

A Service Evaluation of Paediatric Pain Assessment Tools in a Paediatric NF 1 Out-Patient Clinic Setting

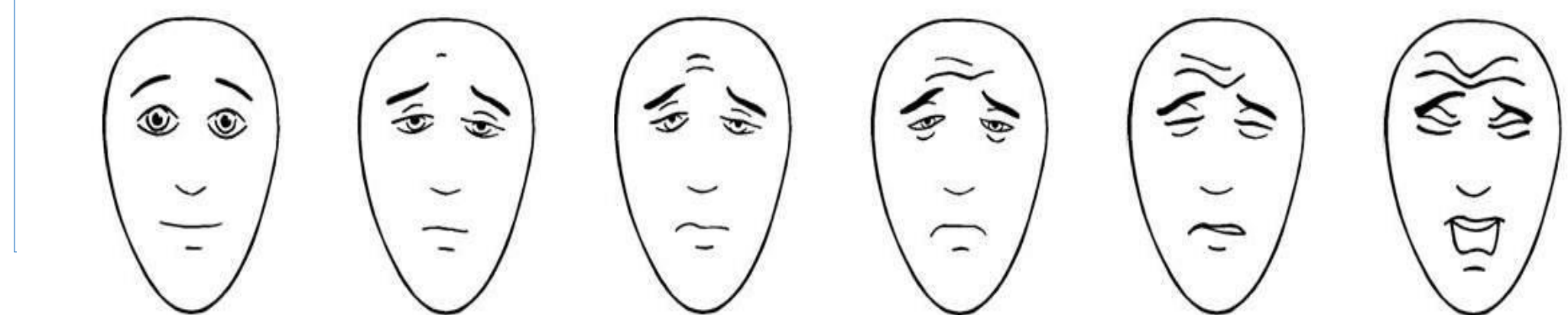
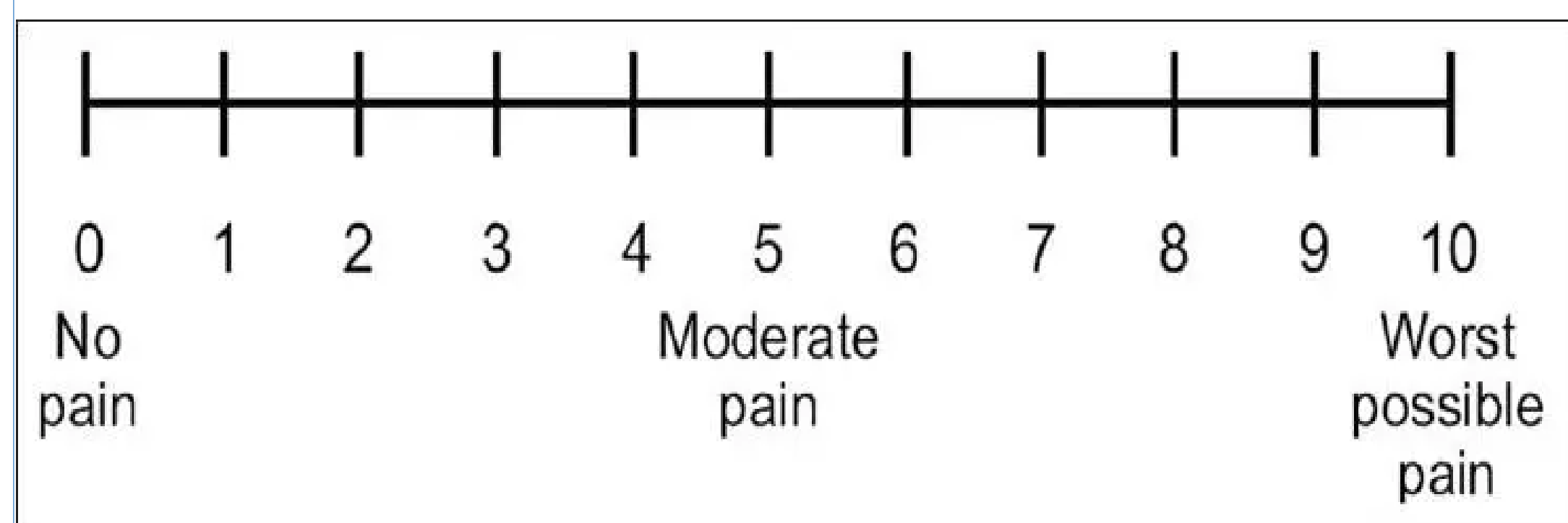
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Background

NF1 increases predisposition to pain and reporting may be challenging in the paediatric population as tools used must be validated and acceptable to children and their carers. The purpose of this evaluation was to look at pain assessment in an outpatient Paediatric NF1 clinic using three general, validated pain assessment tools.

Method

15 children aged 0-18 and their parents/carers attending the National Paediatric NF1 out-patient clinic who identified pain as an issue were assessed by the paediatric clinical nurse specialists. Both child and parent/carer scored the pain using 3 different pain assessment tools; the verbal numerical rating scale (1), the Faces Pain Scale-Revised (FPS-R) scale (2) and the FLACC scale (3) for non-verbal children or children with significant learning difficulties. The Michigan Body map (4) was used to indicate location of the pain. Evaluation of the pain assessment tools was obtained via a brief, structured, verbal questionnaire.

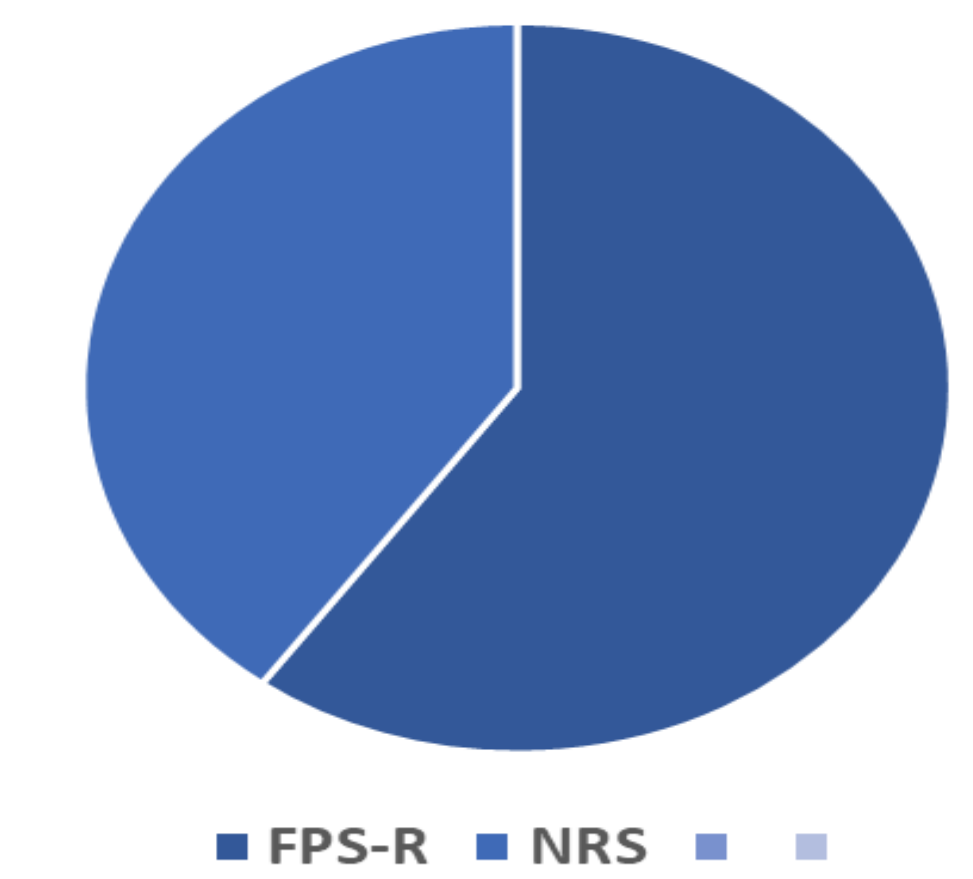


Categories	FLACC Scale		
	Scoring		
	0	1	2
Face	No particular expression or smile	Occasional grimace or frown; withdrawn, disinterested	Frequent to constant frown, clenched jaw, quivering chin
Legs	Normal Position or relaxed	Uneasy, restless, tense	Kicking or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid, or jerking
Cry	No cry (awake or asleep)	Moans or whimpers, occasional complaint	Crying steadily, screams or sobs; frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging, or being talked to; distractable	Difficult to console or comfort

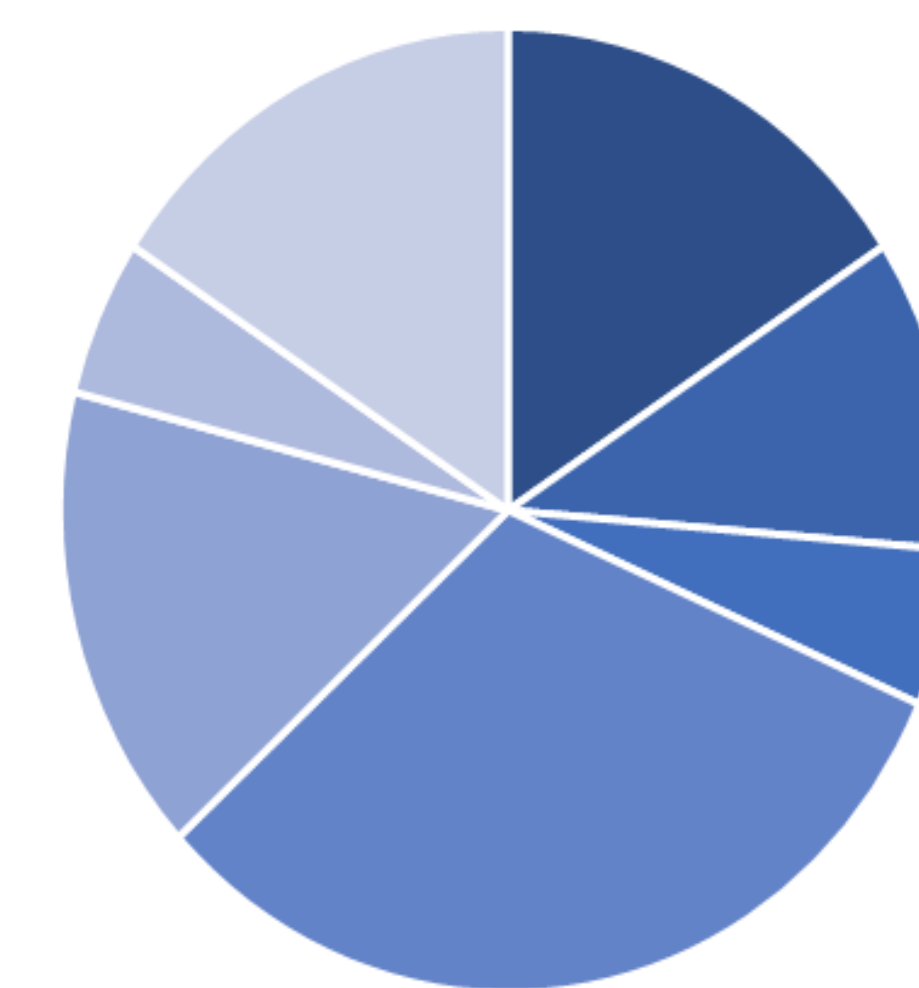
Average pain scores

	NRS	FPS-R
Child	5.2	5.3
Parent	5	4.8

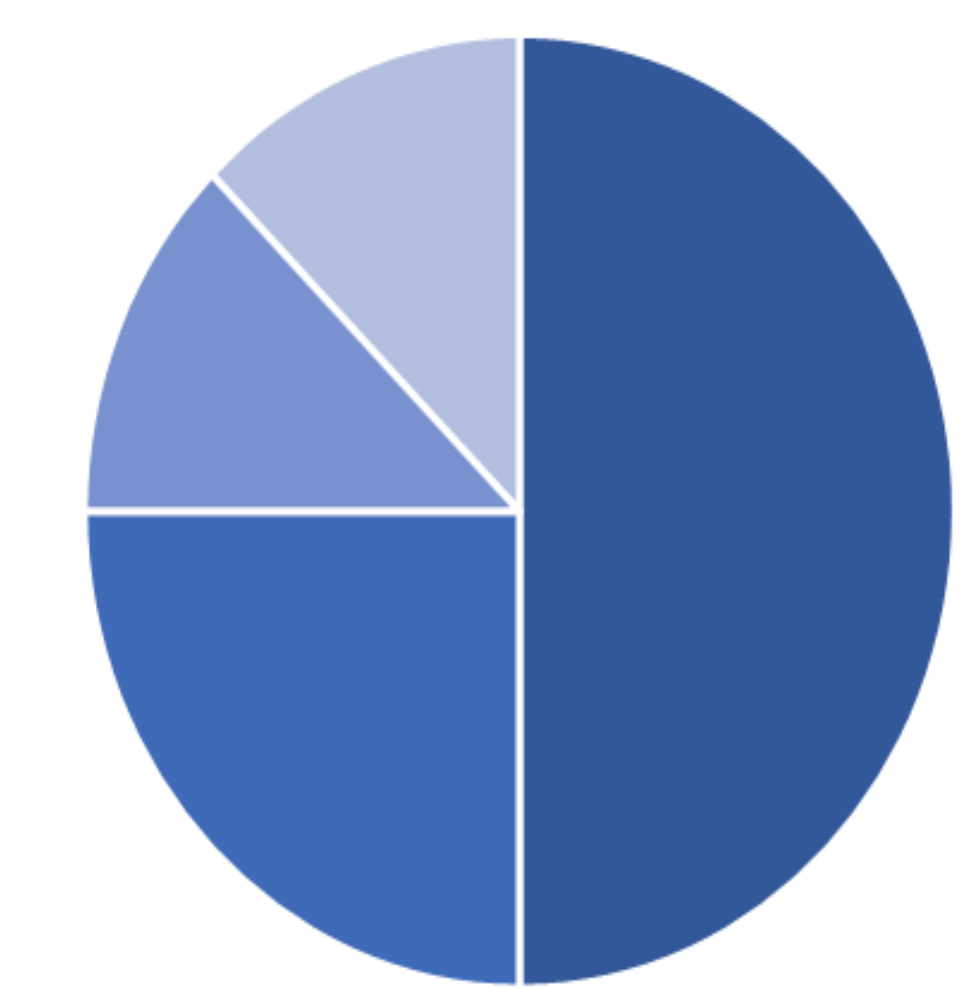
Child pain assessment tool preference



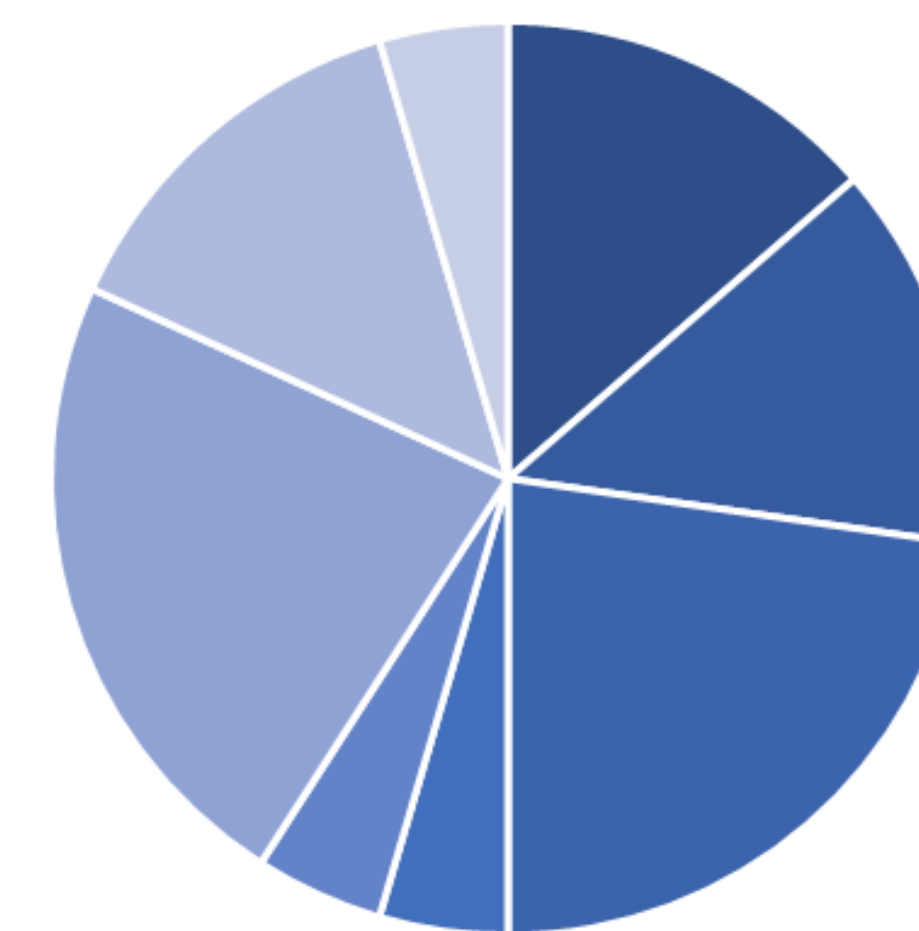
Pain Location



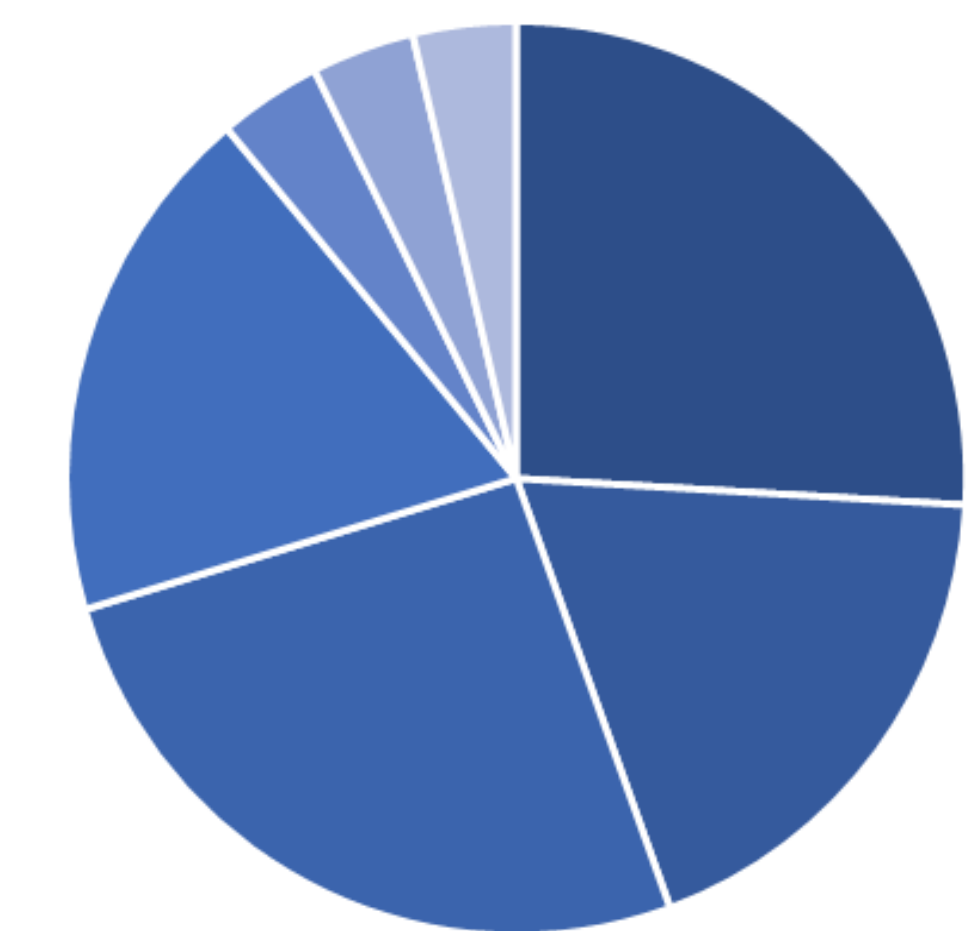
Children's reasons for liking FPS-R



Impacts of pain-child



Disabilities/difficulties



Results

15 children (9 males, 6 females; 7-18 years) and their parents were questioned. The average pain scores were 5.3 for FPS-R for children and 4.8 for parents. Average pain score for the NRS was 5.2 for children and 5 for parents. 3 parents used the FLACC scale and the average FLACC score was 6.3. Non verbal children or those with significant learning difficulties used the FLACC tool.

Parents did not identify a preference for either tool but younger children preferred the FPS-R tool. Children who liked the NRS stated it was easy to use and it can be used remotely. Parents who liked the FPS-R felt it to be more representative and easy to visualise faces especially for parents with learning difficulties. 5 Children and parents scored the same using the FPS-R and NRS but overall rated pain higher using the FPS-R. Pain was described by a range of descriptors including stabbing, pumping, tickly, funny, sore, sharp, tingling, shooting, itching.

Children had a range of disabilities and 2 parents had learning difficulties making assessment challenging.

Conclusions and future plans

Children and their carers found these tools easy to use and younger children preferred the FPS-R but older children preferred the NRS. This shows that it is important to utilise pain assessment tools that are valid, quick and easy to administer in busy out-patients settings. Future research will look at integrating further pain tools to measure the multidimensional psychosocial aspect of pain and the impact of pain holistically on the family.

References

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2. Hicks CL, von Baeyer CL, Spafford P, van Korlaar I, Goodenough B. The Faces Pain Scale - Revised: Toward a common metric in pediatric pain measurement. *Pain.* 2001;93:173-183
3. Malviya S, Voepol-Lewis T, Burke C et al. The revised FLACC observational pain tool: improved reliability and validity for pain assessment in children with cognitive impairment. *Pediatric Anesthesia* 2006; 16:258-265
4. Brummett CM, Bakshi RR, Goesling J, Leung D, Moser SE, Zollars JW, Williams DA, Clauw DJ, Hassett AL. Preliminary validation of the Michigan Body Map. *Pain.* 2016 Jun;157(6):1205-1212.