

Speech impairment in 4- to 5-year-old Australian children: Prevalence, severity and service provision

Sharynne McLeod¹, Linda Harrison¹, Lindy McAllister², & Jane McCormack¹
¹Charles Sturt University, Australia, ²The University of Queensland, Australia

Introduction

Speech impairment refers to difficulty producing sounds and may be mild (a lisp) to severe (unintelligible speech). Childhood speech impairment has been linked with long-term and widespread difficulties with social interactions, academic tasks and employment (e.g., Felsenfeld et al., 1994; McCormack et al., 2009); however early speech intervention is effective in improving outcomes of children with speech difficulties (Law et al., 2003). This paper reports on a 4-phase research project that has investigated speech impairment and service provision for 4- to 5-year-old Australian children. In order to reveal more precise prevalence and severity figures, the research utilised a population sample (*Longitudinal Study of Australian Children*, AIFS, 2009) and a matched sample of children with speech impairment (*Sound Effects Study*) to compare parent report with direct assessment. The research was guided by the International Classification of Functioning, Disability and Health (World Health Organization, 2007) and Bronfenbrenner's ecological systems theory of human development (1990) to investigate the difficulties faced by children with speech impairment and their families, and the role of environmental factors (including speech-language pathology services) in helping them overcome these difficulties.

Phase 1: Prevalence

Participants

A nationally representative population sample of 4,983 4- to 5-year-old children taking part in the Longitudinal Study of Australian Children.

Method

Parents were interviewed about their child's development using the *Parent Evaluation of Developmental Status* (PEDS; Glascoe, 2000).

Results

- ❖ 25.2% of parents had concerns about how their child "talked and made speech sounds".
- ❖ Parents identified "speech not clear to others" as the most frequent area of difficulty (12.0%) (see McLeod & Harrison, 2009).

Phase 2: Correspondence

Participants

Teachers and parents of 1,097 children aged 4- to 5-years-old from 33 Australian childcare centres taking part in the Sound Effects Study.

Method

Teachers and parents completed screening questionnaires utilizing questions used in Phase 1 about children's speech development from the *Parent Evaluation of Developmental Status* (PEDS; Glascoe, 2000).

Results

- ❖ Teachers reported concern for 28.8% of 1001 children.
- ❖ Parents reported concern for 43.1% of 459 children.
- ❖ There were 363 children who had parent and teacher reports that could be matched, and 77% of teacher and parent reports were identical.

Phase 3: Severity and service provision

Participants

143 children identified by parents/teachers with speech concerns in Phase 2 of the Sound Effects Study, along with their parent(s).

Method

Children participated in comprehensive speech pathology assessments incorporating speech, language, oromotor, hearing, and preliteracy skills. Parents completed questionnaires about their child's development, and their use of clinical services.

Results

- ❖ 86.7% of children (124/143) presented with difficulties consistent with a clinical diagnosis of speech impairment.
- ❖ Diagnosis of speech impairment was closely aligned to parent reported difficulties, with a sensitivity of 83.3%.
- ❖ One third of families reported accessing speech pathologists for assessments and/or intervention previously.
- ❖ 12% of children were currently receiving speech pathology intervention. Another 10% were identified by parents as needing speech pathology services but did not have access.

Phase 4: Child and Family Experiences

Participants

13 children who participated in communication assessments Phase 3 of the Sound Effects Study and 21 significant others (including parents and teachers) were interviewed.

Method

Interviews were semi-structured and questions were guided by the International Classification of Functioning, Disability and Health (ICF, WHO, 2007). Topics included the experience of speech impairment and access to speech pathology services.

Results

- ❖ Children and parents experienced frustration primarily due to difficulty understanding ("listening to") the child's speech.
- ❖ Parents indicated their most common sources of information about children's communication were teachers, families and friends.
- ❖ Parents used a range of community services (such as doctors and playgroups or parent groups), to assist their children with communication difficulties, not just speech-language pathologists.

Conclusion

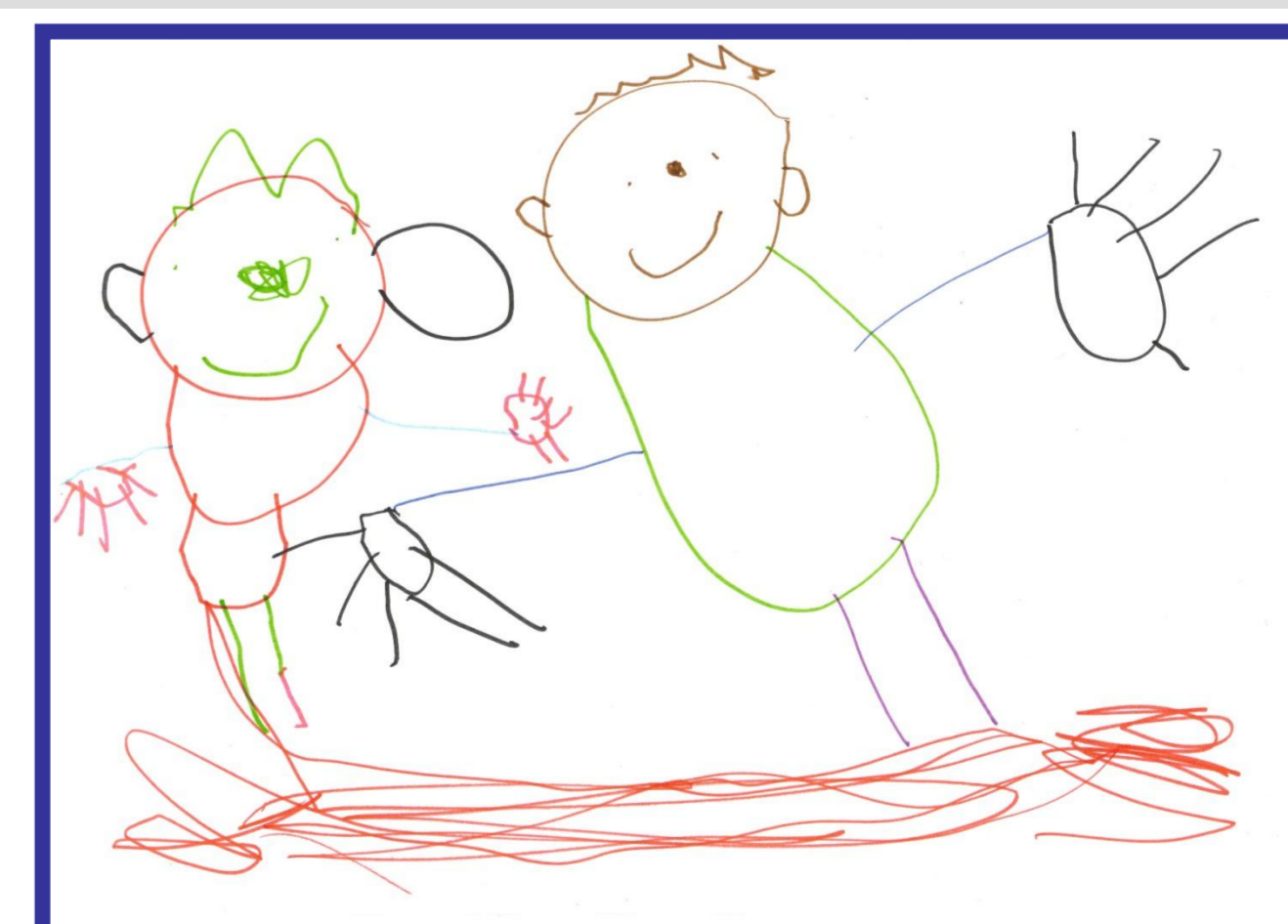
This research confirms that speech impairment is a high prevalence condition in Australian 4- to 5-year-old children and supports the need for targeted speech pathology services. Parents identified 25.2% of children experience speech/language impairment (Phase 1, *Longitudinal Study of Australian Children*), and results from direct assessments (Phase 3, *Sound Effects Study*) confirm the accuracy of parent identification of speech impairment (83.3% match). Thus, we suggest that 21.8% of Australian 4- to 5-year-old children (83.3% of 25.2%) would be identified with speech impairment on direct assessment by a speech pathologist. Consequently, one-fifth of the Australian 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.

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Correspondence

Professor Sharynne McLeod, PhD
 (smcleod@csu.edu.au)
 School of Teacher Education,
 Charles Sturt University
 Panorama Ave, Bathurst, NSW 2795, AUSTRALIA