



Editorial comment

Patients' subjective acute pain rating scales (VAS, NRS) are fine; more elaborate evaluations needed for chronic pain, especially in the elderly and demented patients

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In this issue of the *Scandinavian Journal of Pain*, Pardis Zalmai and Amanda C de C Williams publish an interesting study on how a group of lay persons understand the commonly used pain intensity scales [1]. This group of medical students early in their clinical training, most likely are a more interested and better informed group of persons than the general public, illustrate that our pain-intensity scales can be misunderstood and misinterpreted.

Ever since Michael Bond and Issy Pilowsky in 1966 [2] were the first to use and publish the VAS – the Visual Analogue Scale for assessing subjectively experienced pain intensity, this instrument has been ubiquitously used and misused. The expressions “doing VAS” – “VASing” being synonymous with doing a pain-assessment, at least in the Nordic countries.

1. The NRS is equally sensitive but more practical in use than the VAS

Many mix VAS with NRS – the Numeric Rating Scale. The latter can be used without pen and paper, without sharp vision, and without ability to move the indicator on a paper, plastic, or electronic VAS-scale. It is so much easier to ask the patient: “...how bad is your pain right now – on a scale from 0 to 10, where 0 is no pain and 10 is unbearable pain, the worst pain imaginable?”

Children from around 9 to 10 years can understand and respond appropriately. Elderly patients and patients soon after waking up from anaesthesia and surgery usually understand and respond reliably [3,4]. The NRS is equally sensitive to changes in pain intensity as the VAS [4,5] and NRS and VAS scales are more sensitive to changes than VRS – verbal rating scales using verbal descriptions like mild, moderate, severe, and excruciating pain [4]. The NRS is preferred because it is so much easier to understand and use [1]. But I observe again and again that even well informed nurses and

physicians use the verbal NRS-scale, but report that they are using a VAS-scale for pain assessment.

2. What does VAS = 100 and NRS = 10 mean?

The upper end of these scales is often defined as “the worst pain imaginable”. But this must vary a lot from patient to patient because most of us will relate this “worst pain imaginable” to episodes of severe acute pain that we may have experienced before [1]. For women who have children, they will relate this to the pain during delivery of a baby. For others this “worst pain imaginable” may relate to pain after an accident, tooth-ache, low-back pain, headache, etc. This must vary a lot. In the clinic I try to explain NRS = 10 as pain that is so severe that if effective relief is not provided soon, acute pain with intensity NRS = 10 will cause the patients to seriously consider suicide.

3. Remembering what pain was like yesterday is unreliable

Our memory of pain is unreliable and depends on a number of confounders: Has pain relief been effective? Nausea, lack of sleep, meaning of the pain – is it related to cancer, to an episode of serious, even life-threatening medical event? Did treatment relieve the pain well, but left the patient with nausea, even vomiting severely?

Our memory-functions may not serve us reliably if we are asked to estimate “average” pain during the last 24 h? Or even worse – ask the patient to estimate average pain during a whole week [6].

4. Suffering from chronic pain and its consequences

The subjective experience of acute and short-lasting pain can be well characterized by the intensity of pain assessed with a VAS or NRS score. However, patients suffering from pain that goes on for month after month have difficulties expressing the degree of suffering from the pain condition with a simple pain intensity-scale: “my pain is at least 15, or even 20 at times” is a not unusual response from a patient who suffers from the many consequences of “chronic” pain: anxiety and fear of what the future will bring,

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depression, worries about work, worries about economy and family relations, disappointments from lack of relief by multiple failed therapies [7]. More in-depth evaluations are needed, observing the many negative bio-psycho-social aspects of chronic pain conditions [8].

5. When communication is difficult

When the patients have difficulties expressing their suffering from pain conditions, the challenge becomes more difficult, e.g. in small children and in the elderly patients [9].

The most neglected patients with chronic pain are the elderly, frail (mostly women) with increasing degrees of dementia. And because their expressions of pain and other burdensome symptoms are limited, treatment becomes difficult.

Bettina Husebø and her co-workers at the University of Bergen, Norway developed an evaluation instrument based on observing the patients with dementia during nursing care: the *MOBID-2, the Mobilization-Observation-Behaviour-Intensity-Dementia Pain Scale* that has proved to be useful and highly reliable and sensitive in documenting changes with effective treatment [10,11].

Conflict of interest

None declared.

References

- [1] Zalmay P, Williams ACDC. How do medical students use and understand pain rating scales? *Scand J Pain* 2017;15:68–72.
- [2] Bond MR, Pilowsky I. Subjective assessment of pain and its relationship to the administration of analgesics in patients with advanced cancer. *J Psychosom Res* 1966;10:203–8.
- [3] Breivik H, Borchgrevink PC, Allen SM, Rosseland LA, Romundstad L, Breivik-Hals EK, Kvarstein G, Stubhaug A. Assessment of pain. *Br J Anaesth* 2008;101:17–24.
- [4] Breivik EK, Bjornsson GA, Skovlund E. A comparison of pain rating scales by sampling from clinical trial data. *Clin J Pain* 2000;16:22–8.
- [5] Skovlund E, Breivik H. Analysis of pain-intensity measurements. *Scand J Pain* 2016;13:123–4.
- [6] Broderick JE, Stone AA, Calvanese P, Schwartz JE, Turk DC. Recalled pain ratings: a complex and poorly defined task. *J Pain* 2006;7:142–9.
- [7] Williams ACDC, Davies HTO, Chadury Y. Simple pain rating scales hide complex idiosyncratic meanings. *Pain* 2000;85:457–63.
- [8] Hadjistavropoulos T, Craig KD, Duck S, Cano AM, Goubert L, Jackson P, Mogil J, Rainville P, Sullivan M, de C Williams AC, Vervoort T, Dever Fitzgerald T. A biopsychosocial formulation of pain communication. *Psychol Bull* 2011;137:910–39.
- [9] Hadjistavropoulos T, Breau LM, Craig KD. Assessment of pain in adults and children with limited ability to communicate. In: Turk DC, Melzack R, editors. *Handbook of pain assessment*. 3rd ed. New York: Guilford Press; 2011. p. 260–80.
- [10] Husebo BS, Strand LI, Moe-Nilssen R, Husebo SB, Ljunggren AE. Pain in older persons with severe dementia. Psychometric properties of the Mobilization-Observation-Behaviour-Intensity-Dementia (MOBID-2) Pain Scale in a clinical setting. *Scand J Caring Sci* 2010;24:380–91.
- [11] Sandvik R, Selbaek G, Seifert R, Aarsland D, Ballard C, Corbett C, Husebo BS. Impact of a stepwise protocol for treating pain on pain intensity in nursing home patients with dementia: a cluster randomized trial. *Eur J Pain* 2014;18:1490–500.