

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

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Aim of Investigation: Adequate pain management is dependent on scores determined from a validated, self-reported assessment tool, such as the Numeric Rating Scale (NRS). This scale allows a person to provide a score between 0 – 10 where the anchor (ten) is defined by either “worst pain imaginable” or “worst pain experienced”. Psychometric evidence for the scale is substantial yet concerns are raised about the anchor descriptors and the complexity of pain, in various situations. As pain is a subjective experience, the clinician must rely on the self-reported NRS score to determine non-pharmacological and/or pharmacological management of it. Although it very clear that pain is a complex phenomenon, we collectively assume a person can reduce the myriad of signals of the pain experience and provide a simple pain intensity score. It is also assumed that pain intensity can be measure across all pain populations by one single NRS measure and its defining anchor. Our aim was to investigate how people who have experienced an acute pain event as a result of a traumatic injury determine their pain scores.

Methods: An Interpretive Description approach was employed in this investigation. Thirteen participants with traumatic injuries requiring at least one night’s hospitalization were interviewed using a semi-structured format. Interviews were digitally recorded, transcribed and verified by the first author. Interpretive Description’s roots are in nursing, but it is an approach many disciplines currently use in qualitative research. The flexible architecture of this approach permits tailoring of methodological decisions to contextual aspects of research decision making. Examining and describing complex, clinical human experiences and then analytically determining relational themes is the primary aim of Interpretive Description. Thus, this approach embraces both multiple realities and that the findings are co-constructed through an iterative and robust process of collecting and analyzing data.

Results: We determined that an NRS score can be identified by these three experiential referents: “receiving an injury”, “sensing the imminent loss of consciousness” (ILC) and “grasping the immediate context”. The focus of this presentation is on the second referent: ILC. Participants identified ILC, or “passing out”, as the NRS anchor they used to determine their score for pain intensity. Participants, therefore, operationalized whatever anchor was provided to them by the clinician and instead were using ILC as their anchor. One participant cleared stated “My idea of a 10 is you can’t stand it so you black out.” Having had no pain treatment while waiting for ER triage, this participant with 3 arm fractures, states “I am experiencing some fear at that point because I thought if this gets any worse how can I possibly cope because I am at the upper end of coping right now.” The extent of cognitive function the participant still had, while in acute pain, was sometimes used to infer the ILC. For example, “I can sit here and I can talk to you, and text my mom that I am okay and am joking with my friend. I was still in a rational state of mind.”

Conclusions: The myriad of signals experienced during a traumatic event are reduced systematically in order to provide a simple pain score. The operationalization of the anchor in determining a pain score, provides us with some evidence how people actually score their pain, for the purpose of a pain

assessment. These findings also illustrate that pain and its assessment occurs within a context that may vary significantly from other types of pathologies which are accompanied by pain. Although this would need to be empirically tested, the data suggests that the anchor operationalized by people may vary with their illness/pain situation.

The clinical implications are several. First, the ILC as an anchor is a distinct, physiological referent in stark contrast to some other vague, but current anchors reported in the literature. Second, as pain is being assessed in the moment of pain, and not retrospectively, using pain anchors described as either imagined or historical bearing are not likely being used by the individual to reference pain. This evidence requires further validation in future investigations. Importantly, as the assessment is for pain management purposes, if vague anchors are removed from this process, theoretically at least the pain platform should be more level between patients, providing the clinician with a better foundation for pain management decisions. Fourthly, in acute, traumatic pain situation, the use of the ILC as the NRS's anchor may provide the person in pain with an absolute and meaningful anchor from which to reference their pain, rather than the obscure anchors currently being used in pain assessment.