Prevalence of speech and language impairment in 4,983 four- to five-year-old Australian children

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Knowing the prevalence of children with communication impairment assists with planning of appropriate services and demonstration of the impact of intervention. Prevalence is the "proportion or percentage of cases in a given population at a specified time" within a "normal rather than clinical population" (LAD, Boyle, Harris, Harkness, & Nye, 2000, p. 146). Law et al. (2000) conducted a systematic review of the prevalence of children with speech and language impairment. The prevalence of speech impairment was between 2.3-24.6%, language impairment was between 2.02-19% and speech and language impairment was 1.3-8.5%.

The majority of Australian prevalence data regarding children with communication disorders relates to the school-aged child. Each study has used different data collection techniques and definitions of impairment. Prevalence of communication impairment was higher than the combination of prevalence figures for behaviour difficulties, intellectual impairment, hearing impairment, and visual impairment.

Differing methodologies result in different measures of prevalence. Differences may occur according to the age of participants, data collection techniques (direct assessment versus parent and teacher reports), the definition of communication impairment, and whether studies considered sub-groupings such as speech versus language. For example, higher prevalence of speech impairment was reported for younger ages (e.g., 15.6% of 3-year-olds, Campbell et al., 2003), compared to older children (e.g., 3.6% of 6-year-olds, Shriberg, Tomblin & McSweeny, 1999).

The aim of the present study was to report Australian data on the prevalence of speech and language impairment in the early childhood years using parent and teacher report.

Method

Participants

Data were from the first wave of the Longitudinal Study of Australian Children (LSAC) (Sanson et al., 2002) which was based on a nationally representative sample of 5,000 4- to 5-year-old children and 5,000 infants (aged 3-19 months). The recruitment process involved matches of children, and children and families were proportional to the total numbers of children resident in these areas (Gray & Sanson, 2006). The present paper focuses on the children aged 4-5 years.

A total of 4,983 children (2,537 boys; 2,446 girls) and their parents participated in the study. Children ranged in age from 4 years 3 months (4;3) to 5 years 7 months (5;3) and boys and girls did not differ by age. The families that these children lived in were a close match to the Australian population of families in relation to parents' ethnicity, country of birth, education and income, family size and structure, and whether the mother spoke a language other than English at home. The number of teachers who agreed to participate in the study was 3,276.

Data collection

The LSAC data collection schedule consisted of a 2-hour visit in the child’s home. Interviews were held with the parent who knew the child best (in 97% of cases this was the biological mother). This parent and the other resident parent were asked to complete separate questionnaires. If the child was attending school or preschool/daycare, the parent was asked to provide the address so that a questionnaire could be sent to the teacher. Each of these sources of data were drawn on in the present study to identify the prevalence of communication impairment across the child sample.

Data analysis

The LSAC data were weighted using information from the Australian Bureau of Statistics (ABS) for the "ABS estimated resident population of children aged . . . years." (Soloff et al., 2004a; p. 19).

Results and discussion

Parents’ reported prevalence of children with speech and language impairment

Overall, 25.6% of parents indicated that they had concerns ("a little" (13.4%) or "yes" (11.8)), about how their child talked and made speech sounds and 9.5% had concerns ("a little") (9.1%) or "yes" (4.4%), or about how their child understood what was said to him/her (see Figure 1). Most of the children were identified as having difficulty talking and making speech sounds, whereas boys constituted only 46.8% of the group of children not identified as having these difficulties. Similarly, boys constituted 64.3% of the group of children identified as having difficulty understanding what was said, whereas boys constituted only 49.8% of the group of children not identified as being at risk.

Teachers’ reported prevalence of children with speech and language impairment

Overall, 22.7% of the teachers indicated that they had concerns ("lacking", "less competent", or "less competent") about expressive speech and language and 16.9% had concerns ("lacking", or "less competent") about receptive speech and language (see Figure 2).

Parents’ and teachers’ agreement

The parents were asked to indicate whether their child exhibited different subtypes of communication impairments by answering ten questions. Figure 3 provides the questions, the subtypes of communication impairment and the parental responses. The most prevalent subtype was speech impairment: "Speech not clear to others" (12.0%) and "Speech not clear to the family" (6.0%). Most of the children (14.3% of 4.938) were identified positively for one question relating to subtypes of communication impairment and a further 6.4% for two questions. However, two children were identified as having nine or more (2.3%) and one child as having difficulties with speech and/or language impairments. The highest correspondence was between "speech not clear to others" and "speech not clear to the family". The lowest correspondence was between "speech not clear to others" and "speech not clear to the family".

Inclusion of speech and language pathology services

Parents indicated that in the previous year 10.5% of children had access speech-language pathology services and a further 2.2% of the children did not need access speech-language pathology services. Parents indicated that speech-language pathology services was accessed by 5.8% of the children at the child-care centre, and this service was accessed more than any other service (learning support (3.6%), psychological assessment (0.7%), and behaviour management (1.3%)). When overlapping incidence data were excluded, 13.8% of children were identified as receiving speech-language pathology services (either organized by their parents, the childcare centre or both) and at least a further 2.2% of children needed but could not access speech-language pathology services.

Summary

A large proportion (up to one quarter) of 4- to 5-year-old Australian children were identified by their parents and/or teachers as having speech and/or language difficulties, with "speech not clear to others" being the most prevalent area of concern. Boys were at risk for being identified as having a speech and/or language impairment. Approximately 16% of children accessed or wanted access to speech-language pathology services in the previous year. The interest and intentions are necessary to reduce the impact of these difficulties on these children’s subsequent socialisation and academic endeavours (Lewis et al., 2000).

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References