Pain management: Internationally a nursing responsibility

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Abstract :

Pain management by nurses internationally has increased with the awareness of the importance of relief from pain in the healing process. Studies of the physiological mechanisms of pain and the impact on healing have promoted the recognition for pain relief. Pain relief has been part of all societies initially through traditional medicines and treatments and more recently through chemical and mechanical interventions. Today, studies of the efficacy of traditional methods has promoted a greater acceptance of methods used by various cultures. The research about the types of pain, effect of personal control of pain relief, the acceptance of alternative, non-invasive but effective methods of pain control, the available literature for consumers and professionals is impacting the role of the nurse in pain management. Internationally, nurses are culturally sensitive and integrate pain relief into their daily care, with patients with all types of pain.

A program was instituted in Samoa for nurses to provide palliative care for patients dying with cancer. This was based on programs in the U.S., England, Australia and many other countries. Pain management is recognized as a major role of the nurse internationally and requires nurses to be more aware of the types of pain, methods of assessing pain, pain relief methods other than medications that have been demonstrated to be effective, as well as an awareness of cultural differences in relation to attitudes about pain and its origin.

Key words : pain management, international nursing

Introduction

Internationally, pain management for patients is seen as a nursing responsibility. In countries around the world nurses are assuming a greater role in the care of patients because of shortages and maldistribution of physicians. Nurses are teaching patients about pain and known methods for prevention or relief of pain[1,2,3]. Support by nurses of traditional methods of relieving pain is given as more is understood about the physiological and psychological effects of these methods for pain relief [1,4].

Nursing care focuses on meeting patient needs. Individuals all like to be comfortable and nurses help patients to be comfortable. Usually comfort implies that the environment is not too hot or too cold, good circulating air, not hunger nor thirst, free from any and all discomforts. Pain management has become a more commonly discussed topic and more researched topic in recent years. Why? No doubt because everyone fears pain and wants to know how to prevent it. People also want to know what it means and its relationship to the seriousness of an illness or injury. There are times in medicine that pain is good rather than bad.

What is pain?

Pain--What is it? Most people experience pain during their life both physical and emotional. Is pain always the same? What do you do to relieve pain? Is it always the same? Does everyone experience pain in the same way? Why is pain of interest today? How is pain defined? The dictionary says that pain is physical or mental suffering caused by injury, disease, anxiety, grief [5]. Suffering in the dictionary is defined as the "bearing of pain." Is it any wonder why it is a

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difficult concept to explain? Yet the literature is full of information about the types of pain, pain relief remedies and causes of pain. Pain is abstract; therefore individual perception plays a major role in the description of pain. The International Society for the Study of Pain defines pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" [6].

Looking at expressions of people in the hospital, on the street, in class, or anywhere, one can assess the presence or absence of pain and often the degree. You can identify who is in pain, the location of the pain, and the source by your observations.

What are some of the characteristics of pain? Studies done with a variety of patients asked for them to identify how they would describe their pain. The patients were experiencing pain from a variety of situations. How have you heard patients describe pain? The respondents in the research done by Dubuisson & Melzack [7] presented these descriptions of pain: cramping, aching, gnawing, pounding, shooting, stabbing, sharp, cramping, heavy, tender, boring, sharp, burning, pulling, tiring, sickening, exhausting, annoying, constant, rhythmic, fearful, intense, unbearable, cruel. There may be other descriptors you have heard.

Causes of pain

What are some of the causes for individuals to experience pain? Surgery, physiological changes, labor, disc injuries, trauma, disease, toothache, lack of oxygen, post herpetic pain, phantom limb pain, tension, headache, loss, isolation, fear, are just a few reasons for experiencing pain.

What are some of the myths about pain? Some say that young children do not experience pain? Have you been with infants who experience gas? Is their cry different than an infant who is hungry? Or an infant who wants to be picked up? Have you heard that elderly do not experience pain because their bodies are no longer sensitive? Many believe that as one ages, pain is part of life. Pain is part of the experience of being ill, it indicates either time to address a need or may indicate healing. Some believe that pain is punishment for some past deed. Pain is to be endured as a test of character. Often exercise enthusiasts believe that pain is good.

Research has indicated that patients who have pain relieved following surgery, heal faster and with fewer complications than those who are not medicated. Research has also documented some of the interactions that affect pain and healing[2,8]. There is a cycle of interaction between fear, helplessness, anxiety and sleep deprivation and pain[9]. The study of stress and its impact on the body in health and illness, provides the knowledge that high levels of stress affect the immune system and reduce the body's ability to fight disease, infection and to heal. Therefore, because of these dynamics, pain will affect healing if not controlled. It also exposes the patient to greater risk of complications or susceptibility to other organisms that the body would ordinarily resist [10].

The pain cycle viewed from another perspective illustrates that an individual exposed to a stress responds with various defense mechanisms that include physical and psychological responses. Physical response to painful stimuli will often be a simple stimulus-response syndrome i.e. if something hot or sharp is touched; automatically withdrawal of the hand or body part from the sensation occurs. Other physical responses are splinting and bracing of muscles as observed in patients after surgery or athletes with injuries [11].

Therefore, some of the ways in which we recognize the location and type of pain in a patient are by the posture or position the patient assumes without direction. A variety of factors affecting pain response have been identified such as:

- Cultural differences affect the response to pain; different cultures have different views about expressing discomfort, and the role span has in the life span.
- Observational learning demonstrated by

others and their response to pain the behavior is modeled based on what one has learned from observation of others, movies, books, etc.

- Cognitive appraisal -- some people are graphically aware of what is going on or what their body has experienced and therefore, perceive
- Fear and Anxiety -- the tenseness created by fear and anxiety along with the lack of sleep increases the intensity of pain and as pain increases the lack of sleep is greater, also increasing the fear and anxiety because coping skills are compromised.
- Neuroticism and extroversion--some individuals are neurotic and perceive pain as part of life and extroverts often like recognition as well as neurotics who will feign pain to receive medication, sympathy, etc.
- Perceived control of events -- individuals who like to be in control who experience pain and are unable to relieve it fear that they are losing control, and will be subject to the decisions of others which alters their perception of all factors
- Coping style -- coping styles of individuals vary even within a family and within cultures. Coping style makes a difference in how individuals will handle pain.
- Attention／distraction -- some individuals are able to distract themselves so that they are not as aware of the pain, individuals who are busy often do not notice pain as such as those who have nothing to do but think about their discomfort. Some individuals will have pain to seek attention [1,12,3].

These factors are considerations to be used in the assessment of pain as described by Sola [10] who identifies body conditions (genetic factors, personality, physical conditioning, physiological state) and triggering stress (physical disease／fatigue／injury and mental fatigue／anxiety) and the activation of trigger points which results in pain that perpetuate the cycle adding to the stress creating additional trigger points.

People talk about pain and suffering as if they are companions, while in reality synonymous. Generally what they are referring to is mental anguish or mental pain, such as that caused by a tragedy or loss of a loved one, or an unfortunate experience such as job loss, failure, etc. These are stressors and generally because of the magnitude of the stress will cause a physiologic response.

Assessment of pain

How is pain measured or evaluated the amount or degree of pains that an individual is experiencing? Pain cannot be seen only the manifestations of pain. Often the stressors affecting the person, their beliefs, in relation to pain are unknown. In labor rooms patient's monitors indicate physiological changes so that pain can be anticipated and to some extent the degree to which pain will be experienced. When the pain reaches its maximum peak and when it begins to taper off are visible on the screen. In other clinicol areas physiological monitoring devices measure vital signs and indicate physiological changes one experiences during episodes of pain versus periods of no pain.

However, most of the patients are not connected to monitoring devices for pain evaluation. There are tools to evaluate pain. The McGill Pain Questionnaire is used in many countries[13]. The responses fall into four major groups: sensory (1-10); affective (11-15); evaluative (16) and miscellaneous (17-20) with the PPI (Present Pain Intensity)based on a scale of 0-5. Satow et al.[14] translated this scale into Japanese. There is the short form of this scale. The descriptors (1-11) represent the sensory dimension of pain experience and (12-15) the affective dimension. The intensity scale is 1=mild, 2=moderate, 3=severe [15].

Comparisons have been done comparing the pain scores using the McGill Scale on patients in labor and patients in a general hospital pain clinic[16]. This research illustrates the various types of pain and their related sources. No one is able to actually feel what another is feeling, so assessing patients is difficult to evaluate patient to patient or compare own threshold with patient.

Self-report is the most reliable method used in

pain assessment. Self-report is often regarded as the "gold standard" for pain evaluation [17] however there are incidences in which it cannot be used. In pediatrics, often pictures are used to assess level of pain, this is also used with patients who have communication problems or who speak a different language [18]. Other means of assessing pain rely on observation, facial expressions, body movements, and temperament, all of which offer information about a person's level of comfort /discomfort.

The World Health Organization standard for measurement of pain assessment is based on the consequences of disease in four levels: disease /disorder, impairment, disability, handicap. Many find that this is insufficient to use in the assessment of many types of pain. It a standard used for pain treatment of patients with cancer primarily [19].

Other assessment tools use pictures of real faces, a visual analogue scale or modifications of this, diaries, etc. [20]. For clinical practice, nurses need to determine what is the most effective means to evaluate pain in their patients. Often patients such as in pediatrics will not report pain because they fear the pain or discomfort from the medication given to relieve pain. This is true for adult patients too.

Recognition of the various types of pain

Nurses need not only to recognize that a patient is experiencing pain, but also what type of pain. In various conditions, the change in the type of pain, is a very important means of communication. Nurses who work in maternity quickly recognize the stage of labor a woman is in by the type and intensity of pain she is experiencing. In cardiology, many have not been astute in recognizing the variances in angina pain. Research has educated us to the fact that many cardiac patients do not experience the crushing chest pain when they experience a heart attack previously believed to be the needed indicator for a myocardial infarction (heart attack) [21]. Patients may have deep visceral pain, numbness, tingling, or other sensations that may appear in the arm, back, perhaps in the epigastric area, or superficial pain, nausea, or sweating and not refer themselves.

People often associate cancer with pain. Many women with painless lumps do not seek medical care because they do not have pain. They seek treatment too late and as a result 1 in 8 women in the world die each year from breast cancer. Japan has the lowest rate of breast cancer as long as women remain living in Japan. When they move to other countries their rate is the same as the country. Breast cancer begins with painless lumps. Often the painful lumps are engorged milk glands or benign fibrocystic disease. This is a time when pain while uncomfortable is good rather than bad.

Methods of management of pain

Pain is multidimensional, as we have seen in factors influencing the perception of pain. Therefore, all factors that affect pain must be considered and many of these addressed or alleviated. Some of the associated factors, which may aggravate pain, are nausea or dyspnea, fear, depression, spiritual well being, family support, meaning of pain to the patient and staff.

Some principles of pain management influence the method(s) of management used.

- Use medications or techniques that are appropriate to the severity and type of pain, for example, give pain medication to patients with burns before dressing change or therapy and allow sufficient time for the medication to have an effect to minimize the discomfort and pain caused by the treatments.
- Give medications in sufficient amounts to control the pain and at intervals appropriate to the medication's duration of action of action; this often requires an initial dose greater than the maintenance dose
- Use oral medications whenever possible
- Give medications around to maintain

constant titer (level of drug in the system) to prevent recurrent pain

- Use other methods, or medications as appropriate
- Assess and treat for side effects of medications
- Assess for tolerance
- Assess for and intervene in psychological and spiritual issues
- Use the strengths and beliefs of patient
- Teach patient and family about effective pain management [1,22].

Pain often has a psychological component. Therefore there are measures that can relieve pain that are effective and do not require the introduction of chemicals into the body. In maternity nursing (midwifery) patients are taught breathing techniques to help them to relax when they are experiencing contractions. Tense muscles increase the perception of pain. Patients are told to take deep breaths when receiving an injection, it makes the insertion of the needle easier because they relax and the needle inserts without the resistance of a tense muscle.

Cousins [23] introduced the concept of distraction as a means of reducing pain through the use of laughter. Researchers studied why his watching funny movies eliminated his pain [24]. Laughter increases the release of endorphin. He not only minimized or eliminated the pain but his disease went into remission and he lived many years beyond expectations based on the disease and the stage of the disease when initially he was diagnosed. Endorphins (endogenous morphine-like compound) are released which is part of the central nervous systems pain modulating circuits. In North America there is an organization, The Healing Power of Laughter and Play who sponsor research and workshops about the uses of laughter and play and their impact on healing and reduction of pain. Have you ever noticed that you feel much better after you watch a program or go to a movie that makes you laugh?

Laughing is also a means of relaxing muscles, which contributes positively to pain reduction. Frowning and scowling require the tensing of muscles, which will cause fatigue and increase pain.

TENS (transcutaneous electrical nerve stimulation) and vibration stimulate the patient's neurobiological control mechanisms to reduce acute pain as well as chronic intractable pain [3, 25]. These are available in department stores, pharmacies, from mail order catalogues, etc. Patients will often use these without the recommendation of a physician but from a recommendation of a friend.

Traditional medicines are used by many cultures and may be in a variety of forms, oral, solutions, ointments or salves, etc. Cupping is done by heating a glass cup by hot coals or flaming alcohol and then inverted over the painful area and held against it. As the air cools and contracts, it creates a partial vacuum, which then produces bruising of the skin with concomitant pain and tenderness. Cauterization, moxibustion, and other pain modulating treatments work on "counterirritation [4,13].

Acupuncture is the insertion of fine needles through specific points in the skin and twirling them for some time at a slow rate or left in place for a time. The needles are inserted based on the chart of 361 points, which lie on the 14 meridians. Research studies indicated that for some conditions (low back pain, myofascial pain and some of the neuralgias) this is very effective. Patients in many countries are advocating this as an effective method of pain relief.

Distraction such as music, play, conversation, counseling, is effective for pain reduction or relief. In children, play is often quite effective in eliminating pain, but may only mask it [1,26,3].

Imagery or focusing is a mental exercise that transforms the pain into an image of something else that can be controlled by turning it on or off or dissociating the pain from the body [1,26,3].

Meditation is used by many as an effective method of focusing the mind and can eliminate pain through this method [1,26,3].

Relaxation strategies are used quite

effectively. Some of these strategies are guided imagery and progressive muscle relaxation. Generally nursing students or nurses are taught these techniques so that they can teach patients and family members. Tapes are available to guide people through the process.

Hypnosis is used by some especially for chronic pain.

Biofeedback is another method used in some societies [1,26,3].

Cold or hot therapy is often used. It is important that these are only used for 20-30 minutes at a time. Ice therapy in many types of pain is more effective than heat and has been demonstrated by research to be effectively used at acupressure points [13].

Massage therapy or exercise programs are often used to reduce pain. This is true especially with cardiac rehabilitation from surgery and myocardial infarction and also for patients with arthritis. Patients with joint replacements are placed in rehabilitation programs, as are patients who have had strokes [27,28].

Patient-controlled analgesia (PCA) self-medication with intravenous opioids but may include oral or other routes of administration. PCA offers patients a sense of control over their pain and is preferred by most patients to intermittent injections [3,29].

Anesthesia and nerve blocks are required with some types of pain [30]. Laser, ultrasound, microwave and shortwave are sometimes all used for pain relief, especially with back pain [31].

World Health Organization provides an uncomplicated three-step oral drug therapy to manage patients with cancer pain. The first level of pain is managed with nonopioid, the second level for pain that is persisting or increasing is non-opioid for mild to moderate pain, and the third level is freedom from cancer pain using opioid for moderate to severe pain. At all levels other adjuvants may be used and once opioids are used nonopioids may or may not be used in conjunction[19].

Nurses role in pain management

The nurse's role in pain management is to use the nursing process effectively to prevent further occurrence and to determine the causes both organic and non-organic [1, 2, 3, 18, 29, 32]. Pain in nursing should be looked at as both a problem and a means of preventing other problems. In applying the nursing process with each patient the nurse:

Assesses the patient - identifies the problems, identifies aggravating and relieving factors with the aid of the 10 basic descriptors (mode of onset, location, character, radiation, intensity, aggravating factors, relieving factors, associated symptoms, course or chronology, effect on daily life) related to pain. Determines the meaning of pain to the individual and determines the definitions of optimal relief.

Derives nursing diagnoses for the patient related to pain.

Identifies the appropriate interventions often in consultation with the physician based on the data she has obtained. In many places the doctor needs to prescribe medications while in other countries such as the United States, Samoa and other countries where there are standing protocols for the nurse to use. The nurse often determines traditional and non-pharmacological methods or measures with the patient and family.

Execute the selected interventions and communicate these to other caregivers so that they are aware of the plan. Pain management relies on timely administration of treatments. Once pain is controlled, a blood level of analgesic needs to be maintained while pain is present.

Patients who use nitroglycerin patches to control angina pain, can sometimes eventually determine when they will need them prophylactically

Evaluate the outcomes of the interventions to determine if they are effective or not. Is the pain relieved? Are there side effects of the interventions? What are these side effects? How can they be relieved or prevented? Is the intervention aggravating the situation? For example, many medications have unpleasant side effects for

patients. Patients want to have a sense of control that is lost when one is in pain or suffering side effects from treatments.

In Samoa, for example, the nurses administer to the patients who are dying of cancer in the home. They visit at intervals throughout the day and night and administer pain medication. They assess the pain and also talk with family members about how the patient is when they are not there and ask about pain control. As the cancer progresses, the pain medication may be increased in frequency. Eventually, the patient and family establish the indication and administer the medication. This is a cost-effective way to care for the patients but more importantly it is culturally appropriate.

In many countries i.e. Pacific Islands, China, Africa, U.S., Mexico, Central and South America, nurses are working often with traditional healers or learning from traditional healers more about the use of traditional methods to relieve pain. The use of alternative therapies is increasing worldwide. China sends nurses to many African, Middle Eastern and other countries to teach traditional Chinese medicine techniques for pain relief. The use of natural methods is less costly for developing or evolving countries. Research is being conducted in the United States and Europe to understand the physiologic effect of traditional forms of medicine.

No longer can nurses wait to be told what to do by others when caring for patients experiencing pain, or about to experience pain. It is a nursing responsibility recognized by nurses in all countries as illustrated by the basic nursing textbooks used around the world. Modern nursing bases its practice on the teachings of Nightingale [32] who states that a nurse's responsibility to meet the patient needs so that the patient can use their reserves to heal, which certainly includes pain prevention and pain relief.

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