

Hearing the voice of the child: How technology-assisted approaches can help

Prof. Rachel Calam: Manchester University

Mr David Glasgow: Child & Family Training



child
and
family
training



In My Shoes system

- In My Shoes is a computer/tablet based toolkit for child interview and assessment
- Developed from analysis of children's representations/drawings
- Elicits accounts of experiences, emotions, thoughts, settings and relationships
- Evaluated in many contexts & with wide age range



In My Shoes system

Based on the drawings and extensive pilot studies developed & refined standardised symbols of:

- Sensations, especially Pain
- Feelings (i.e emotions)
- People
- Places
- Thought
- Speech
- Commentary/messages/narrative
- Degree/intensity/comparison

These have all the benefits of drawn symbols & toys, but remove vast majority of task demands and ambiguity of them

Animated or video Guides:

- Structure and standardise conversation
- Enhance collaborative interaction
- Offer cultural and/or linguistic localisation
- Improve accessibility to children with a disability



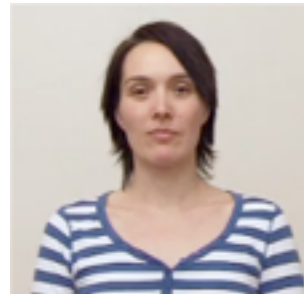
English



Swedish



Black English woman

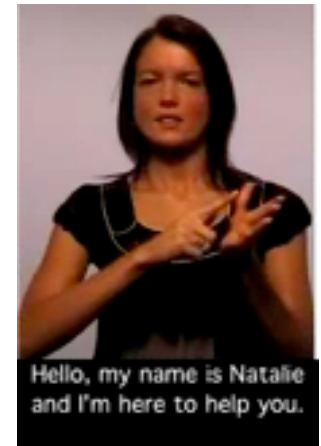


Spanish



Sign Supported

English



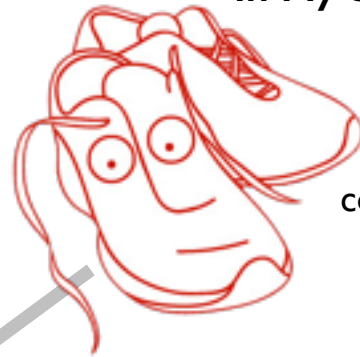
British Sign

Language

(Also Norwegian & Turkish)

In My Shoes system

In My Shoes (In My Shoes)



(1993→present)

- a comprehensive communication toolkit-
(Mac OS X & Windows)



This Much! (2013)



Backdrop (2014)



This Feeling (2015)

In My Shoes inspired apps for iPad, Windows tablets Mac OS and Windows

An Interactive Visual Analogue Scale (VAS):

- Establish capacity
- Express & prioritise goals/ preferences
- Evaluate relationships
- Quantify symptoms, wishes & preferences

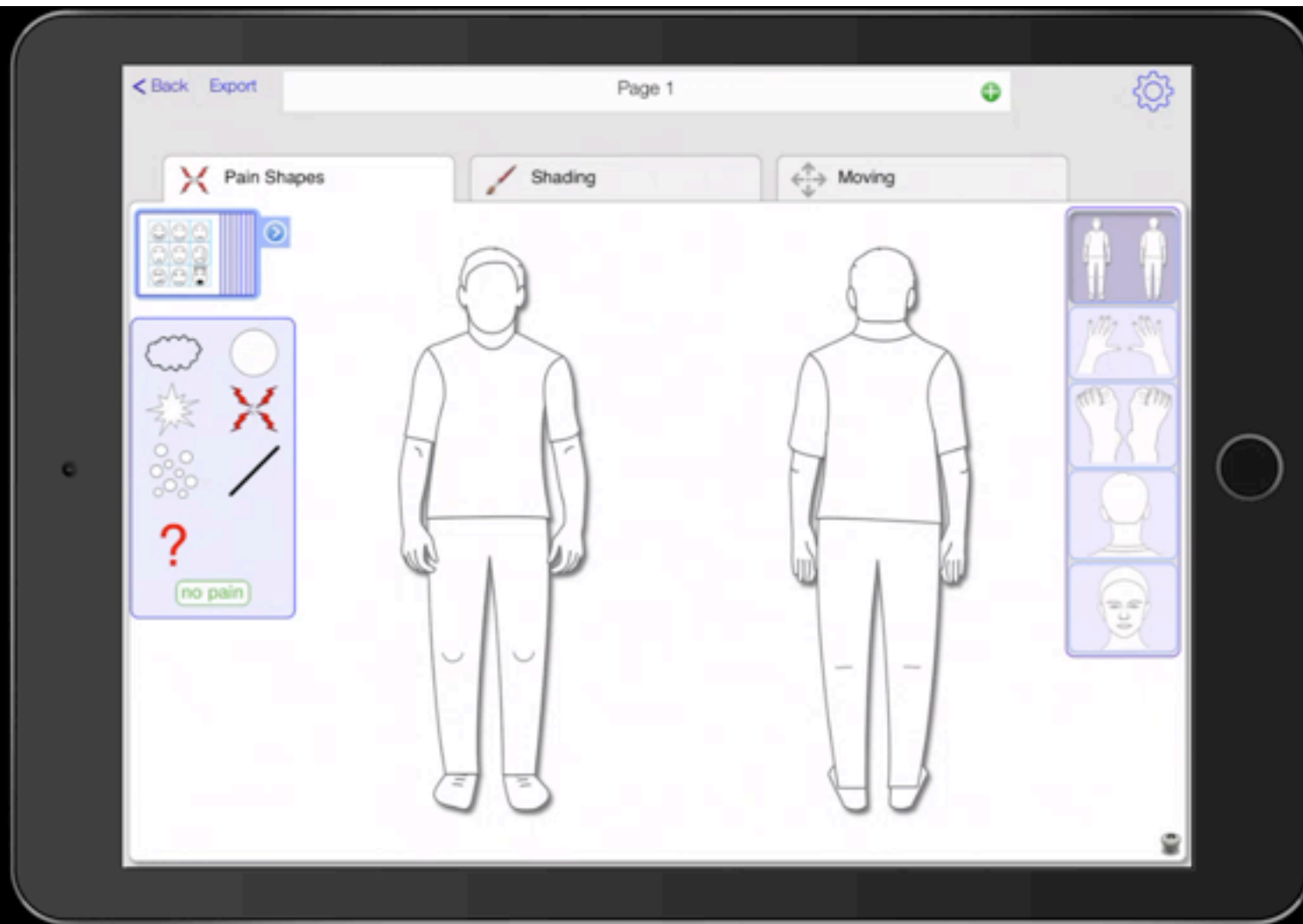
A Draw-&-Tell tool:

- Build rapport
- Enhance communication
- Establish capacity
- Scaffold narrative
- Record wishes and fears
- Describe experiences

A feelings (emotions & sensations tool)

- Locate & explore sensations (inc. pain)
- Attribute causes to injury, (including perpetrator)

This Feeling (2015)



What is the empirical evidence?

- Scope
- Usability
- Applicability
- Acceptability
- Validity & Benefit

General evidence:

- Children prefer collaborative, side by side conversations to face to face, interrogative interviews
- Eye contact can impair cognitive function in young children
- Adolescents and children on the autistic spectrum often uncomfortable with eye contact
- The ability to use symbols to represent people & objects typically develops at about 2 years (perhaps earlier)
- Conversations supported by children's drawings are more productive
- Thought and speech bubbles enhance theory of mind ability, and possibly facilitate CBT (ID)
- Children are used to screen based symbols and avatars
- Children of all ages engage very positively with apps

Evidence relating to In My Shoes & Apps:

Children's pain

Calam et al (2002b)

Account of In My Shoes development & potential in pain measurement

- Good correlation between In My Shoes and established pain measures
- In My Shoes excellent test-retest reliability

Watson, et al. (2002)

In paediatric arthritis:

- Good usability
- Good acceptability (95% of children preferred the app to traditional pain measures)
- Parents said app captured complexity of pain in a child-friendly way

Tapping et al (2015)

Professional feedback (Social workers)

Grasso et al (2013) surveyed 39 In My Shoes social worker users, in relation to a total of 592 cases.

Uses:

- 28.9% reported that they used In My Shoes regarding family placement
- 42.1% for care proceedings and reviews
- 47.4% in cases of child abuse and neglect
- 63.2% to investigate the child's experience of education and school

Overall:

- 76% of users reported that In My Shoes was either '*Very Useful*' or '*Essential*' in their work.

Autistic Spectrum disorder

Barrow & Hannah (2012) reported using In My Shoes with children with an autistic spectrum disorder (ASD). They found that some children tended to be irritated by the guide, but added:

“It might have been expected, given the difficulties associated with ASD, that participants might have found distinguishing between visual representations of themselves and others confusing. However, a number of the participants indicated that they were able to distinguish between self and other representations as illustrated in the following quotes: ‘That’s just a girl. Not me . . . It could be one of my friends’”

Validity & acceptability: Adults with learning disability

Glasgow & Crossley (2004) investigated In My Shoes and ability of patients detained in secure hospital to report the cause of significant injuries.

- Accuracy & completeness of In My Shoes as good as two other interview approaches
- In My Shoes was much preferred by interviewees.

Exploring children's experiences of a parent with bipolar disorder

Backer et al (2016) conducted a qualitative study of In My Shoes used to elicit and account of children's (6-10 yo, N=10) experiences of a parent with bipolar disorder:

- Children of all ages were able to describe their parent and the symptoms of bipolar disorder (whether the child knew about the illness or not)
- Four year old children could discuss their parent's mood and behaviour
- Children older than seven could reflect about the impact on themselves both emotionally and practically
- Both positive and negative experiences were described
- Children in two parent families were able to describe their perception of the parent without bipolar, and their role within the family
- One child talked about his father's and his own fears of becoming bipolar

Validity:

Very young children (4-5 years old, N = 23)

Bokström et al 2015 (using Swedish version) investigated the use of In My Shoes to interview children about a routine health assessment between 2 . They concluded:

“... the results suggest that In My Shoes can be used to help children to describe their health care experiences, with detail, depth and reasonably high accuracy. The children actively made use of and interacted with the In My Shoes, and held their interest for an extended period of time.”

Forensic value:

Very young children (4-5 years old, N=54)

Fängström et al 2016 (using Swedish version) compared In My Shoes with NCAC forensic interview (FI) re: accuracy, completeness and responsiveness of child:

- 96 % of the children actively made use of and interacted with In My Shoes.
- In My Shoes elicited accounts as accurate and complete as NCAC except for objects.
- In My Shoes gave significantly more information about people than NCAC

“... In My Shoes interviews were as good as best practice interviews on all accuracy measures for both age groups, except for object accuracy that was better in the forensic interview condition. Events description completeness was similar in both interview conditions; however, In My Shoes interviews generated more complete statements about people present at the visit.”

Validity:

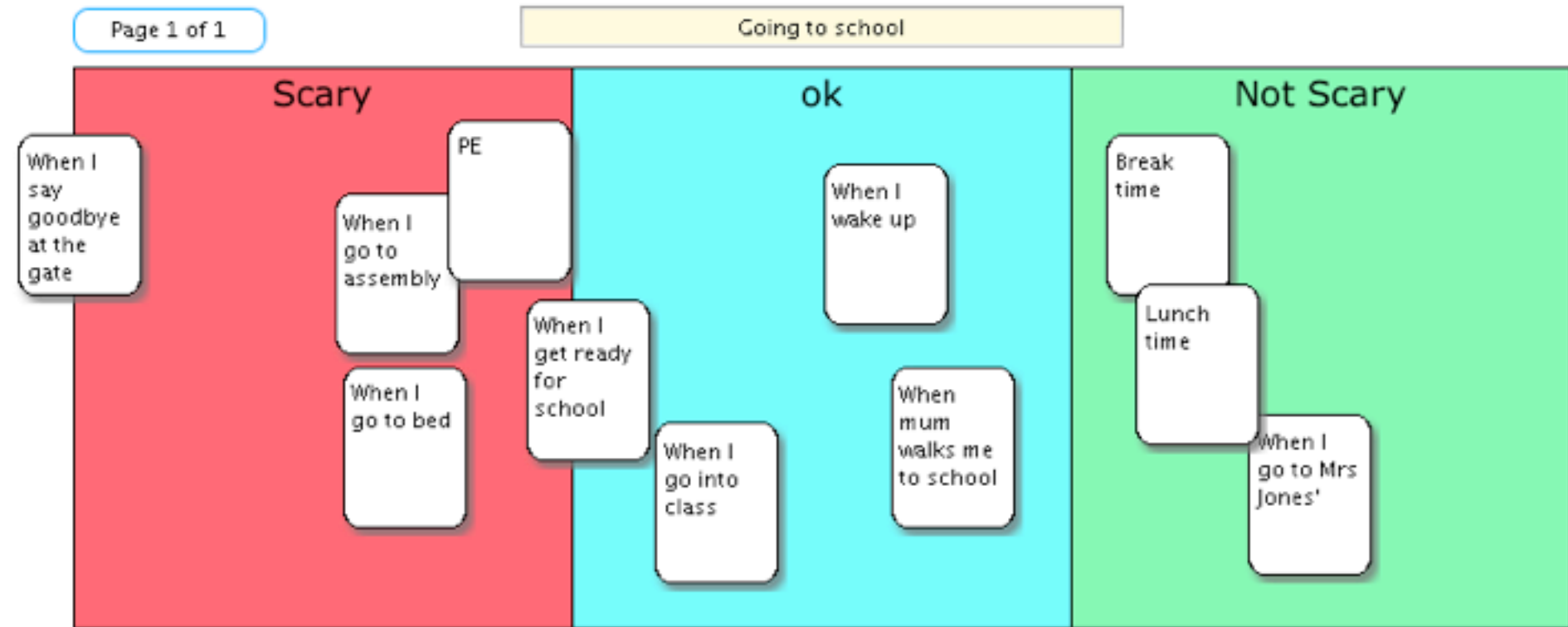
Very young children (4-5 years old, N=60)

Fängström et al 2017 (using Swedish version) compared In My Shoes with NCAC and situationally shy, with non shy children :

- Quieter, more inhibited children interviewed with In My Shoes showed a greater increase in verbal responsiveness compared with the standard interview.

“... The results showed that for the shy children in the In My Shoes group their talkativeness increased and their answer latency decreased, including the amount of encouragement the child needed to talk, while no changes were observed for the shy children in the Standard verbal interview group..”

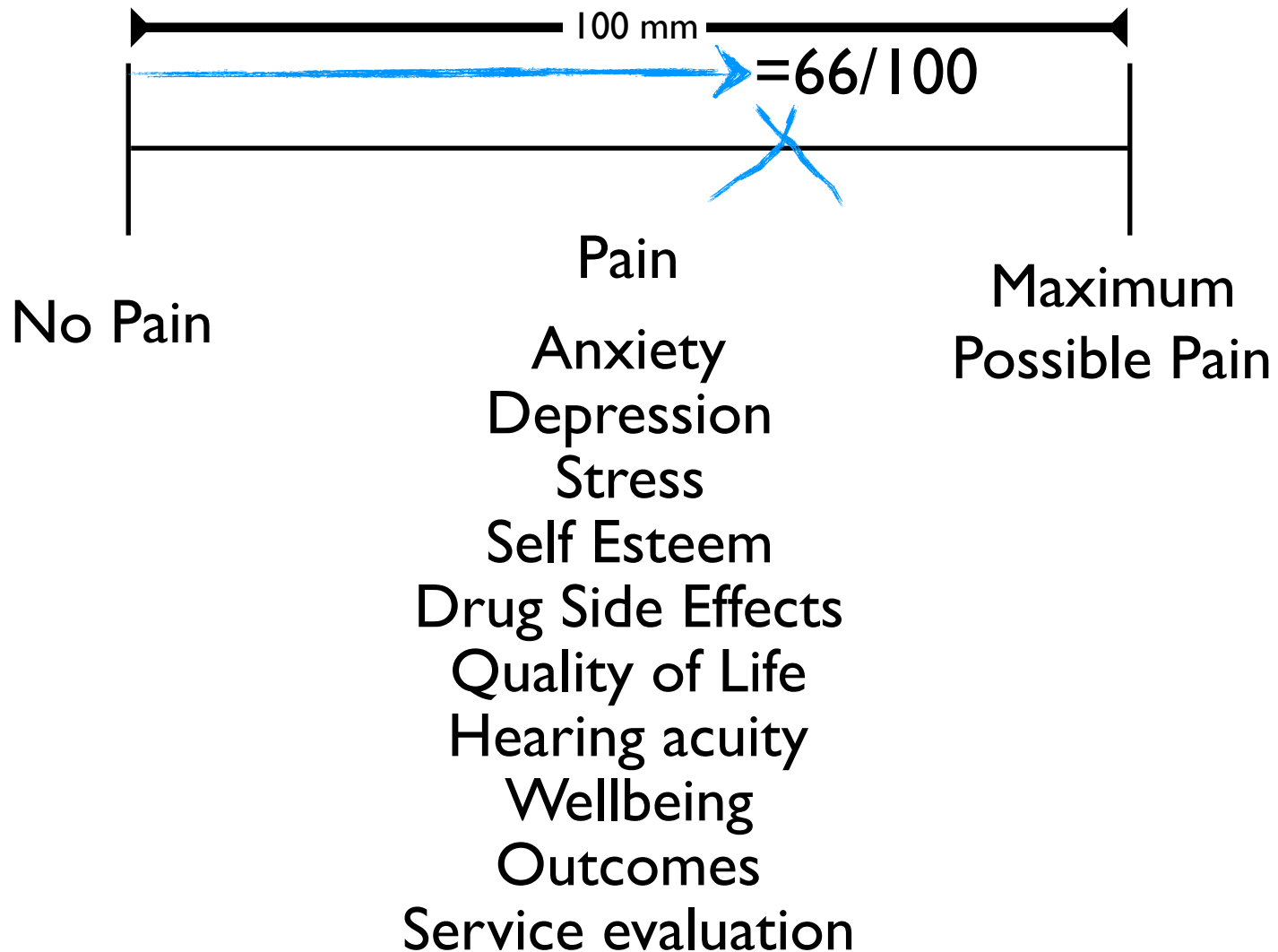
The development of 'This Much!' for touch screens



The 'Experiences' module of In My Shoes

Designed to deconstruct, explore experiences & generate hypotheses...
but so close to being a scale!

Visual Analogue Scale (VAS)



Regarding paediatric pain

“Self-reporting using the The Visual Analog Scale (VAS) is the gold standard and is the most validated tool.”

Beltramini et al, 2017

This Much! enables the same methodology to be used for any experience, attitude, feeling or symptom:

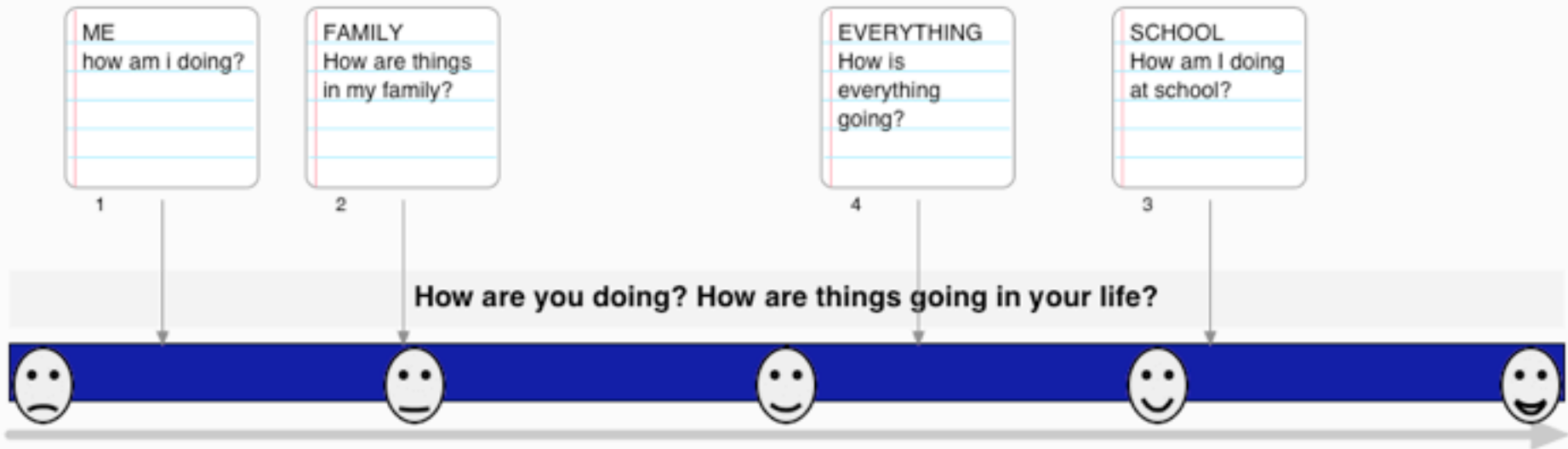
This Much Equivalent of simple pain VAS

Pointer can be moved up and down until child is satisfied position accurately reflects internal state

Quantitative data AND image saved. Latter retains accessibility for child



Multiple text pointers enable a global assessment to be administered very quickly

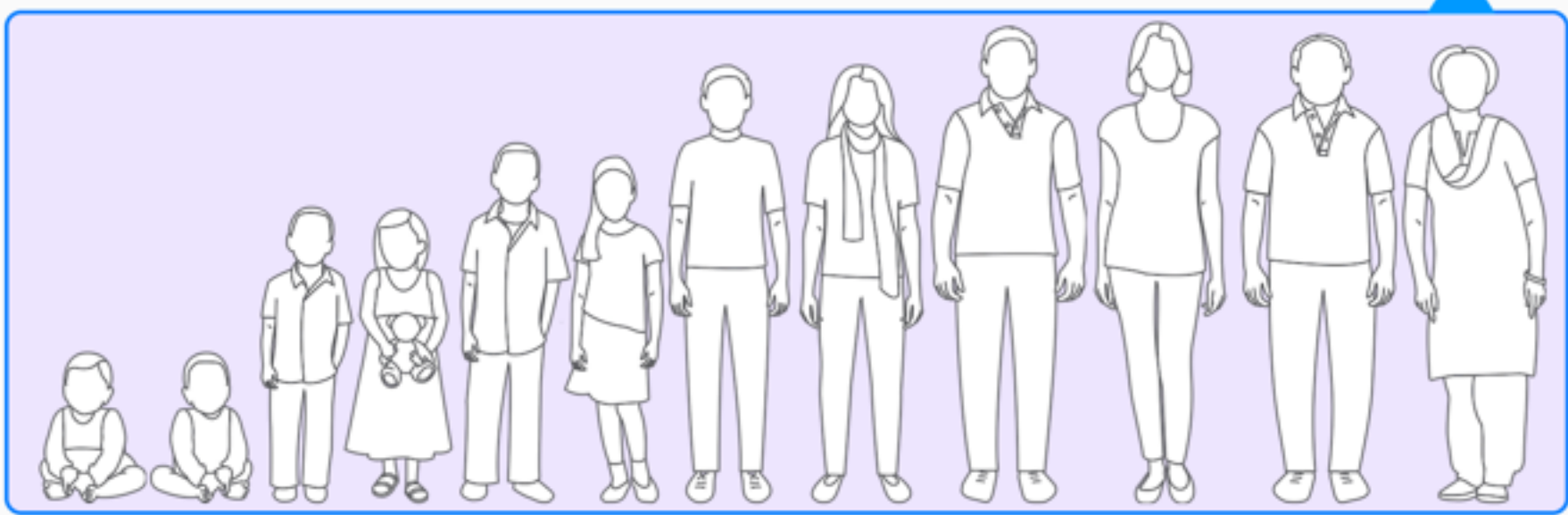


Photographs of people and places can be used...



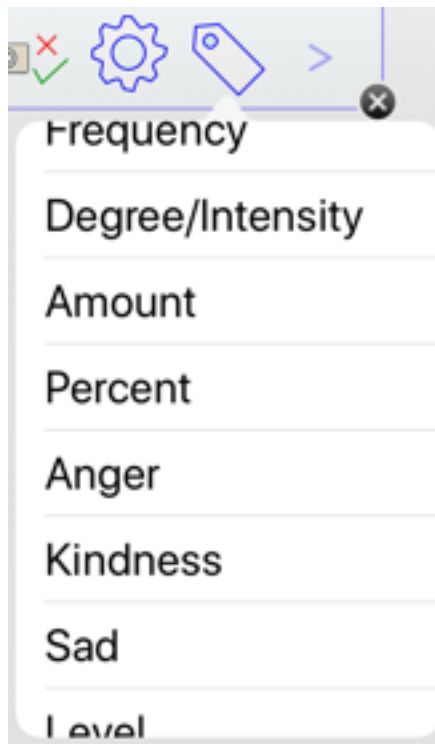
Enabling comparison of people, relationships, familiar places, 'real' emotional states etc.

Alternatively, simple line drawings of people can symbolise self and others...



Child friendly labels can be added if required

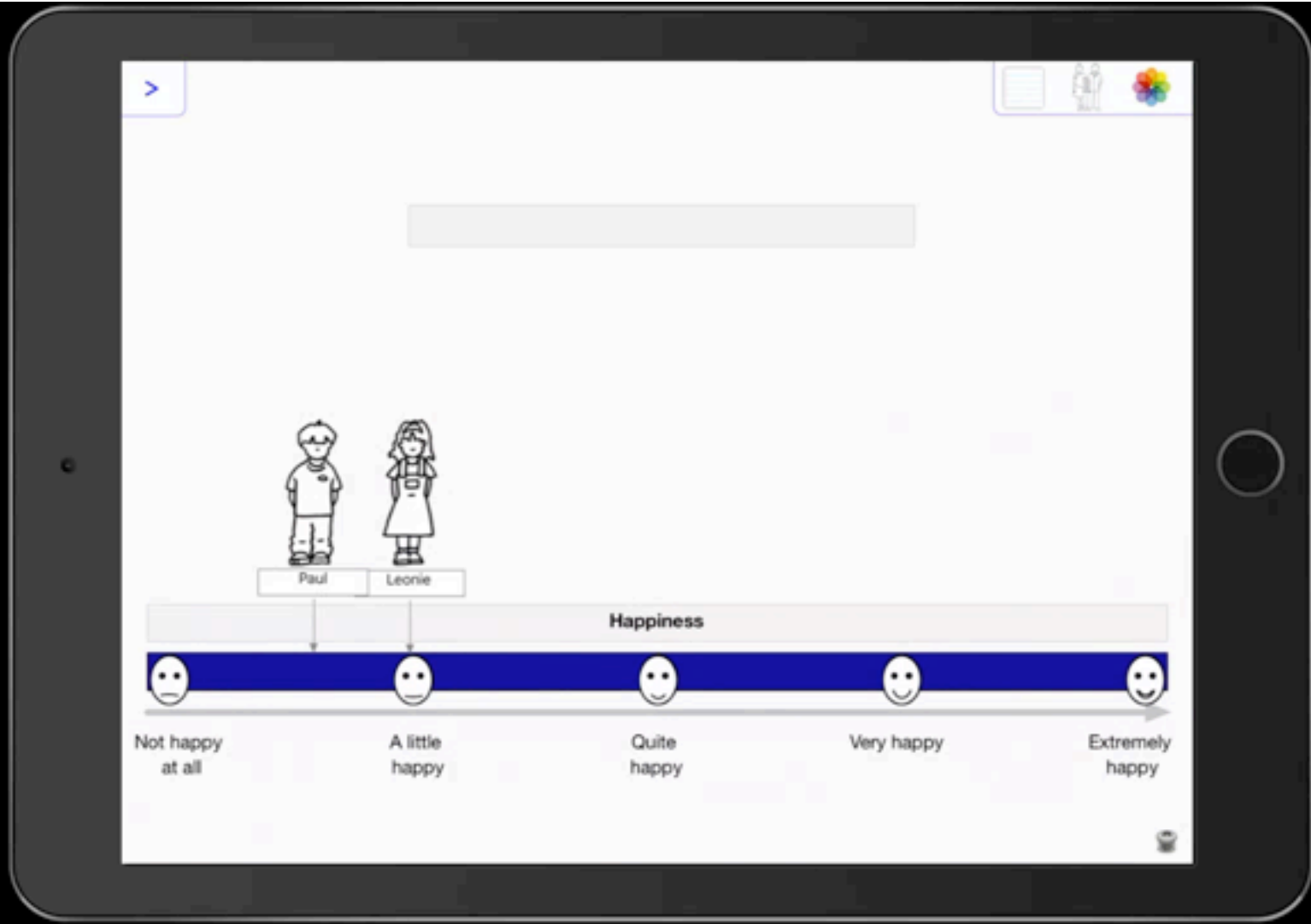
Add scale labels



Add child friendly symbols



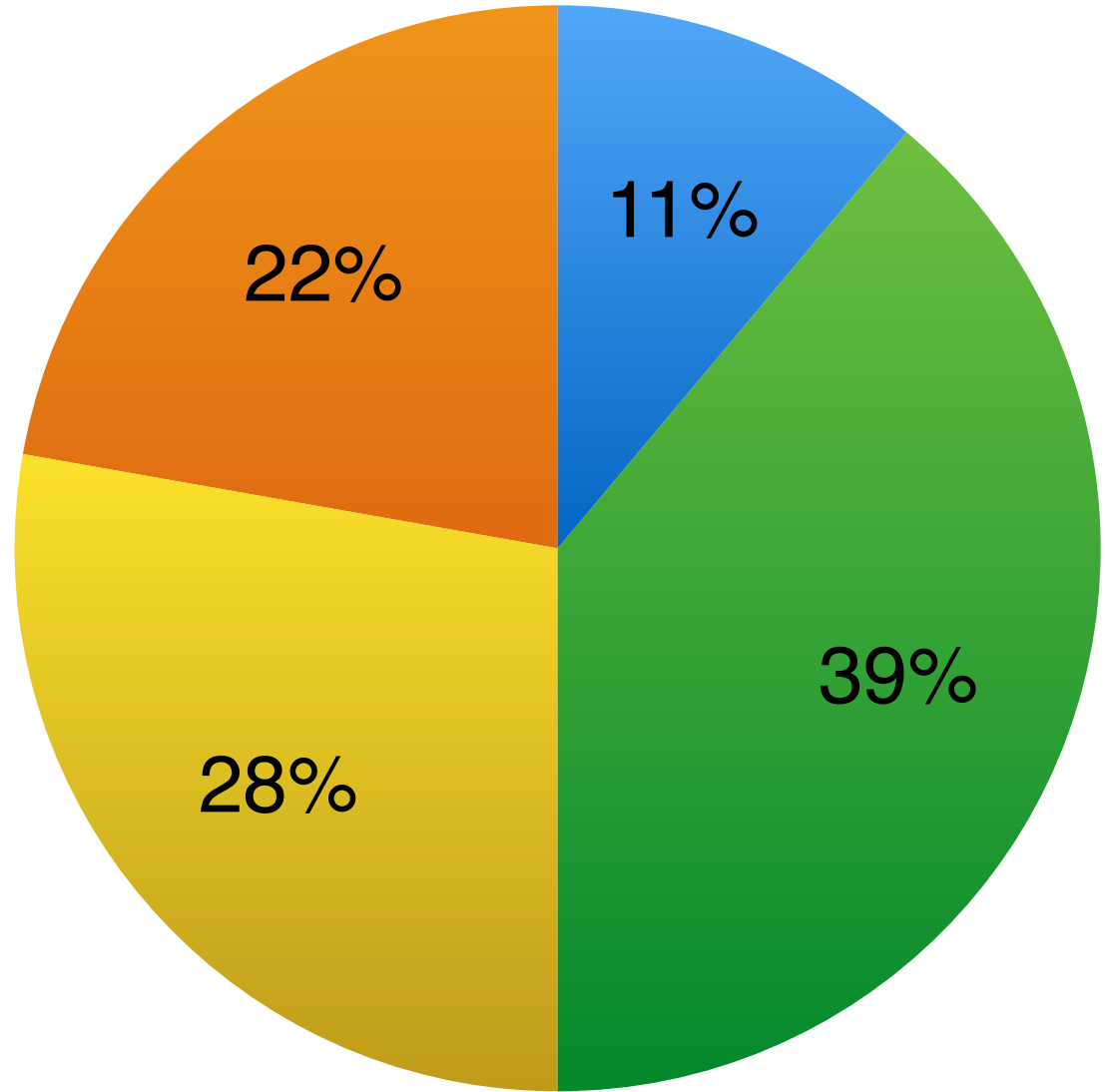
Video of the standard induction procedure to establish child's capacity to use scale



Only a small minority placed the pointer without adjusting it (often with commentary)

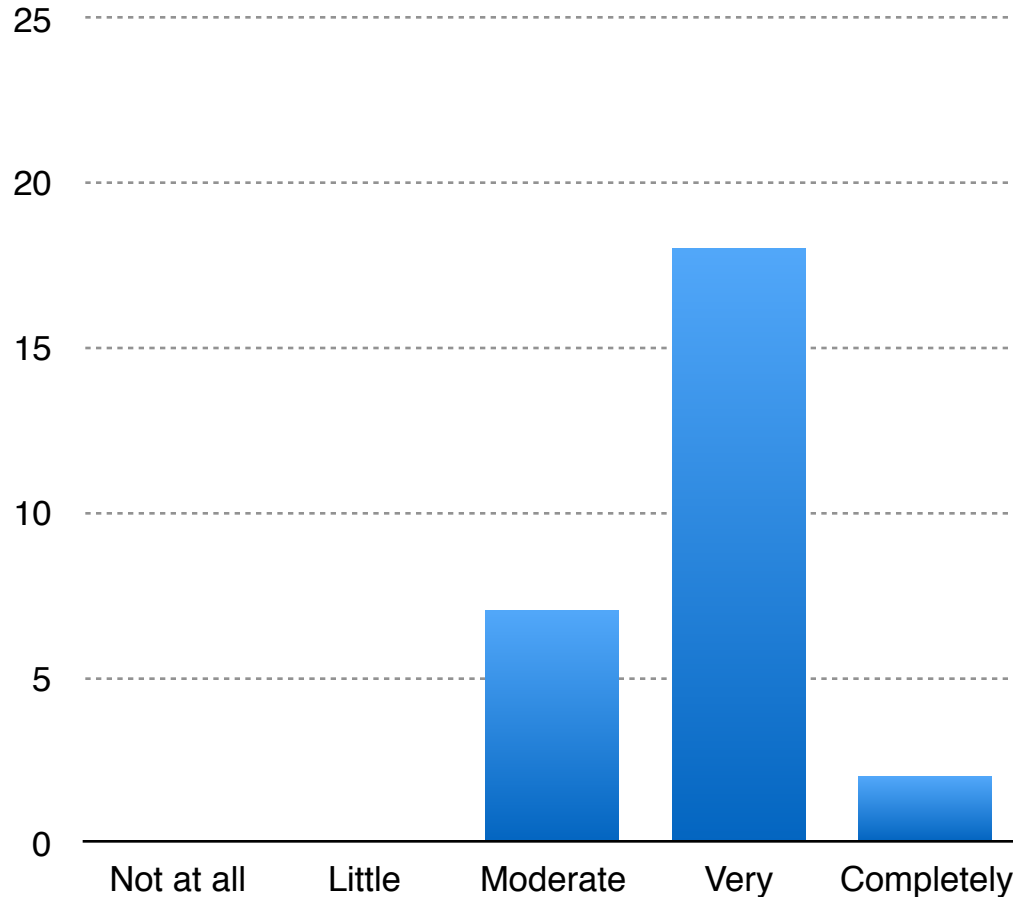
Frequency of adjustment of TM! pointer after placement (N=34)

- 0
- 1
- 2
- ≥ 3



Subjective accuracy of TM scale (evaluated using Likert scale!)

“That (indicate TM scale) is supposed to me how much X you feel. I want to know if it has done a good job. How close is it to how you feel inside?”

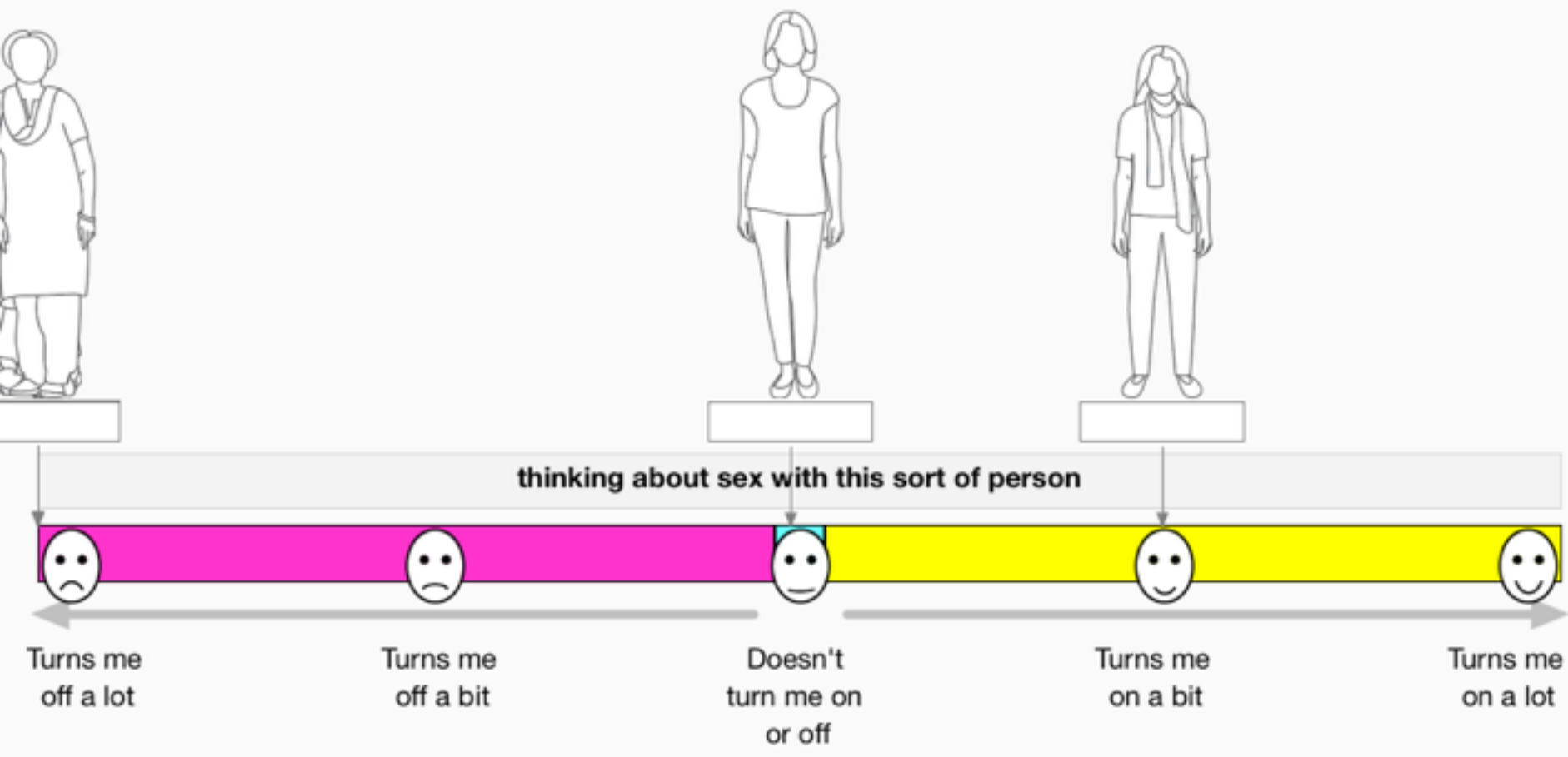


Subjective accuracy of the TM scale

Comparison between child's score on TM! and on a Likert equivalent

**Correlation between TM! and Likert
Equivalent = 0.88 (N=27)**

‘Sensitive’ scales are hidden by default, but can be accessed & used if needed. In this case sexual interest...



Child-friendly version of FRA participation rights

1. I was treated fairly
2. People listened to me
3. Someone explained things I didn't understand
4. People took notice of what I said
5. There was someone there to speak up for me
6. I felt safe and looked after
7. I was given choices about what was going to happen

Child expresses dissatisfaction before Guardian ad Litem is appointed (Quantitative data top left)

1. 0.503 I was treated fairly
2. 0.236 People listened to me
3. 0.050 People explained things i didn't understand
4. 0.235 People took notice of what i said
5. 0.385 There was someone there to speak up for me
6. 0.237 I felt safe and looked after
7. 0.386 i was given choices about what was going to happen

In my case

People explained things i didn't understand

3

I felt safe and looked after

6

There was someone there to speak up for me

5

I was treated fairly

1

Before my letter



Not at all

A Little

Medium

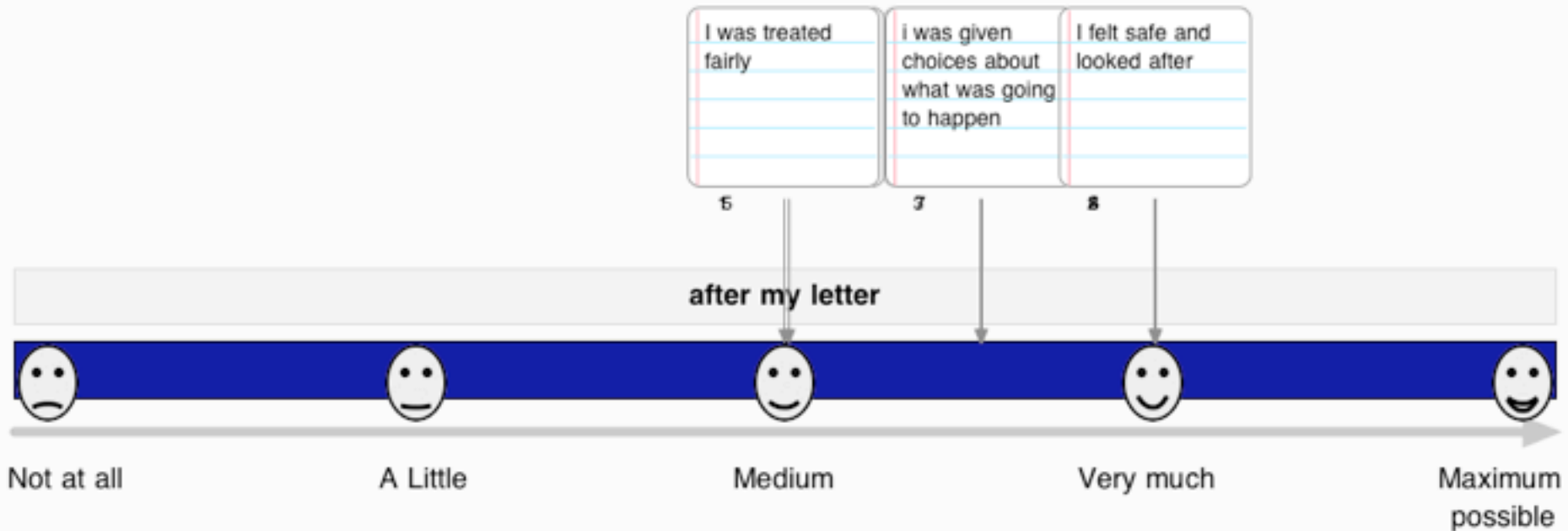
Very much

Maximum possible

Same child, same scale AFTER Guardian ad Litem is appointed (Quantitative data top left)

1. 0.499 I was treated fairly
2. 0.739 People listened to me
3. 0.626 People explained things i didn't understand
4. 0.740 People took notice of what I said
5. 0.502 There was someone there to speak up for me
6. 0.740 I felt safe and looked after
7. 0.627 I was given choices about what was going to happen

In my case



More information:

**See Child & Family
stall (Opposite &
left of ISPCAN
Stall)**



Links

[In My Shoes Website](http://bit.ly/1vdNkXi)

<http://bit.ly/1vdNkXi>

[Child & Family Training
Communication & Assessment Apps](http://bit.ly/1PDxsXx)

<http://bit.ly/1PDxsXx>