

# Developing a Conceptual Model for the Acute to Chronic Postsurgical Pain Transition After Cesarean Delivery: a Qualitative Study

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# Background and Aims

- Chronic postsurgical pain (CPSP) develops in 15% of patients following cesarean delivery (CD). <sup>1</sup>
- The HR-QoL impacts of CPSP and the transition from acute to CPSP are underexplored.
- A biopsychosocial conceptual model could inform evaluation, prevention and treatment strategies.
- This study aimed to elicit concepts describing patient experience of CPSP and the transition from acute to CPSP using qualitative methods.

# Study Design and Methods

- Participants recruited from 2 independent prospective studies with matching inclusion criteria
- CPSP: pain that developed after CD and lasted >3 months after surgery, distinctive from pre-existing pain conditions before surgery
- Design: Semi-structured interviews, thematically analyzed
- Sample: 24 postpartum (19 English, 5 Spanish), 3 to 6 months after CD
- Approach: Inductive coding, with openness to emerging themes
- Research questions:
  1. How does CPSP-CD impact maternal HR-QoL?
  2. How does acute pain transition into CPSP in this population?

# Key Findings

HR-QoL Themes	Description	Example Quotes
Physical Limitations	Pain interfered with walking, bending, caregiving, daily tasks.	P6: "Leaning over the crib still hurts." P21: "I still avoid stairs if I can."
Emotional Impact	Participants reported frustration, guilt, and emotional strain.	P4: "I felt like a failure." P10: "I hated needing help all the time."
Sleep Disruption	Pain disturbed sleep, making recovery harder.	P9: "The pain would wake me at night." P13: "I sleep with pillows propped around me."
Body Image & Sensory Changes	Numbness, hypersensitivity, and altered body awareness were common.	P11: "It feels numb and hypersensitive all at once."
Social & Relationship Strain	Participants avoided outings, intimacy, or social interaction.	P2: "I didn't want my partner to touch me." P5: "I felt like I couldn't explain what I was going through."

Transition Themes	Description	Example Quotes
High Initial Pain Intensity	Severe acute pain was common in early days postpartum.	P8: "It was like I got hit by a truck." P17: "I remember crying in the hospital bed."
Disrupted Recovery Expectations	Participants expected quicker healing and were surprised by pain persistence.	P20: "I thought I'd bounce back."
Sleep Disruption as a Factor	Poor sleep made pain worse and delayed recovery.	P13: "Pain makes me tired, tired makes me hurt more."
Avoidance and Fear of Movement	Participants limited activity out of fear of worsening pain.	P14: "I was scared I'd tear something open again."

# Discussion and Conclusion

- Participants reported a diverse range of symptoms and HR-QoL impacts.
- This study contributes to a preliminary conceptual model for acute to CPSP after CD
  - help guide development of future interventions
    - physical therapy as a preventative strategy for patients at risk of deconditioning
    - early postpartum sleep protection
    - cognitive behavioral therapies
- More research needed to quantify patient burden and develop specific measures including a core outcome set to help monitor and screen patients and improve maternal health outcomes.