

# MuSICCA: The Music therapy Sensory Instrument for Cognition, Consciousness and Awareness

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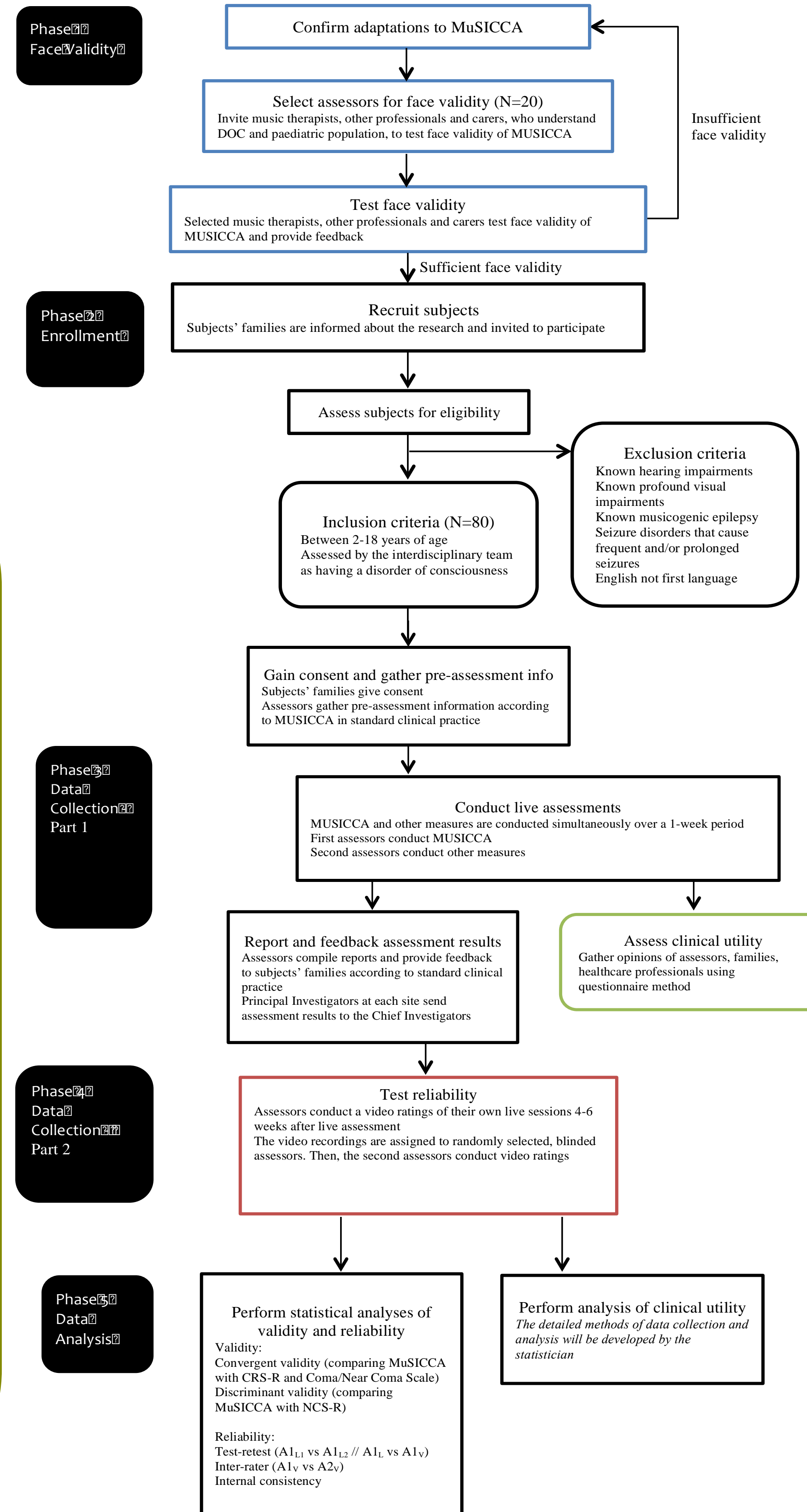
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## Abstract

Children and young people surviving severe ABI can experience Disorders of Consciousness (DoC). Diagnostic, clinical, and ethical challenges are prominent with this group. Misdiagnosis of children risks inadequate care, rehabilitation and stimulation, reduced access to services, and inappropriately limited opportunities for participation. Understanding a child's sensory responsiveness is fundamental to the quality, mode and intensity of the sensory stimulation and care<sup>3</sup>. The **Music therapy Sensory Instrument for Cognition, Consciousness and Awareness (MuSICCA)** has been developed from the MATADOC, an existing standardized measure of awareness for adults<sup>1,2</sup>. Families, multidisciplinary teams and international experts in music therapy and paediatric DoC were consulted to refine the existing adult measure. The MuSICCA is now being tested for Reliability, Validity, and Clinical utility<sup>4</sup>.

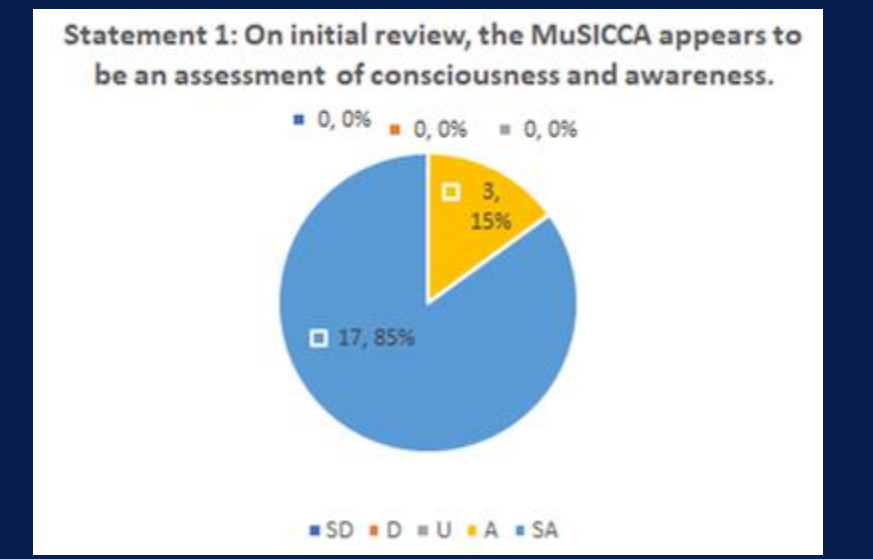
## Method



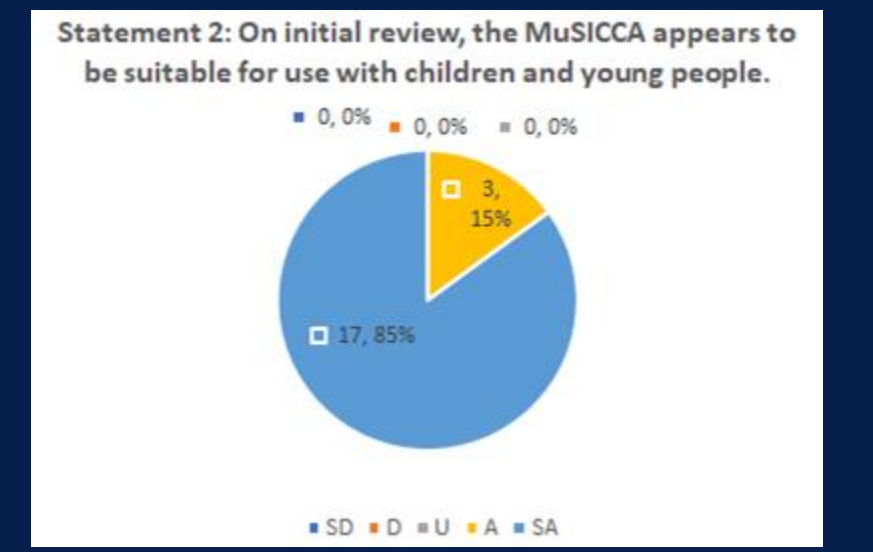
## Findings from Phase 1: Assessment of Face Validity

20 participants were recruited from The Children's Trust and the MATADOC training database, including:

- 10 MATADOC trained assessors
- 5 family members of children and young people with DoC
- 5 paediatric rehabilitation specialists (1 speech and language therapist, 1 occupational therapist, 1 physiotherapist, 1 psychologist, and 1 paediatrician).



Following a presentation about the MuSICCA, participants were asked to rate their level of agreement/disagreement with two statements. They were also asked to comment on the perceived strengths and weaknesses of the MuSICCA. Responses were recorded using questionnaire forms.



## Quotes from the participants

- “Good to have guidance for parents/caregivers included”
- “Assessment is child-focused”
- “A tool that will allow assessment and then go on to inform a treatment plan (this will/should offer reassurance to parents that assessment is meaningful and not an end state.”
- “The rating form is very visual. I feel it is very helpful for analysing category.”
- “The assessment is easy and straightforward to use.”

## Conclusion

The MuSICCA appears to be suitable as an assessment of responsiveness of Disorders of Consciousness and may assist in diagnostic processes. The MuSICCA is appropriate to use with children and young people with DoC.

## References

1. Magee, W.L., Ghetti, C.M. and Moyer, A., 2015. Feasibility of the music therapy assessment tool for awareness in disorders of consciousness (MATADOC) for use with pediatric populations. *Frontiers in psychology*, 6, p.698.
2. Magee, W.L., Siegert, R.J., Daveson, B.A., Lenton-Smith, G. and Taylor, S.M., 2014. Music therapy assessment tool for awareness in disorders of consciousness (MATADOC): Standardisation of the principal subscale to assess awareness in patients with disorders of consciousness. *Neuropsychological rehabilitation*, 24(1), pp.101-124.
3. Pool, J. and Magee, W.L., 2016. Music in the treatment of children and youth with prolonged disorders of consciousness. *Frontiers in psychology*, 7, p.202.
4. Pool, J., Siegert, R., Taylor, S., Dunford, C. and Magee, W.L. 2020. Evaluating the Validity, Reliability and Clinical Utility of the Music therapy Sensory Instrument For Cognition, Consciousness and Awareness (MuSICCA)

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**The purpose of the MuSICCA is to assess responsiveness across the auditory, visual, motor, tactile and communication domains in children with DoC**

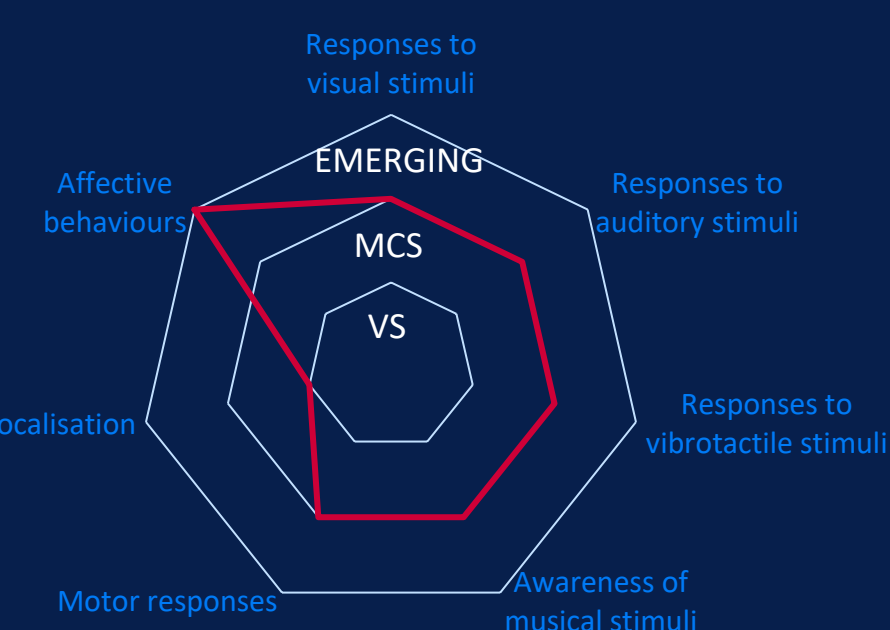
## A music-based tool for assessment in children and young people with DoC

Standardised protocol involves

- 7 procedures, including live music, to elicit responses
- Potential for family involvement
- 20-30 minutes per clinical contact
- 15 items rate responsiveness across the auditory, visual, motor, vibrotactile and communication domains
- Guttman rating for 13 items and binary rating for 2 items

## Graphical outputs

### Profile of Indicated Response Level



### Profile of Demonstrated level of function

