Assessment of acute traumatic pain: the critical role of the scale anchor

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Presenter (and co-authors) Disclosure

- Speaker (and authors): FJ Slomp
  co-authors: MJ Mayan, GC Lasiuk, BD Dick

- Relationships with commercial interests: No conflicts identified
Learning Objectives for CME

1. What is the role of the anchor (definition of 10) on the numerical rating scale?
2. How does context influence the assessment of pain?
3. When assessing pain are we measuring pain intensity or pain experience?
BACKGROUND
Complexity of pain

- Subjective
- Invisible
- Dynamic
- Numerous qualities (sharp, burning, dull)
- Multiple dimensions (physical, mental, emotional)

- Modified (possibly) by factors* such as
  a) Previous pain experience
  b) Memory of pain
  c) Personality
  d) Values, expectations and beliefs
  e) Injury or pathology
  f) Context

* Primary evidence is statistical
Adequate pain management is an essential feature of high quality health care.
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Most common validated self-report measurement tool is the Numerical Rating Scale-11 (NRS)
Typically the NRS is administered like this:

On a scale of 0 to 10

0 = “no pain”
10 = “worst pain imaginable”

what is your pain?
NRS has robust psychometrics

YET

There are concerns...
Specifically,

1. clinical mistrust of the tool (Montali et al., 2012)
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4. “worst pain experienced” as an anchor has not been validated
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4. “worst pain experienced” as an anchor has not been validated
5. “worst pain experienced” is the anchor used by people when using the NRS (Seymour et al., 1985)
AIM OF THIS INVESTIGATION
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How do people with an acute, traumatic injury determine their pain scores?
METHODS

Interpretive Description approach (Thorne, 2008)
(this is a Qualitative Approach)
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13 participants
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Conventional content analysis (Hsieh and Shannon, 2005)
We identified that the NRS score is determined by three experiential referents:

1. “receiving an injury”
2. “sensing the imminent loss of consciousness”
3. “grasping the immediate context”

For this presentation we will focus on #2
Participant characteristics

* MVA= motor vehicle accident

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<th>Accident site</th>
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“Imminent loss of consciousness” as the anchor for the NRS

“I can sit here and I can talk to you and text my mom that I am ok.”

“I don’t think I could stay conscious if I experienced pain worse then this”

“I am experiencing some fear …because I thought if this gets any worse how can I possibly cope because I am at the upper end of coping right now”

POST-OP. “I was sleepy and tired, but I wasn’t losing consciousness because of the pain”

“I am joking with my friend. I was still in a rational state of mind”
The ILC is a distinct sensory signal

Anchors provided did not help participants gauge their pain.
Participants operationalized the NRS scale with the ILC as their anchor.
The ILC is an absolute, physiological event.
DISCUSSION/CONCLUSIONS
Pain scores might not be determined by the anchor provided

The anchor of the NRS seems to be critical in how people determine their pain score. (CME: Objective 1)

The role of the anchor seems to be key to unlocking the pain score. (CME: Objective 1)

The anchor functions as an independent variable. (CME: Objective 1)

In acute, traumatic pain ILC is the anchor used to gauge pain for the purpose of a pain score.
Clinical implications
- pain assessment occurs in a context
  (CME: Objective 2)
- the ILC is an absolute anchor unlike current vague ones
- providing a pain score occurs in the moment of pain so “worst pain experienced or “worst pain imaginable” might not be the best anchors (CME: Objective 2)
- pain management theoretically could improve with this increased knowledge as the ILC anchor levels the playing field.
When assessing pain are we measuring pain intensity or pain experience?

This important question requires significantly more research.

CME Objective 3
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Thank you for your time and consideration of this presentation