

Assessing Pain in Older People With Persistent Pain: The NRS Is Valid But Only Provides Part of the Picture

Bradley M. Wood,^{*} Michael K. Nicholas,^{*} Fiona Blyth,^{*,†} Ali Asghari,^{*,‡}
and Stephen Gibson^{§,¶}

^{*}*Pain Management Research Institute, University of Sydney at Royal North Shore Hospital, Sydney, Australia.*

[†]*School of Public Health, University of Sydney, Sydney, Australia.*

[‡]*School of Psychology, Shahed University, Tehran, Iran.*

[§]*National Ageing Research Institute, Royal Melbourne Hospital, VIC, Australia.*

[¶]*Caulfield Pain Management and Research Centre, Caulfield, VIC, Australia.*

Abstract: This study examined the assessment of pain intensity and pain distress with the Numerical Rating Scale (NRS) in elderly patients (age >60 years) with persistent pain. A consecutive sample of 800 elderly patients were categorized by age into 3 groups: 61 to 70 years (n = 366), 71 to 80 years (n = 308), and 81 years and over (n = 126). Participants completed 3 Numerical Rating Scales assessing current pain intensity, and both the usual level of pain and average pain distress in the preceding week. The failure rate for scale completion was low for all scales for all age groups, but was significantly higher in the oldest group compared to the youngest group for the scales assessing current pain intensity and average pain distress in the preceding week. The NRS was shown to be a reliable and valid measure of pain intensity and pain distress in all these age groups. Distress related to pain appeared to be specific to the pain experience and was only weakly related to more generalized affective distress. These findings confirm that measures of pain intensity and pain distress, like the NRS, capture only part of the pain experience in older patients and should be supplemented by other measures in the assessment process.

Perspective: This article confirms the utility of the Numerical Rating Scale (NRS) as a measure of pain intensity and pain distress in elderly patients with persistent pain. The use of a large sample increases confidence in the psychometric soundness of the NRS with this population.

Crown Copyright © 2010 Published by Elsevier Inc on behalf of the American Pain Society

Key words: Persistent pain, elderly, assessment, numerical rating scale.

There is recognition that the population in most western societies is aging. Additionally, the prevalence of persistent pain increases with age, at least until the seventh decade.^{2,6,10,15} The Initiative on Methods, Measurement, and Pain Assessment in Clinical Trials (IMMPACT)^{9,35} identified pain intensity as an essential part of a multidimensional pain assessment, along with physical and emotional functioning. The most frequently used scales to assess pain intensity include the Visual Analogue Scale (VAS), Verbal Rating

Scale (VRS), Verbal Descriptor Scale (VDS), and Numerical Rating Scale (NRS). Interestingly, although there is a great deal of research on these pain-assessment methods in persistent pain populations generally, close examination of most studies reveals that much of this work has been based on patients under 65 years of age.²¹

The increasing number of older adults with persistent pain has led to a call for more effective pain management for this population.¹ However, this assumes there are readily available measures of pain experience that are valid and reliable for this age group. As pointed out by the IMMPACT group, this means that assessment measures should be psychometrically sound, standardized in older adult populations, time efficient, and not an excessive burden on the patient.^{9,14,35} The reliability and validity of the most frequently used scales in older patient samples has been demonstrated,^{7,16,18,20,31,37} however, methodological shortcomings, such as small sample sizes, prevent confident conclusions being drawn regarding the suitability of these measures for

Received December 11, 2009; Revised January 21, 2010; Accepted February 24, 2010.

Supported by a grant from the Australian Health Ministers Advisory Council (Grant: AHMAC PDR 2005/08).

Address reprint requests to Bradley M. Wood, Pain Management Research Institute, Royal North Shore Hospital, St Leonards, NSW 2065, Australia. E-mail: [bmwood@nscchs.health.nsw.gov.au](mailto:bmwwood@nscchs.health.nsw.gov.au)

1526-5900/\$36.00

Crown Copyright © 2010 Published by Elsevier Inc on behalf of the American Pain Society

doi:10.1016/j.jpain.2010.02.025

use in older patients.¹² For example, the largest study to date³¹ employed a sample of only 157 patients whose age began at 55 years.

The assessment of pain in older adults presents special challenges. Some cognitive impairment is common in older adults and a positive association between severity of impairment and ability to successfully complete a pain-intensity scale has been reported,^{7,8,11,23,39} although there is evidence that older adults with mild-to-moderate cognitive impairment can reliably report pain.^{22,25,30,38} Other age-related issues such as sensory deficits and fatigue may also compromise the suitability of self-report measures.¹⁷

The suitability of a scale is not only determined by reliability and validity alone, but completion rates also need to be considered when examining any scale. Peters et al³¹ found that the total number of incorrect responses on a number of pain-intensity scales, including a VAS, VDS and NRS, increased as age increased, where an incorrect response was defined as more than 1 response, no response, or a response in-between 2 response categories.

The aim of this study is to evaluate the utility of a commonly used scale, the NRS, for assessing pain intensity and pain distress in 2 samples of patients aged over 60 years, attending a tertiary-level referral pain-management center. The first sample (800 patients) is much larger than those reported in previous studies and will be used to evaluate failure rates across age groups, and also the relationship between the NRS and other measures of pain intensity and affective distress. A separate sample of patients will be used to evaluate the stability of the NRS over time. Specifically, we asked the following question: Is the NRS a reliable and valid measure of pain intensity and pain distress in older patients? We hypothesized based on previous research that the NRS would be a useful measure of pain intensity and pain distress. The use of a much larger sample will increase confidence in the utility of the NRS with this population.

Methods

Participants

The study is based on a consecutive sample of 800 patients assessed at the Pain Management and Research Centre at the Royal North Shore Hospital, Sydney, Australia over a 7-year period (2001–2007). All patients attending this tertiary-level referral center were asked to complete a booklet of commonly used pain-assessment scales, including Numerical Rating Scales of pain intensity and pain distress, at their initial clinic visit. Informed consent was obtained from each subject to allow use of data from the scales for research purposes. Patients were grouped according to age into 3 groups: those aged 61 to 70 years; those aged 71 to 80 years; and those aged 81 years and over. The mean age of patients in the oldest group was 84.29 years and the oldest participant was 95 years of age. Groupings were chosen to coincide with the age groups used by Nicholas et al,²⁹ which provide normative data on the NRS in a clinical population. Additional pain history and demo-

graphic information were collected prior to this visit by self-completion questionnaires, which were mailed to patients and returned by post prior to their initial visit. The cognitive status of patients was not assessed, which is not unusual in a clinic setting. However, the patients in this sample were very likely to be high functioning, relative to other older groups, given that most lived in the community and not an institutional setting, and were able to participate in a 2- to 3-hour assessment.

A separate sample of 47 older patients (12 males and 35 females) attending the same center with a mean age of 72.74 years (SD: 5.58, range = 62–87) and median pain duration of 77 months (SD: 183.28, range = 6–775) was used to assess the stability of the Numerical Rating Scales over time. Approximately half of the patients in this sample (47.4%) were either married or in a de facto relationship, while almost 1/3 (31.6%) were widowed. Almost half (47.4%) held a post-high school qualification and most (73.1%) were retired. The majority of patients (48.6%) in this sample reported no obvious reason for the onset of their pain and almost half (43.2%) reported having “generalized pain,” that is, pain in 2 or more major sites. As with the larger sample, cognitive status was not assessed, but the patients in this sample were also very likely to be high functioning.

Determining the stability of the NRS is complicated by the varying nature of the construct it is trying to measure. Pain intensity can vary for a multitude of reasons, including the introduction of new treatments. To minimize treatment effects on pain intensity, these patients were participants in an evaluation of a pain-management program for older adults with persistent pain. They were assigned to a waitlist condition and were not active participants in the pain-management program while taking part in this study, although all continued with their current treatment.

Measures

Numerical Rating Scale (NRS)

Patients completed a total of 3 Numerical Rating Scales assessing pain intensity and pain distress. Numerical Rating Scales were used to measure current pain intensity and the usual level of pain in the preceding week. Patients were asked to rate the intensity of their pain on a 0 to 10 (11 points) scale, where 0 indicates “no pain” and 10 indicates “worst pain imaginable,” by circling a number on the scale. A third NRS was used to assess, on average, how distressing patients found their pain in the preceding week. Patients were asked to rate their average distress on a 0 to 10 (11 points) scale, where 0 indicates “not at all distressing” and 10 indicates “pain as distressing as it could be,” by circling a number on the scale. The 3 Numerical Rating Scales were printed on the same page in the booklet of pain-assessment scales given to patients at their initial clinic visit.

West Haven-Yale Multidimensional Pain Inventory (MPI)

The West Haven-Yale Multidimensional Pain Inventory (MPI)²⁴ assesses psychosocial variables relevant to the

Download English Version:

<https://daneshyari.com/en/article/5877898>

Download Persian Version:

<https://daneshyari.com/article/5877898>

[Daneshyari.com](https://daneshyari.com)