

The Use of Pain Assessment Tools in Clinical Practice: A Pilot Survey

Gregory J* and Richardson C

School of Nursing Midwifery and Social Work, University of Manchester, UK

Abstract

The aim of this study was to identify which pain assessment tools are used in clinical practice. The recognition and assessment of pain is essential to ensure appropriate pain management. There are a number of pain assessment scales and tools available for healthcare professionals to assist patients describe and rate their pain intensity and to help clinicians assess pain, observe behaviours associated with pain and monitor the effectiveness of pain interventions. A short self-administered questionnaire survey of nursing staff was completed by nurses attending a pain management study day at the university and a pain meeting completed the questionnaire. Although no one pain assessment rating scale was used across all the healthcare organisations represented all the nurses indicated that they used one or a number of self-report pain assessment scales in their clinical practice. The Numerical Rating Scales and the Verbal Descriptor Scale were used by the majority of nurses. The use of behavioural pain assessment scales, such as the Abbey pain assessment scale, were used by 42% of the respondents. This small survey indicates that verbal self-report pain assessment scales appear to be embedded into clinical practice, but the use of observational pain assessment tools for people with communication difficulties (including dementia) have not been adopted by the majority of organisations represented. This suggests that there is a need to increase their use in everyday clinical practice. It is important that clinical staff are aware which pain assessment scale is used in their organisation to ensure consistency. Where different pain assessment scales are used for individual patients the scale chosen for an individual patient needs to be documented and communicated to all members of the health care team to ensure consistent use.

Keywords: Pain assessment; Nurses; Observational pain assessment

Background

The formal assessment of pain is important to initiate and evaluate the effectiveness of pain treatments [1-5]. Assessment subjectivity is reduced by using an assessment tool [6]. Two types of pain assessment tools are available, 'self-report' and 'observational or behavioural' for people who cannot self-report.

Self-report

Uni-dimensional and multi-dimensional self-report tools are the most reliable measure of pain as long as the person in pain is listened to and believed [7,8]. According to Hjermstad et al. pain intensity is the most clinically relevant dimension of the pain experience; hence it is the most commonly assessed element of pain using uni-dimensional tools [8]. Pain intensity assessment tools include the Visual Analogue Scale (VAS), Numerical Rating Scale (NRS), Verbal Descriptor Scale (VDS), a Numerical Descriptor Scale (NVDS) and the Wong Baker smiley faces.

VAS, NRS and VDS are valid, reliable and appropriate for clinical use [2]. However when compared the NRS, VDS and NVDS to VAS variations in use were found [9]. Different 'anchor' descriptors were identified, although no pain was generally used at one end of the scale, a variety of phrases, such as worse pain, or worse pain experience, or worst pain imaginable and intolerable pain were used at the other extremity which suggests that comparison between studies is unreliable [9].

Pain site, intensity, description and effect on function are measured using multi-dimensional tools giving a broader perspective of the pain and how the pain is affecting the sufferer. Multi-dimensional scales include the McGill Pain Questionnaire (MPQ) [10] which is used in palliative care and for the assessment of on-going or chronic pain.

All self-report scales require the ability to: be able to interpret noxious stimuli; understand the question being asked; be able to describe pain; have a memory of painful events; and being able to attribute a score or descriptor to the pain [11]. These require complex cognitive abilities [12] which young children and adults with communication

difficulties, impaired conscious level or cognitive impairment may not possess [5]. Self-report is the default position as some people with mild to moderate cognitive impairment can self-report effectively [13] but when self-report is found to be inadequate behavioural pain assessment tools are the next best alternative.

Behavioural pain assessment tools

A number of behavioural pain assessment tools have been devised for people who can't self-report pain i.e. critical care patients and people with dementia. For example the Critical Care Pain Observation Tool [CPOT], was devised using 105 Intensive Care patients. It consists of four items and scores range from 0-8 [14].

Tools designed to assess pain in people with dementia have tended to use some or all of the six behaviours identified by the American Geriatric Society [AGS], verbalisation, facial expression, body movements, changes in interaction, and changes in activities of living and mental status changes. The Abbey Scale includes six items, producing a score ranging from 0 to 18 [15]. The tool was developed using patients with end stage dementia in 24 Australian Long Term Care Homes. It is recommended for use in the UK by the Royal College of Physicians, British Geriatric Society and British Pain Society [RCP, BGS & BPS] (2007) [16]. The Pain Assessment IN Advanced Dementia (PAINAD) has five items and produces a score out of ten. It was developed with 19 white male patients with advanced dementia in a veteran's hospital in the USA [17]. PAINAD has become popular and

*Corresponding author: Julie Gregory, Jean McFarlane Building, School of Nursing, Midwifery and Social Work, University of Manchester, Oxford Road, Manchester, M13 9PL, UK, Tel: +44 (0)161 306; E-mail: Julie.gregory@manchester.ac.uk

Received January 17, 2014; Accepted March 16, 2014; Published March 18, 2014

Citation: Gregory J, Richardson C (2014) The Use of Pain Assessment Tools in Clinical Practice: A Pilot Survey. J Pain Relief 3: 140. doi:10.4172/2167-0846.1000140

Copyright: © 2014 Gregory J, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

adopted in a variety of settings due to its simple scoring system and there are indications that it is clinically usable [18].

Many behavioural pain assessment tools for use with people with dementia have been developed and tested. Some have demonstrated a potential for detecting pain, but none have shown sufficient practical application to inform clinicians about when to provide treatments [19]. Indeed six reviews of behavioural pain assessment tools for people with dementia have been undertaken since 2005 [18]. The reviews have concluded that more work is required to establish if the use of behavioural pain assessment tools is transferrable across all care settings and whether they specifically detect and measure pain [20]. Successful use of any behavioural pain scale depends on the patient's ability to use the scale followed by careful interpretation by healthcare professionals [2].

Despite the accepted weaknesses of such tools they are an important first step in pain assessment and it is widely agreed that they should be used [11]; however there is evidence that they are not used regularly in practice [21]. This paper aims to pilot a questionnaire and explore which pain assessment tools are used in clinical practice by nurses within the North West of England.

The Study

This was a cross-sectional self-report survey pilot study using a short questionnaire adapted specifically for this study. The questionnaire comprised two sections, the first asked about organisational and clinical data and the second section asked the participants to identify which tools they use from a list of commonly used pain assessment tools similar to the one used by Gregory and Haigh [22]. The questions were piloted prior to use and was completed by a total of 132 healthcare professionals during the study [22].

The sample

A convenience sample was used and involved two groups of nurses:

one group attended the university as part of a pain management module and represented acute hospital, primary care and mental health nursing. The second was a group of hospital based nurses attending a regional pain meeting which included members of pain teams and pain link nurses.

Fifty questionnaires were circulated and 37 were returned (74% response rate). The responses represented 32 nurses from 17 hospitals, two community nurses and one working in mental health. A wide range of clinical areas were represented by the hospital nurses (Table 1).

Two respondents did not indicate where they worked. Three hospitals had five or more representatives, three had two and the remaining eleven hospitals had one representative completing the questionnaire.

Self-report pain scales

Self-report pain scales were used by all the respondents with eleven different scales being used either alone or in a combination (Figure 1).

The NRS (0-10) alone was used by a total of nine respondents and in combination with the faces scale by a further eight. The NVDS was used alone by seven nurses and the VDS alone by a further two. Combinations of VDS and NRS were indicated as well as VDS with NRS and faces. Eight respondents indicated a combination of three or more scales. Five nurses at the pain meeting worked with an Acute Pain Service and two of these nurses indicated that they used up to four self-report pain assessment scales, one used two scales and one used one scale.

Three of the hospitals had five or more responses. Although there were similar pain assessment tools used consistently at each hospital, within the small sample there is evidence of a variety of pain assessment scales used with each hospital (Table 2).

	Surgical	Medical	Theatre	ICU	Acute pain service	ED	Community	Detox Unit
Pain Meeting	9	1	2		5	1		
University Study day	6	6		1		3	2	1
Total	17	7	2	1	5	4	2	1

Table 1: The clinical areas represented by the respondents.

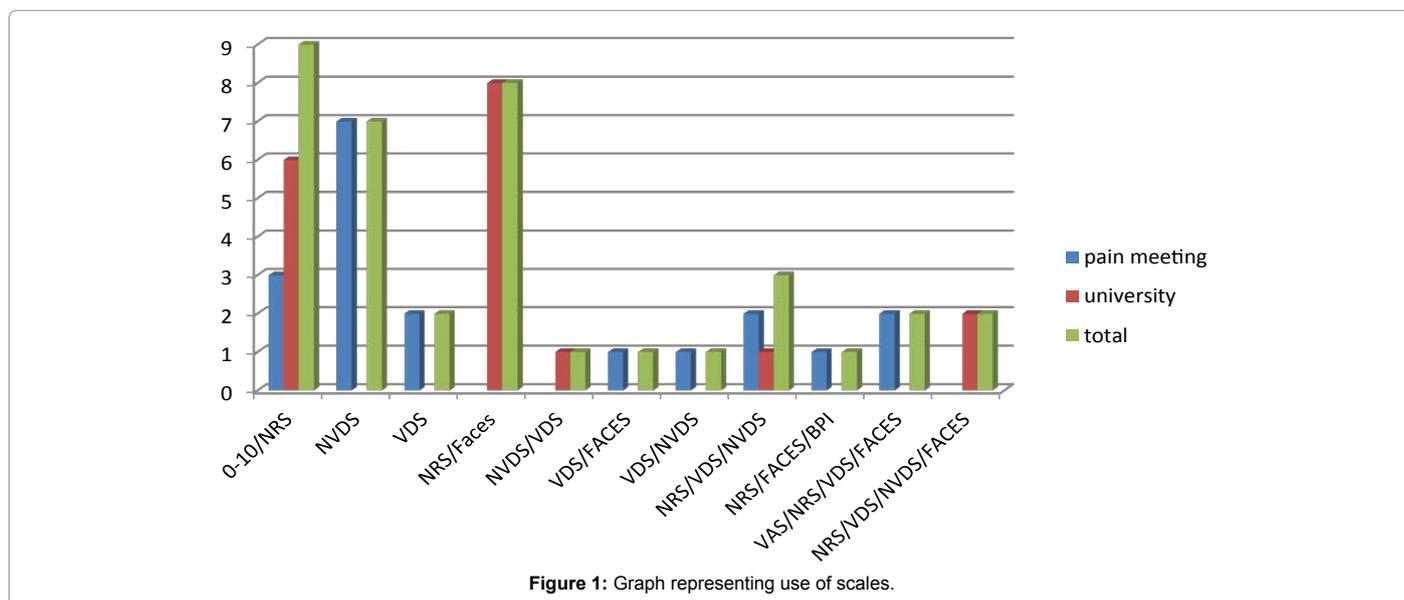


Figure 1: Graph representing use of scales.

Hospital A		Hospital B		Hospital C	
Pain scale	Number of respondents	Pain Scale	Number of respondents	Pain scale	Number of respondents
0-10 Scale	2	0-10	1	NRDS	2
0-10 /faces	4	NVDS	4	VDS	1
0-10/VDS/ Faces	2			VDS/FACES	1

Table 2: The use of pain assessment scales at three hospitals.

BEHAVIOURAL SCALE	ABBEY	PAINAD	FLACC	ICU	ABBEY & ICU	NONE
Pain meeting	10	1	1		2	5
University		1		1		17
Total	10	2	1	1	2	22

Table 3: Behavioural pain assessment tools used.

Behavioural or observational pain assessment tools

Sixteen (42%) respondents indicated that they used a behavioural or observational pain assessment tool. Only two of these were from the University pain module. The community nurses did not use an observational tool.

Four behavioural pain assessment tools were identified, the Abbey, PAINAD (Pain Assessment IN Advanced Dementia), FLACC (Faces, Legs Arms, Crying Consolability) and ICU assessment tool (Table 3).

Three hospitals use the Abbey pain scale. Nine of the respondents represented two hospitals suggesting its widespread use in those hospitals. The tenth respondent from a third hospital remarked that although she had seen it used it was 'not routinely used' in that hospital. The two nurses that indicated they used the PAINAD did not record which hospital they represented hence it can be deduced that up to five of the sixteen hospitals (31%) represented by the sample use a behavioural or observational pain assessment tool for people with communication problems and or cognitive impairment. Four of the five Acute Pain specialist nurses indicated the use of observational assessments; three used the Abbey and the fourth FLACC.

Discussion

The results of this small survey show that verbally administered self-report pain assessment scales of pain intensity are routinely used in clinical practice by the nurses attending a study day and a pain meeting, suggesting that they have become an integral aspect of nursing care. This is supported by the findings of a project from a hospital within the region that 98% of charts had a score recorded following a quality improvement initiative [23].

The review by Hjermstad et al. [9] identified a number of self-report pain assessment scales and found that no one pain assessment scale could be recommended above another. This survey supports that assumption as we found that various tools were in regular use across our sample. The most consistently used scale was the NRS. This scale is: easy to use; valid; reliable; able to measure small changes in pain intensity and has a high compliance [9,24]. The numerical verbal descriptor scale (NVDS) and the verbal descriptor scale (VDS) were also widely used. They are also valid, easy to use and there is some evidence that suggests they may be preferred by the elderly and less educated people [9]. The Wong Baker faces scale tended to be used alongside other scales. This scale was developed for use in children and has been adopted for use in (but not validated for) people with language and communication problems and patients with cognitive impairment, including dementia [25]. Our survey indicates that when communication is difficult the nurses additionally use this scale to help assess pain.

Nearly half of the sample indicated that they used one self-report pain assessment scale only. This practice is supported by Young et al. who

described the need for uniform pain scales to assess pain appropriately. The pain assessment tool needs to be easy to use by the health care professionals and understood by patients' [26], it needs to be practical and known across the hospital setting [27] because using more than one assessment scale can cause confusion and inconsistencies among staff [28]. Mohan et al. found that different scores were obtained when the VAS and NRS were administered at the same time to the same patient, and also recommended the use of one scale consistently with individual patients [29]. Over 50% of our respondents indicated that they used two or more pain assessment scales although none indicated that they would use more than one scale with an individual patient, however in one hospital where four nurses responded, the VDS was used on the wards, but a NRS was used in surgical theatres. It could be argued that this inconsistency would be very confusing for patients.

There is some indication that some scales are more suitable for older patients and people with communication problems. Aveyard and Schofield [30] advocate adopting a pain assessment scale that is suitable for an individual patient. Lukas et al. supports this suggesting that a toolbox of pain assessment scales should be available for use in individual patients [13]. Our survey indicates that some of the nurses have adopted the use of up to four self-report pain assessment scales. This has implications for practice to ensure that the pain scale chosen for an individual patient is used consistently by all members of the healthcare team.

Three respondents indicated the use of an observational tool in ICU, but they did not specify which tool was used. Pain assessment items observed on critical care tools are similar to the behaviours observed for people with cognitive impairment and dementia. One of our respondents said that they used the FLACC which was devised for use in children under seven following surgery but is often used in ICU or critical care environments even though it has not been validated for use in cognitively impaired elderly patients or tested on adults in critical care [31].

The results of this survey support the findings of Manias that observational or behavioural pain assessment tools are not routinely used in everyday clinical hospital or community practice. This may be due to an inherent suspicion that the tools may not be measuring pain. The Abbey scale was the most used by respondents to our survey. Three of the sixteen hospitals used the Abbey and up to two used the PAINAD. Eleven (68%) of the hospitals do not use an observational pain assessment tool for people with communication problems, cognitive impairment or dementia. The Royal College of Physicians, British Geriatric Society and British Pain Society recommended the use of the Abbey pain assessment tool for people with cognitive impairment who could not use a self-report pain assessment scale although it was developed and devised for use in long-term care or nursing home settings and there is a lack of studies using the Abbey

in acute care settings [32]. When used by a group of staff in one acute hospital setting the Abbey scale was found to be subjective and relied on knowledge of the individual being assessed [33], so training and an awareness of the individualisation of the tool are essential if it is to be used in this setting.

The results of this survey indicate that there is a need to inform and encourage the use of observational assessment tools to help identify pain in people with communication difficulties in every day clinical practice to ensure that they become embedded in a similar way to the self-report assessment tools. This is relevant with the expected increase in the number of people with dementia admitted to acute hospitals with acute medical problems [34].

The findings from our pilot study indicate that within a small number of nurses a wide variety of self-report pain assessment tools are used in practice. This suggests that there is a need for further exploration of a larger representative group of nurses from different organisations and settings in the UK to confirm the findings.

Limitations

This is a very small pilot study of nurses attending a study day and meeting about pain management. The sample used was therefore not representative, it is convenient and the respondents may be biased due to their attendance at the two pain study events. The findings of the survey are not intended to be generalised but do provide an example of the variation of scales used in practice. The survey does not address the accuracy or application of the assessment scales and tools used in everyday clinical practice.

Conclusion

This small survey suggests that verbally applied self-report pain assessment scales are available and applied in clinical practice. The NRS was used most commonly, but no one assessment scale is used universally in all the hospitals and clinical areas represented by the sample. There is an indication that many of the nurses consistently use the same assessment scale for all patients, although some nurses' use more than one self-report assessment scale possibly based on the individual patient's ability to use the scale.

There are a number of observational pain assessment tools available to assist clinicians to recognise and assess pain that were not used in clinical practice according to the nurses completing the survey. There is a need to identify which of these assessment tools is appropriate for individual organisations and to increase their use in everyday clinical practice.

Relevance to Clinical Practice

Self-report pain assessment of pain intensity appears to be embedded in everyday clinical practice. This survey suggests that there is no one accepted assessment tool in use across the organisations represented and it is important that nurses are aware which pain assessment scale is used in their organisation to ensure consistency.

When more than one assessment scale is used, the scale chosen should be appropriate for an individual patient and it needs to be documented and communicated to ensure consistency.

Observational pain assessment tools are available for patients with communication difficulties including dementia. There is a need to increase awareness of the importance of assessing pain, to examine which assessment tool is appropriate for use within an organisation

and to encourage the use of a tool to help identify pain for this group of vulnerable patients.

References

1. Bird J (2005) assessing pain in older people. *Nurs Stand* 19: 45-52.
2. Williamson A, Hoggart B (2005) Pain: a review of three commonly used pain rating scales. *J Clin Nurs* 14: 798-804.
3. Coker E, Papiouanou A, Turpie I, Dolovich L, Kaasalainen S, et al. (2008) Pain Management Practices Older adults On Acute Medical Units. *Perspectives* 32: 5-12.
4. Kumar A, Allcock N (2008) Pain in older people. Reflections and experiences from an older person's perspective. London.
5. Ruder S (2010) 7 tools to assist hospice and home care clinicians in pain management at end of life. *Home Healthc Nurse* 28: 458-468.
6. Schofield P, Dunham M (2003) Pain assessment: how far have we come in listening to our patients? *Prof Nurse* 18: 276-279.
7. Carr ECJ (1997) Evaluating the use of a pain assessment tool and care plan: a pilot study. *J Adv Nurs* 26: 1073-1079.
8. Wood S (2004) Factors influencing the selection of an appropriate pain assessment tools. *Nurs Times* 100: 42-47.
9. Hjermstad MJ, Fayers PM, Haugen DT, Caraceni A, Hanks GW, Loge JH, et al. (2011) Studies comparing numerical rating scales, verbal rating scales and visual analogue scales for assessment of pain in adults: A systematic literature review. *Journal of Pain and Symptom Management* 41: 1073-1093
10. Melzack R (1987) The short-form McGill pain questionnaire. *Pain* 30: 191-197.
11. Buffum MD, Hutt E, Chang VT, Craine MH, Snow AL (2007) Cognitive impairment and pain management: review of issues and challenges. *J Rehabil Res Dev* 44: 315-330.
12. McDonald DD, Thomas GJ, Livingston KE, Severson JS (2005) Assisting older people to communicate their postoperative pain. *Clin Nurs Res* 14: 109-126.
13. Lukas A, Niederecker T, Gunther I, Mayer B, Nikolaus T (2013) Self- and proxy report for the assessment of pain in patients with and without cognitive impairment. *Z Gerontol Geriatr* 3: 204-221.
14. Gelinas C, Fillian L, Puntillo K, Viens, Fortier M (2006) Validation of a critical care pain observational tool in adults. *Am J Crit Care* 15: 420-427.
15. Abbey JA, Piller N, DeBellis A, Esterman A, Parker D, et al. (2004) The Abbey Pain Scale. A 1-minute numerical indicator for people with late-stage dementia. *Int J Palliat Nurs* 10: 6-13.
16. Royal College of Physicians, British Geriatrics Society, The British Pain Society (2007) The assessment of pain in older people. National Guidelines. London Royal College of Physicians.
17. Warden V, Hurley AC, Volicer L (2003) Development and psychometric evaluation of the Pain Assessment in Advanced Dementia (PAINAD) Scale. *J Am Med Dir Assoc* 4: 9-15.
18. Herr K (2011) Pain assessment strategies in older patients. *J Pain* 12: 3-13.
19. Corbett A, Husebo B, Malcangio M, Staniland A, Cohen-Mansfield J, et al. (2012) Assessment and treatment of pain in people with dementia. *Nat Rev Neurol* 8: 265-273.
20. Scott S, Jones L, Blanchard MR, Sampson EL (2011) Study protocol: the behaviour and pain in dementia study (BePAID). *BMC Geriatr* 11: 61.
21. Manias E (2012) Complexities of pain assessment and management in hospitalised older people: An observational and interview study. *Int J Nurs Stud* 49: 1243-1254.
22. Gregory J, Haigh C (2008) Multi-disciplinary interpretations of pain in older patients on medical units. *Nurse Educ Pract* 8: 249-257.
23. Purser L, Warfield K, Richardson C (2012) Making pain visible: an audit and review to improve the use of pain assessment by implementing pain as the fifth vital sign. *Pain Manag Nurs* 15: 137-142.
24. Shugarman LR, Goebel JR, Lanto A, Asch SM, Sherbourne CD, et al. (2010) Nursing staff, patient and environmental factors associated with accurate pain assessment. *J Pain Symptom Management* 40: 723-733.
25. AGS Panel on Persistent Pain in Older Persons (2002) The management of persistent pain in older people. *J Am Geriatr Soc* 50: S205-224.

26. Carr ECJ (2002) Refusing analgesics: using continuous improvement to improve pain management on a surgical ward. *J Clin Nurs* 11: 743-752.
27. Young JL, Horton F, Davidhizar R (2006) Nursing attitudes and beliefs in pain assessment and management. *J Adv Nurs* 53: 412-421.
28. Bird J (2003) Selection of pain measurement tools. *Nurs Stand* 10: 33-39.
29. Mohan H, Ryan J, Whelan B, Wakai A (2013) The end of the line? The Visual Analogue Scale and Verbal Numerical Rating Scale as pain assessment tools in the emergency department. *Emerg Med J* 27: 372-375.
30. Aveyard B, Schofield PA (2007) Assessment of Pain, Chapter 4. In Schofield PA (2007) Editor, *The Management of Pain in Older People*. Wiley and Sons.
31. Marmo L, Fowler S (2010) Pain assessment tool in the critically ill post-open heart surgery patient population. *Pain Manag Nurs* 11: 134-140.
32. Schofield P (2008) Assessment and management of pain in older adults with dementia: a review of current practice and future directions. *Curr Opin Support Palliat Care* 2: 128-132.
33. Gregory J (2012) How can we assess pain in people who have difficulty communicating? A practice development project identifying a pain assessment tool for acute care. *International Practice Development Journal* 2: 1-20.
34. Alzheimer's Society (2013) *Dementia 2013 Infographic*. The hidden voice of loneliness.