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### Belief vs Pain: The Rematch

Question: According to the study, when were postoperative pain scores the highest for spine-surgery patients?

- A. During the 12<sup>th</sup> postoperative hour
- B. During the 24<sup>th</sup> postoperative hour
- C. During the 1<sup>st</sup> and 2<sup>nd</sup> postoperative hour
- D. During the 36<sup>th</sup> postoperative hour

Correct Answer: C. During the 1<sup>st</sup> and 2<sup>nd</sup> postoperative hour

Found: Second paragraph under the results on page: 230

Reference:

Kose, G., & Şirin, K. (2023). Effects of pain beliefs on postoperative pain and analgesic

consumption in spine surgery patients. *Journal of Neuroscience Nursing*, 55(6), 228–234.

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## Introduction

- A. Globally, 5 million people have undergone spinal surgery since 2017
  - 1. Approximately 8% increase each year
- B. Spinal surgery cases' severe pain is due to the length of the surgery and different interventions, which causes inflammatory activation
- C. Moderate to severe pain is very common in spine surgeries, and there is a risk of chronic pain postoperatively: patients are more likely to ask for analgesics
- D. Pain beliefs are an important concept of the cognitive behavior approach
  - 1. It proposes that attitudes, beliefs, and thinking styles mediate to behavior and emotional responses of patients
- E. A patient's pain beliefs are an important aspect of their recovery. An individual's views towards pain can vary depending on culture, sex, age, and previous experiences with healthcare and pain.
- F. Organic beliefs on pain are tied to damage caused to the body, and the severity of the damage determines how much pain the patient will experience.
- G. Psychological pain beliefs are dependent on the emotions that the patient is feeling, and play a crucial role in pain experience and organic beliefs
- H. A patient's recovery is shaped by their behaviors and attitudes, their willingness to receive treatment; negative views can lead to inadequate pain relief by increasing the feeling of helplessness, whereas positive views allow the patient to have more control, enabling them to have better pain management outcomes.

## Purpose

“This study evaluates the impact of pain belief on postoperative pain and analgesic consumption in patients undergoing spine surgery.”

## Methods

- A. A description and cross sectional study evaluating the impact of pain beliefs on post-operative pain and analgesics consumption in patients undergoing spinal surgery .
- B. Participants from the neurosurgery department of the Neurological science Institute of a university hospital between January 2021 and April 2022.
- C. A descriptive information form, Pain Beliefs Questionnaire (PBQ), visual analog scale (VAS), pain evaluation form, and verbal category scale were used for data collection.
- D. Inclusion
  - 1. 18 years and older
  - 2. Undergoing a planned spinal surgery
  - 3. Able to understand and respond to questionnaires, who did not have any physical or mental problems related to speaking
  - 4. Had a American society of Anesthesiologist score of I-II
- E. A description information form
  - 1. Consisted of 8 questions about the following: sex, age, preoperative pain level, and analgesic consumption
- F. Pain Beliefs Questionnaire (PBQ)
  - 1. Organic beliefs, and psychological beliefs subscale
  - 2. The 12 items of the questionnaire were evaluated on a 1 to 6 scale. Higher subscale scores indicate stronger pain beliefs in that subscale; there is no cutoff point.
  - 3. Cronbach  $\alpha$  of the 2 subscales (organic and psychological beliefs) in the study were 0.68 and 0.72.
- G. Visual analog scale (VAS)
  - 1. Pain scores at rest & after cough voluntary cough were evaluated on a 0-to10 Postoperative 1st, 2nd, 3rd, 4th, 6th, 12th, 24th, 26th, and 48th hours
  - 2. Rated on a scale from 0-10 (0: no pain, 10: extreme pain)
- H. Pain evaluation form

1. Defines the characteristics of pain, and used to collect information on the practices and situations that may affect pain evaluation, and perceived pain. Ex: site of pain, changes in pain level, and the intensity of pain
- I. Verbal Category scale
    1. Used to classify pain in the 24th postoperative hour
    2. Patients were allowed to verbalize their pain as mild, moderate, severe, or intolerable, as pain is subjective and VAS only gives an average score
  - J. Standard pain management protocol was used in the clinic where the study was conducted: diclofenac sodium 75 mg twice daily, tramadol 100 mg once daily (if necessary), and paracetamol 1 g 3 times daily

## Results

- A. There were 71 participants with a mean age of 53.9
  1. 59.2% were female
  2. 88.7% were married
  3. 67.6% had an education of secondary school or lower
  4. Mean body mass index was 28.3
- B. The surgery participants
  1. 41% underwent surgery for spinal disc herniation
  2. 31% spinal fractures
  3. 28% spinal degenerative disease
  4. Mean duration of preoperative pain was 7.6 (11.2) months
- C. All patients in the study experienced postoperative pain ranging from mild to intolerable. In the postoperative 24 hours:
  1. 70.4% of the patient expresses that the level of pain decreased
  2. 43.7% had pain as they expected
  3. 53.5% experienced pain at the surgical site

4. 95.8% felt difficulties in activities
  5. 40.8% expressed they had problems breathing & coughing due to post-op pain
- D. In the postoperative 24 hours the highest VAs scores at rest, and after coughing were 5.3 and 6.2, whereas the lowest scores were 2.5 and 3.2
1. The VAs scores at rest or after voluntary cough were highest in the first and second hours post op
  2. The VAS scores at rest and after voluntary cough significantly decreased after the second and third post-op hours
- E. There was no significant link between postoperative pain intensity and patients' sociodemographic factors, diagnosis, preoperative analgesic use, or postoperative use of opioids and non-opioids ( $P > .05$ ).
- F. The mean scores of the Organic and Psychological Beliefs subscales of the PBQ were 4.3 and 4.2
1. Sociodemographic, PBQ scores, and pain characteristics show a significant relationship between organic beliefs and working status ( $P = .007$ )
  2. Organic Beliefs subscore was higher in the employed participants

## Conclusion

- A. Patients experienced moderate pain after spinal surgery, which increased with coughing, and gradually decreased after the postoperative 2nd and 3rd hours
- B. Participants pain beliefs were shown to be high
- C. Working status and coughing were related with the pain, but pain beliefs evidently had no influence on taking analgesics.
- D. These findings highlight the importance of regular assessment of postoperative pain, taking analgesics before doing any activities; such as coughing, and the consideration of working status and pain beliefs in pain management

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