

Unit 10

Pain Management

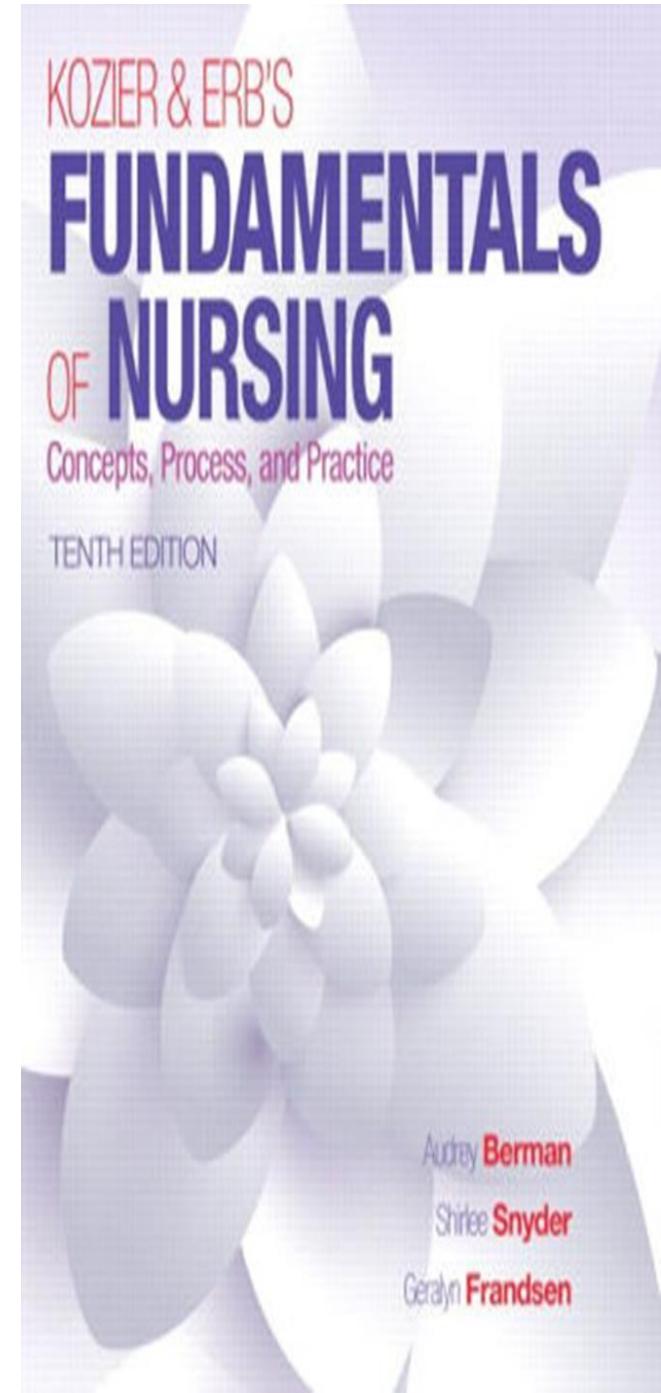
The nature of pain

Type of pain

Factors affecting pain

Pharmacologic

Non- pharmacologic pain management



Pain Management

The Nature of Pain

Pain is a universal experience, its exact nature remains a mystery.

Geach (1987) defines pain as "the noxious stimulation of threatened or actual tissue damage. It is known that pain is highly subjective and individual that it is one of the body's defense mechanisms indicating that there is a problem.

Pain:

- Is the most common reason; people seek help from a physician

Pain threshold :

- Is amount of pain stimulation a person requires in order to feel pain.

Pain reaction includes:

- Autonomic nervous system and behavioral responses to pain.

Pain tolerance:

- Is maximum amount and duration of pain that an individual is willing to endure.

Types of Pain

1. Pain may be acute or chronic

Acute. When pain lasts only through expected recovery period. It has a sudden or slow onset and regardless of the intensity, e.g. pain following a acute injection, some type of surgery.

Chronic. It lasts beyond the usual course for recovery, interval of six months, duration to define it as chronic. E.g cancer pain

Types of Pain

2. According to its origin

- a. **Cutaneous pain:** originates in skin or subcutaneous tissue, e.g. a paper cut causing a sharp pain with some burning.
- b. **Deep somatic pain:** arises from ligaments, tendons, bones, blood vessels and nerves. It is diffuse and tends to last longer than cutaneous pain, e.g. ankle pain
- c. **Visceral pain:** results from stimulation of pain receptors in abdominal cavity, cranium, and thorax. Pain tends to appear diffuse and feels like deep somatic pain, that is, burning, aching, or a feeling of pressure. It is frequently caused by stretching of the tissues, ischemia, and muscle spasm, e.g. an obstructed bowel will result in visceral pain.

Types of Pain

3. According to where it is experienced in the body

- a. Radiating pain:** It is perceived at source of pain and extends to nearby tissues, e.g. cardiac pain may be felt not only in the chest but also along the left shoulder and down the arm.
- b. Referred pain:** Pain felt in a part of body that is considerably removed from tissues causing the pain, e.g. appendix pain (pain from one part of abdominal viscera may be perceived in an area of the skin remote from the organ causing the pain).

3. According to where it is experienced in the body

- c. **Intractable pain.** It is highly resistant to relief, e.g. pain from an advanced malignancy.
- d. **Neuropathic pain.** It is occurred as a result of a disturbance of peripheral or central nervous system that results in pain, which may or may not be associated with an ongoing tissue-damaging process. It is described as shooting or stabbing and is often severe, e.g. in AIDS
- e. **Phantom pain.** It is painful sensation perceived in a body part that is missing, e.g. an amputated leg, or paralyzed by a spinal cord injury, e.g. neuropathic pain (feeling that the missing part is still present). Phantom pain can be reduced when analgesics are administered via epidural catheter.

Factors Affecting Pain Experience

1. **Ethnic and cultural values.** Pain may be considered a punishment for bad deeds; the individual is, therefore, to tolerate pain without complaint in order to a tone of sins.
2. **Developmental stage:** age and developmental stage of a client will influence both the reaction to and the expression of pain.
3. **Environment and support group.**
 - Family members can be a significant support for a client in pain. They can affect how a person perceives or responds to pain, Client may tolerate pain more when supportive group are nearby

Factors Affecting Pain Experience

4. Past pain experiences.

5. Meaning of pain.

- A client who associates the pain with a positive outcome may withstand the pain amazingly well. These clients may view the pain as a temporary inconvenience rather than a potential threat or disruption to daily life.
- On the contrary, clients with unrelenting chronic pain may suffer more intensely. They may respond despair, anxiety, and depression because they can't attach a positive significance or purpose to the pain.

Factors Affecting Pain Experience

6. Anxiety and stress.

- Anxiety accompanies pain. Threat of unknown and the inability to control the pain augment the pain perception.
- Fatigue reduces a person's ability to cope so, increasing pain perception.

Pharmacologic Pain Management

- ❖ It involves the use of opioids (narcotics), non-opioids / NSAIDs (Non Steroidal Anti inflammatory Drugs), and a adjuvant, or co-analgesic drugs
- **Opioids** : morphine and codeine. It causes many side effects such constipation, nausea, and vomiting, sedation, respiratory depression, pruritus, and urinary retention.
- **Non opioids**: non narcotic analgesics include non steroidal anti inflammatory drugs such as Aspirin and Ibuprofen. These analgesics have anti-infalmmatory, analgesic, and antipyretic effects.
- **Adjuvant analgesics**: such as valium (tranquilizers), anti-depressants (Elavil), and anticonvulsants (Tegretol)

Administration of Placebos

Placebo: is an inert substance that is used in clinical practice to determine effects attributable to administration of the placebo rather than to the pharmacologic properties of legitimate drug or treatment

Non-Pharmacologic Pain Management

- It consists of a variety of physical and cognitive behavioral pain management strategies.

1. **Physical interventions:** include cutaneous stimulation, immobilization, transcutaneous electrical nerve stimulation (TENS), acupuncture and the administration of placebo.
2. **Mind-body (cognitive-behavioral) interventions** include distraction activities, relaxation techniques, imagery, mediation, bio-feed back, hypnosis and therapeutic touch.

1) Cutaneous Stimulation

- It provides effective temporary pain relief.
- It distracts client and focuses attention on tactile stimuli, away from painful sensations, thus reducing pain perception. It includes the following:
 - a. **Massage.**
 - ✓ It is a comfort measure that can aid relaxation, decrease muscle tension, ease anxiety.
 - ✓ It decrease pain intensity by increasing superficial circulation to the area.
 - ✓ It can involve the back and neck, hands and arms, or feet.
 - ✓ The use of ointments may provide localized pain relief with joint or muscle pain.

1) Cutaneous Stimulation

- b. **Application of Heat and Cold.** A warm bath, heating pads, ice bags, ice massage, hot or cold compresses, and warm or cold sitz bath in general relieve pain and promote healing of injured tissues.
- c. **Acupressure.** It Chinese healing system. Fingers pressure is applied to points that correspond to many of the points used in acupuncture.
- d. **Contralateral stimulation.** It can be accomplished by stimulating skin in area opposite to painful area (e.g. stimulating the left knee if the pain is in the right knee). The Contralateral area may be scratched for itching, massaged for cramps, or treated with cold packs or analgesic ointments.

2) Immobilization

- It is restricting the movement of a painful body part may help to manage episodes of acute pain.
- Splints or support devices should hold joints in the position of optimal function, and should be removed regularly in accordance with agency protocol to provide range of motion exercise.

3) Transcutaneous Electrical Nerve Stimulation (TENS)

- It is method of applying low-voltage electrical stimulation directly over identified pain areas, at an acupressure point along peripheral nerve areas that innervate the pain area, or along the spinal column

Cognitive-Behavioral Methods

1) Distraction

- It draws the person's attention away from the pain and lessens perception of pain. It can make a client completely unaware of pain, e.g. reading or watching T.V, listening to music, slow rhythmic breathing, card games

Non-pharmacologic Invasive Therapy

- **A nerve block.** It is chemical interruption of a nerve pathway, affected by injecting a local anesthetic into the nerve. Nerve blocks are widely used during dental work. Pain conduction pathways can be interrupted surgically. Several surgical procedures may be performed.
- **Spinal cord stimulation (SCS).** It is used with nonmalignant pain that has not been controlled with less invasive therapies. It involves the insertion of a cable that allows the placement of an electrode directly on the spinal cord. The cable is attached to device that sends electric impulses to the spinal cord to control pain.