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Adaptation and Preliminary Validation of the Intelligibility in Context Scale – Tamil (ICS-T) among children

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Introduction: The Intelligibility in Context Scale-ICS (Mcleod, Harrison, &McCormack, 2012) was developed to assess children’s intelligibility with a diversity of listeners (communication partners) and different raters in a range of environmental contexts. This scale based on the International Classification of Functioning, Disability and Health for Children and Youth (ICF-CY; World Health Organization, 2007) is a parent-reported tool. Parent’s indicate their perception of child’s intelligibility (i.e., how well children are understood by different communication partners, including parents, family members, friends, teachers, and strangers), on a five-point Likert scale (1=never, 2=rarely, 3=sometimes, 4=usually, 5=always). It has been demonstrated to be suitable for early screening for speech sound disorders among children and enabling families to seek early intervention.

Objectives: To adapt and validate the Intelligibility in Context Scale-Tamil (ICS-T) among Tamil-speaking children

Method: Speech skills of 132 children aged between three-to-six- years of age (90 typically developing and 42 children with parent identified concern of unclear speech) were assessed using a word list consisting of 50 Tamil words comprising of 43 words by Perumal et al. (2017) and additional seven words. Parents were requested to complete the ICS-Tamil. Children’s recordings of word productions were transcribed and analysed using the PHON software to calculate Percentage of consonants correct (PCC) as a measure of speech production abilities.

Bivariate correlations determined the criterion validity with PCC. Internal consistency of items within ICS was determined using Cronbach’s alpha. Independent sample t-test determined the difference between total scores of ICS among typically developing (TD) children and children with a parental concern of speech sound disorder (SSD).

Results: TD children skills scored significantly higher on the ICS ($M=31.02$, $SD=3.81$; $t(130)=14.513$, $p=0.000$) in comparison to children with SSD ($M=25.05$, $SD=3.98$) indicating known-groups validity. Bivariate correlation analyses between the total scores of ICS and PCC revealed a moderate positive correlation ($r=0.537$, $p=0.000$). Higher correlations with PCC were found for parent’s ratings of child’s speech being understood by teachers, acquaintances, children’s peers, and strangers in comparison to extended and immediate family members and parents’

themselves. The internal consistency (Cronbach's $\alpha = 0.906$) among parents' responses to the items of the ICS-T was high.

Conclusion: Preliminary analyses of psychometric properties of ICS-Tamil suggests that it holds promise as a measure of children's functional intelligibility across a range of environmental contexts and communication partners.