Correspondence between direct assessment of speech and language impairment in 4- to 5-year-olds and LSAC measures of parent and teacher reported concern

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Measures of speech and language ability in the Longitudinal Study of Australian Children (LSAC) at age 4.5 years are reliant on parent and teacher reports and a direct assessment of receptive vocabulary. In Wave 1, 25.2% of parents had concerns about how their child talked and made speech sounds, and teachers reported that 22.3% of children were less competent in their expressive language ability than other children of a similar age (McLeod & Harrison, 2009). Although each of these measures is contextually relevant, the use of different questions makes it difficult to assess the correspondence between parent and teacher identification of children with communication difficulties.

Large epidemiological studies often rely on parent and teacher reports alone. It has been suggested that this may misrepresent prevalence rates through failing to identify more subtle impairments (Blum-Harasty & Rosenthal, 1992; Wake & Reilly, 2001) or through over-identifying mild impairments (Whitworth, Davies, Stokes, & Blain, 1993). In LSAC, parent and teacher reports of receptive vocabulary correspond closely but not closely for expressive language; however, no assessments of speech and expressive language status were conducted.

This poster presents findings from the Sounds Effect Study, an ARC Discovery Project which used LSAC measures to identify a sample of 143 4- to 5-year-old children (96 boys, 46 girls) identified by parents and or teachers as having difficulty talking and making speech sounds. Specifically, it examines the extent of correspondence between direct assessment of speech impairment and identification by parents, teachers and children.

Fieldwork for this project was conducted in Wave 1 of the LSAC (2000-2004) and Wave 2 (2005-2008) (Patterson & Groen, 2008). Validated assessments of speech and language were utilised (McLeod, 2002). Assessments conducted by qualified speech and language therapists at 33 early childhood centres.

### Method

#### Speech pathology assessment

- Children assessed were 50% boys
- Teacher report

#### Parent report

- 138 parents completed screening questionnaires
- Parent Evaluation of Developmental Status (PESD; Centre for Community Child Health, 2000)
- Used in the LSAC Wave 1 parent interviews to identify concerns about children’s communication skills
- Key question: “Do you have concerns about how your child talks and makes speech sounds?”
- Number of children identified

#### Teacher report

- 29 teachers (17 preschools and 12 childcare centres) completed screening questionnaires for all children
- LSAC Parent Evaluation of Developmental Status (Centre for Community Child Health, 2000)
- Key question: “Do you have concerns about how this child talks and makes speech sounds?”
- LSAC language competency question

#### Child report

- 133 children completed the child questionnaire

#### Results and Discussion

**Correspondence between direct assessment and parent report**

Speech impairment as reported by parent concern (using the PESD) compared well with direct assessment of speech impairment (using percent phonemes correct). Of the 138 children with parent information, 115 (83.3%) were correctly identified as being assessed as having a speech impairment and a further 2 (2.2%) were correctly identified as having speech within the normal range. The remaining 20 were either incorrectly identified as being of concern (13, 9.4%) or incorrectly identified as of being of no concern but assessed as having a speech impairment (7, 5.1%). These results support the use of parent reported concern as a means of identifying children with speech impairment.

**Correspondence between direct assessment and teacher report**

There was 65.9% correspondence between teachers’ and parents’ reports and the correspondence between teachers’ reports and direct assessment was poorer than for parents’ reports. Of the 143 children with teacher ratings on the PESD, 96 (67.1%) were correctly identified as being assessed as below normal limits and a further 6 (4.2%) were correctly identified as being assessed as having speech within the normal range. The remaining 41 were either incorrectly identified as being of concern (10, 7.0%) or incorrectly identified as of being of no concern but receiving a speech pathology assessment of below normal limits (31, 21.7%). Similar findings were seen for teachers’ ratings of expressive language competence (LSAC): 76 (53.1%) children identified as less competent than others were assessed as below normal limits, and 10 (7.0%) identified as competent as assessed within normal limits. Of the other 57 children, 6 (4.2%) were rated as less competent but assessed within normal limits and 51 (35.7%) were rated as competent but identified by a speech pathology assessment as having a speech impairment. Therefore, more teachers were more likely than parents to fail to identify childhood speech impairments.

**Correspondence between direct assessment, teacher and parent report**

Not surprisingly, given the small number of children who self-identified having communication difficulties, children’s self-reports had low correspondence with direct assessment (22.6%), parents’ PESD reports (24.8%), teachers’ PEDS reports (21.8%) and teachers’ ratings of competence (21.1%). Two-thirds of children reported communication within the normal range on the KiddyCAT but were assessed as being below normal limits by a speech pathologist or their parents reported concern. Teachers’ ratings had a better correspondence to children’s self-reports than parents’.

**Conclusions**

- Parent reported concern for children’s speech corresponded most closely to the diagnosis by a qualified speech pathologist of children with speech impairment, with a sensitivity of 83.3%. Applying this figure to the LSAC finding that 25.2% of children were identified by the parent PEDS, it could be extrapolated that 21.8% of 4- to 5-year-old children (83.3% of 25.2%) would be identified with speech impairment on direct assessment by a speech pathologist. Thus, one-fifth of the population of 4- to 5-year-olds requires access to appropriate speech pathology and educational services to minimize the impact of speech impairment on educational and social outcomes.
- Teachers’ identification of communication impairment was less effective than parents’, and in a significant proportion of cases, teachers failed to identify children who were diagnosed with speech impairment. Given the important role that early childhood services are expected to play in alerting parents and service providers to the need for additional or specialist support, this finding raises questions about the ability of staff to fulfill this role. Professional development for child care and preschool staff should highlight the area of children’s speech and language.

### References


Wake, M., Beilan, S. (2007). How are we talking... but are we really talking about? Journal of Paediatrics & Child Health, 43(5), 421-422.