



Editorial comment

Evaluation of pain in children with communication difficulties: r-FLACC translated and validated in Nordic languages



Harald Breivik^{a,b,*}, Kari Sørensen^a, Øyvind Skraastad^{b,c}

^a Department of Pain Management and Research, Oslo University Hospital, Norway

^b University of Oslo, Faculty of Medicine, Oslo, Norway

^c Division of Emergencies and Critical Care, Oslo University Hospital, Norway

In this issue of the *Scandinavian Journal of Pain* Line Kjeldgaard Pedersen and her co-workers report on two studies on the Danish version of the well known and much used tool for evaluating pain in children who have communication difficulties, the **revised Face, Legs, Activity, Cry, and Consolability – the r-FLACC** [1,2].

1. Formally testing reliability and validation of a translated version of a pain-evaluation tool

Often such tools are just translated to other languages and used in other cultures than the original. The translation may be inaccurate, or words with a similar meaning, but a different cultural context may cause a different meaning than in the original. This creates problems in that a translated version may measure different aspects of a similar issue. Results cannot be compared with results from the original version or other language versions.

There are formal ways of correctly translating a scoring system from one language and culture to another: Translation and translation back to the original can detect inaccurate translations. This will not guarantee that the translated version will function as intended: It is also necessary to evaluate the validity of the wording in the new culture, as well as reliability, e.g. that different raters reach similar conclusions and repeated assessments by the same rater result in similar results. The translated version also must be documented to have content validity, construct validity, and criterion validity when used in a population or sample of patients from the nation and culture where it is intended to be used.

2. The Danish version of r-FLACC pain score is a valid and reliable tool for assessment of postoperative pain in children with cerebral palsy (CP) after orthopaedic surgery

Line Kjeldgaard Pedersen and her co-workers first did a literature search and evaluated several pain assessment tools for

children with cognitive impairment. They concluded that the r-FLACC appeared to be the most valid and clinically feasible for children with cognitive impairment, not able to self-report pain. They therefore chose the r-FLACC to be translated and adopted for use in Denmark [1]. They followed the thorough 10 step translation process guideline from the *Translation and Cultural Adaptation Group*, documenting how important it is in order to discover subtle meaning differences even between English and Danish, both languages belonging to the same family of North-Western European languages. Translations from English to languages that are not at all related, such as the Finnish language, most likely will have more difficulties finding words that convey the same meaning as words in the English version.

Line Kjeldgaard Pedersen and her coworkers then evaluated the feasibility of using the Danish translation of the r-FLACC in patients with cerebral palsy (CP) having surgery [2]. Children with CP often have cognitive impairment, but their motor-dysfunctions may be even more problematic when evaluating pain after necessary surgery. CP-children often need a series of orthopaedic operations. Therefore, it is important that the pain evaluation tools function for these children. They emphasize that observations of abnormal behavioural reactions to postoperative pain is a necessary part of the pain evaluation. They compared the pain scores using the r-FLACC with the *Observational Visual Analogue Score (VAS-OBS)* assessed by the parents of CP-children.

Their conclusions are clear: After this formally correct evaluation, there is no doubt that the Danish language version of the r-FLACC is an effective and sensitive tool for evaluation of pain in children with CP and variable cognitive and motor dysfunctions.

3. Implications of the reliable and valid Danish version of the r-FLACC pain evaluation tool

Children in general are among the most vulnerable patients when suffering acute or chronic pain. Not only is evaluation of the intensity of pain difficult, most health care workers are also afraid of giving too much of analgesic drugs to children, for fear of over-dose-complications. Children with cognitive impairment are even

DOIs of original articles: <http://dx.doi.org/10.1016/j.sjpain.2015.06.005>, <http://dx.doi.org/10.1016/j.sjpain.2015.06.007>

* Corresponding author at: Department of Pain Management and Research, Oslo University Hospital, 0242 Oslo, Norway. Tel.: +47 95865323; fax: +47 23073690.

E-mail address: harald.breivik@medisin.uio.no (H. Breivik).

more vulnerable because it is so difficult to know how much they suffer from their pain. Verbal communication is often difficult or unreliable. It is also well known that both parents and health care workers may adapt to this pain-behaviour of children because they may think that there is nothing that can be done to relieve the pain.

Behavioural reactions of cognitively impaired children to a painful hurt may be very different from those of children with normal abilities to communicate with parents and health care personnel. It is therefore extremely valuable and important what Line Kjeldgaard Pedersen and her co-workers now have correctly translated and documented the feasibility of the r-FLACC in this especially vulnerable group of children with cerebral palsy who often need a series of surgical interventions. Orthopaedic interventions in these children are often quite painful, and the children can remain in pain for weeks after an orthopaedic corrective operation.

Translations of the r-FLACC to other Nordic languages are in use, but with varying degrees of testing for reliability and validity. Thus a Norwegian version, the FLACC-N was tested on 1–5 years old, normal children after outpatient surgery at Oslo University Hospital by Hanne Reinertsen and co-workers from Oslo and Akershus University College of Applied Sciences [3]. They found satisfactory inter-rater-reliability (2 nurses) and the tests for validities were also satisfactory. Their study and results are published in Norwegian with an English summary [3].

4. Pain evaluation at the other extreme of age: Elderly and demented inhabitants of nursing homes

It is appropriate to mention that Bettina Husebø and her co-workers at the University Hospital in Bergen, Norway, have developed a tool for evaluation of pain and the effect of pain treatment in another vulnerable group of patients who cannot communicate their pain: the elderly and demented inhabitants of nursing homes [4].

Conflict of interest

No conflicts of interest declared by any of the authors.

References

- [1] Pedersen LK, Rahbeka O, Nikolajsen L, Møller-Madsen B. The revised FLACC score: reliability and validation for pain assessment in children with cerebral palsy. *Scand J Pain* 2015;9:57–61.
- [2] Pedersen LK, Rahbeka O, Nikolajsen L, Møller-Madsen B. Assessment of pain in children with cerebral palsy focused on translation and clinical feasibility of the revised FLACC score. *Scand J Pain* 2015;9:49–54.
- [3] Reinertsen H, Christophersen K-A, Helseth S. Validering og reliabilitetstesting av smertevurderingsverktøyet FLACC. Available from: <https://sykepleien.no/forskning/2014/02/validering-og-reliabilitetstesting-av-smertevurderingsverktoyet-FLACC> (accessed 18.08.15).
- [4] Husebo BS, Ostelo R, Strand LI. The MOBID-2 pain scale: reliability and responsiveness to pain in patients with dementia. *Eur J Pain* 2014;18:1419–30.