Commentary

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The International Association for the Study of Pain definition of pain: as valid in 2018 as in 1979, but in need of regularly updated footnotes

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Abstract

Milton Cohen, John Quintner, and Simon van Rysewyk proposed a revision of the IASP definition of pain of 1979. This commentary summarizes, why this proposal is useful for guiding assessment of pain, but not its definition.

Commentary on: Cohen M, Quintner J, van Rysewyk S. Reconsidering the IASP definition of pain. PAIN Reports 2018:e634.

See also: Osborn M. Situating pain in a more helpful place. PAIN Reports 2018:e642.

1. Why the article by Cohen et al. is worth reading

Milton Cohen, John Quintner, and Simon van Rysewyk[1] wrote an excellent article on the background and history of the definition of pain, which I strongly recommend for enlightening reading. However, they misinterpret some central elements of the International Association for the Study of Pain (IASP) definition[6] and their proposed wording is suitable for guiding assessment of pain, but not its definition.

Cohen et al. point out correctly that pain should not be confused with nociception.[4,7,9] One of the reasons is that pain is defined as a subjective experience that arguably exists only in the person that feels it (first-person perspective). Nociception is defined as observable activity in the nervous system in response to an adequate stimulus (third-person perspective). A white paper by an IASP task force has recently pointed out this distinction in the context of attempts to misuse brain imaging as a replacement for verbal report.[2]

Cohen et al. suggest that 2 issues need to be resolved:

(1) How to define the experience of pain

(2) How to describe this experience with the inaccuracies of language

The first issue has already been solved elegantly by the IASP definition, whereas the second issue, indeed, needs to be debated: does pain exist in nonverbal humans, does pain exist in other species?

2. Where Cohen et al. are right

The IASP definition does not exclude wilfully wrong verbal reports such as in malingering. This issue fortunately plays only a minor role in clinical practice but is of utmost importance in medicolegal contexts.[2] The revised wording by Cohen et al. throws out the baby with the bathwater by including "mutually recognizable … experience," which essentially means that pain is no longer defined from a first-person perspective, but from a third-person perspective. That concept, however, is called nociception not pain (Box 1). This change in perspective may not have been the intention of the authors, but this is what the wording implies.

Box 1. Nociception vs pain

Nociception: a function of a specific sensory system.
Nociceptive system: a warning system with an adequate stimulus.
Noxious stimulus: A stimulus that is damaging or threatens damage to normal tissues.
Pain: a result of network activity in the brain.

Nociception	Pain
Third-person perspective	First-person perspective
Stimulus-related	Perception-related
Sensory discrimination	Suffering

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Box 2. New proposal vs existing definition.

Proposed revised definition of pain by Milton Cohen, John Quintner, and Simon van Rysewyk[1]:

"Pain is a mutually recognizable somatic experience
that reflects a person's apprehension of threat to their bodily or existential integrity."

IASP definition of pain[6]:

"An unpleasant sensory and emotional experience
associated with actual or potential tissue damage,
or described in terms of such damage."

Note: The inability to communicate verbally does not negate the possibility that an individual is experiencing pain and is in need of appropriate pain-relieving treatment. Pain is always subjective. … *Many people report pain in the absence of tissue damage or any likely pathophysiological cause; usually this happens for psychological reasons.* There is usually no way to distinguish their experience from that due to tissue damage if we take the subjective report. If they regard their experience as pain, and if they report it in the same ways as pain caused by tissue damage, it should be accepted as pain. This definition avoids tying pain to the stimulus. Activity induced in the nociceptor and nociceptive pathways by a noxious stimulus is not pain, which is always a psychological state, even though we may well appreciate that pain *most* often has a proximate physical cause. (https://www.iasp-pain.org/Taxonomy?navItemNumber=576#Pain)

However, the wording proposed by Cohen et al. is an excellent description of how to approach the assessment of pain in others. Verbal report is at the core of pain assessment, just like history taking is at the core of medical diagnostics. However there are also nonverbal modes of communication, in particular behavioural ones. They are also used in medicine, and have a particular role when dealing with nonverbal humans (small children or demented patients) or when there is no common language between doctor and patient. Veterinarians have no way of verbal communication with their patients; thus, a comparison of veterinary vs medical approaches to disease and treatment may be educational.

3. Where the reasoning by Cohen et al. is flawed

"the link with tissue damage implies that a stimulus is necessary": The IASP definition does not require the presence of a noxious stimulus for pain to exist; the third part of the definition clearly states that anything that hurts is pain (Box 2). The verbal report by the patient has to be trusted, but the management of pain will differ according to the underlying causes and mechanisms.

"the descriptor "unpleasant" tends to trivialize … pain": this descriptor simply refers to the usual hedonic valence of the emotional experience of pain. The second part of the IASP definition clearly specifies what type of unpleasant experience can qualify as pain (described in terms of potential tissue damage) and what not (anything else).

"the … concept of "psychogenic pain" … enshrined … within the body of a defining document". Pain without any obvious tissue damage was considered "psychogenic" in the 20th century. In the 21st century, we distinguish between nociceptive pain (tissue damage) and neuropathic pain (somatosensory system damage), where neuropathic pain has clear positive identification criteria,[10] although there is no tissue damage at all in the painful region (Box 3). Nociplastic pain may become another category of pain without tissue damage,[3] once positive identification criteria are defined. The footnote to the IASP definition, however, contains a phrase that will benefit from rewording ("usually this happens for psychological reasons") indicating that the presence of psychological mechanisms does not mean that pain is psychogenic.[8]

Cognitive and social dimensions of pain are claimed to be missing. These terms are, indeed, not part of the IASP definition (neither are the motor and autonomic components of pain), but the important question is: is pain not pain without the social dimension? Can a person alone on a desert island not experience pain?

Nonverbal behaviours such as facial expressions can be used as surrogates for pain assessment as proposed, but they must be properly validated against verbal reports first (which facial expressions in humans are). The proposed judgement by an observer instead of introspection by the person in pain would abandon the definition of pain as a subjective experience.

Box 3.Nociceptive vs neuropathic pain

What is nociceptive pain?
(1) Pathological process in peripheral organs and tissues.
(2) Pain projection into damaged body part or referred pain.
What is neuropathic pain?
(1) Pathological process in the somatosensory system.
(2) Pain projection into innervation territory.

4. Why we should keep the 1979 Merskey definition

(1) It clearly defines pain as a subjective experience (Box 2).
(2) It links pain to both sensory systems' physiology and to the neurobiology of emotions.
(3) It specifies that pain is associated with a specific adequate stimulus: noxious stimulus = threat of tissue damage; other unpleasant experiences do not qualify (eg, hunger, thirst, social rejection, …).
(4) It clarifies that anything that feels like pain is pain by definition (ie, anything that is experienced as if it were due to the threat of tissue damage).
(5) The strong emphasis on verbal communication is alleviated by the footnote ("The inability to communicate verbally does not negate the possibility that an individual is experiencing pain and is in need of appropriate pain-relieving treatment.").

5. Why we should not use the 2018 Cohen et al. definition

(1) It does not refer to the multidimensional nature of pain experience (Box 2).
(2) It broadens the scope from threat to bodily integrity (noxious stimulus) to threat to all types of existential integrity (ill-defined term).
(3) It posits that recognition by an outside observer is mandatory for pain to exist.[1]

6. From thesis and antithesis to synthesis

In summary, I think the readers are now convinced that the wording proposed by Cohen et al. is not useful for a redefinition of pain. But, I agree with the 3 of them that we should be aware of the limitations of language as a means of communication. This is probably obvious to those of us who speak more than one language and know that the concept of translating between languages is flawed; in reality, we

can only try to express the same thoughts and ideas with the limited resources of 2 different languages. Cohen et al. frequently refer to the McGill pain questionnaire as having solved the puzzle of verbal description of pain experience.[5] I think their article, by contrast, underlines the need to have a fresh look at the language of pain. This fresh look must abandon the English language as the gold standard and rather analyse the underlying dimensionality of pain descriptors in several different language families. There is a precedent from the sensory physiology of taste: all carnivorous mammals including ourselves have a taste channel for the detection of amino acids. But, there is neither an English nor a German nor any other European language term for it: "umami" has hence been imported from Japanese to describe this sensory experience.

The article by Cohen et al.[1] will have done a great service to the field if we take it as an inspiration for broadening our approach to pain assessment, but not as a redefinition of pain.

Disclosures

The author has no conflict of interest to declare.

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