Brief Methodological Report

Assessing Pain and Mood in a Poorly Resourced Country in a Post-Conflict Setting

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Abstract

Context. Accurate pain assessment is important but presents problems in poorly resourced countries. A civil war in Sierra Leone resulted in civilian casualties with pain from deliberate amputation and other injuries.

Objectives. To examine the quality of simple pain and mood scales.

Methods. Within a pain treatment project, pain was assessed using numerical and verbal descriptor scales, and mood using visual analogue and verbal descriptor scales. The relationships between these scales (translated where necessary) were examined by comparison of pairs of measures.

Results. The overwhelming majority (99%) used the scales consistently. The verbal pain scale showed substantial discrimination between the pain words *mild/small*, *moderate/half and half*, and *severe/serious* ($F = 41.80$, $P < 0.001$). Numerical and verbal pain scales were related at a modest level (Kendall's tau-b = 0.39, $P < 0.001$, $n = 272$) and not dependent on the level of education. A smaller sample ($n = 30$) provided pain data across three assessment occasions, and both pain scales appeared sensitive to change. The 5-point verbal mood scale collapsed into three categories, with reasonable distinction between mood words ($F = 14.75$, $P < 0.001$). The visual analogue scale proved difficult to explain to civilian casualties in this setting.

Conclusion. Verbal pain and mood scales and numerical pain scales appeared to yield useful information in a post-conflict situation. This suggests that adapting these established rating scales for pain, and for mood, was useful to clinicians and acceptable to patients. J Pain Symptom Manage 2011;42:301–307.

Key Words
Rating scales, pain, mood, underdeveloped country, post-conflict, education level

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Introduction

Pain rating methods are well established in the developed world for systematic pain assessment,[1,2] but these methods cannot be assumed to apply in underdeveloped countries. Assessment is an essential feature of health care, and inadequate assessment, generally and in diverse ethnic groups, is associated with poorer treatment.[3] Sierra Leone is a resource-poor West African country with a population of approximately five and a half million and predominantly small-scale agricultural economy. It achieved independence from British colonial rule in 1961. There is a diversity of languages, predominantly Krio (based on English). Civil War started in 1991 and lasted for over a decade.[4] During the war, civilians suffered many injuries, including the organized amputation of limbs, most often of arms below the elbow. An initial assessment showed that pain problems were common,[5] leading the nongovernmental organization Médecins Sans Frontières (MSF; www.msf.org.uk) to decide to treat chronic pain in this unstable setting.

The challenge in rating pain in poorly resourced countries arises from differences in culture, education, and language. The simplest approach, translation of instruments developed in Western countries, makes the assumption that well-established measures will transfer to cultures other than that in which they were standardized.[6] Others argue that more attention should be paid to investigating shared meaning before examining psychometric qualities[7,8] and that cultural and educational differences require more fundamental examination of how measures are used.

Differences in the use of a question across cultures can arise from differences in understanding, ease of retrieving the information required to answer, and differences in forming the response.[7,8] This is particularly true of words and constructs for emotion because emphasis and differentiation can vary considerably,[9] making it hard to find equivalent terms when translating a measurement instrument. There have been consistent reports of cultural differences in distress associated with pain, even where pain intensity shows no difference.[10] Inevitably, responding to scales requires reference to implicit norms—of disability, for instance—that vary between cultures.[8] In addition, tendencies to use or avoid extremes of scales might vary systematically with cultural norms and with the dominance of collectivism or individualism.[8]

Educational level can affect use of scales.[11] Of the two African studies identified, one reported no effect of education on the use of a Yoruba-translated visual analogue scale (VAS) and verbal rating scale (VRS) by Nigerian patients with musculoskeletal pain,[12] whereas the other found that Zimbabwean maternity patients after Caesarean section only used a Shona-translated VAS and VRS consistently with one another when they had received more than seven years of education.[13]

This study in Sierra Leone investigated whether numerical and verbal pain rating scales and VAS and verbal mood rating scale, based closely on those widely used in the developed world,[1] could be used to express pain by respondents, and interpreted meaningfully by clinicians, in this poorly resourced health care setting at a time of national chaos. That is, the study aimed to investigate shared meaning. It also assessed whether responses on these scales were related to extent of education.

Methods

People with pain came from two temporary camps in the area around Freetown (capital of Sierra Leone) to a primary health care center in one of the camps. Most injuries had occurred in 1998 or 1999, up to four years before. Patients were assessed during the therapeutic consultation, usually in English but interpreted where required. Most consultations were with one of the authors (P. L.) and the remainder with a clinician supervised by him. Information also was collected by a trained local health care worker in English or in Krio (translated), using a questionnaire-based interview. The questionnaire covered demographics, pain location, pain intensity, mood, function including prosthesis use, and education level. If the patient did not understand, a health worker experienced with the questionnaire translated the clinician's questions to Krio or other dialects.

Subsequent assessments reviewed the effects of treatment[4] using the same pain and mood measures. The assessment occasions and numbers are shown in Fig. 1. Data in this study were