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Language Development and its Impact on Children's Psychosocial and Emotional Development

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Introduction

Language is central to social life; speech and language development is a cornerstone for successful outcomes later in life. Speech and language competency does not progress normally for a sizeable number of children, however, and research shows that these children are at greater risk for later psychosocial problems than children who do not have speech or language impairments.

Studies have produced compelling evidence that the child and adolescent psychosocial outcomes of language impairment are disproportionately problematic; some disadvantages persist into adulthood. These outcomes include continued disadvantage in speech and language competence, intellectual functioning, and educational adjustment and achievement, psychosocial difficulties, and increased probability of psychiatric disorder. Key insights from the studies highlighted in

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this fact sheet imply a need for early identification of language problems and effective intervention addressing language problems and related cognitive, academic, behavioural and psychosocial concerns, and prevention of victimization in this population. Support for children and adolescents who have language impairment is particularly important in the school context.

Subject

There is strong evidence for the association between speech and language impairments and psychiatric disorders.[1,2,3] Children with speech and language impairments have increased rates of attention-deficit hyperactivity disorder and anxiety disorders through childhood and adolescence.[2,5,6,7] Poor verbal skills have been linked to juvenile delinquency and conduct problems particularly in boys.[8,9] Children with childhood language impairment are more likely to experience both concurrent and future behavioural problems than are children with typically developing language.[10,11,12,13] Language impairment, rather than speech impairment alone, is most associated with persisting behaviour problems.[10,11] Language-impaired youth often have social difficulties and may be bullied or socially excluded by their peers.[10,14,15] Continued social problems in adulthood have been reported in studies following clinically-referred children with language impairment.[16]

Language impairment is consistently associated with poor academic performance in childhood and adolescence. Clinically-referred language-impaired children and youth have, on average, poorer academic performance than children in the general population;[17,18,19] these results have been corroborated by prospective epidemiological studies.[20,21,22,23] Children with language impairments at age five were about eight times more likely to have learning disabilities at age 19 than children without language impairments.[21] Recent research indicates that children with language impairment differ from typical language children in cognitive development and information processing, including short-term memory and auditory processing.[24,25,26]

Problems

Research on the outcomes of speech and language impairments is incomplete. First, many studies reporting long-term outcomes of speech and language impairments have used clinic-referred rather than community-based samples. These studies do not represent the spectrum of speech and language impairments. Individuals referred for treatment tend to be more severely impaired and/or have more noticeable impairments than those who are not referred. They are

also more likely to have associated problems, especially behaviour problems, that attract attention and motivate referral,[27] while those with more subtle problems, often girls, may be overlooked.[27,28] Second, most studies of adult outcomes of childhood speech/language impairment are retrospective, and have had difficulty securing objective data on language history. Third, very few studies of non-referred samples have published outcomes beyond adolescence, into adulthood. Fourth, some studies on the adult outcomes of language-impaired samples have not employed matched control groups, severely limiting inferences that can be made. Fifth, available studies seldom include measurement of outcomes across multiple domains of functioning. This is a crucial shortcoming because problems in other domains of psychosocial function may persist even if speech and language difficulties resolve. Broad assessments can also identify areas of strength, and similarities between language-impaired and typical language individuals. Finally, greater attention to social contexts in relation to outcomes of speech/language impairment is needed.[28,29] For instance, few studies have directly addressed gender in relation to the outcomes of language impairments; most that have done so focus on young children.[15,30]

Research Context

The Ottawa Language Study (OLS) is the first population study of children with speech/language impairment to be followed into adulthood.[31] A one-in-three random sample of all five-year-old English-speaking children in the Ottawa-Carleton region of Ontario, Canada was administered a speech and language screening procedure by qualified speech pathologists.[32] The procedure resulted in a sample of 142 children with speech and/or language impairments. A control sample of 142 children matched for age and sex and from the same classroom or school as the language-impaired children was recruited simultaneously. Both samples completed assessments of cognitive, developmental, emotional, behavioural and psychiatric functioning.[6] Three follow-up studies of original OLS participants were undertaken when the participants were ages 12, 19, and 25.[2,7,31] The retention rate for each of these follow-up studies exceeded 85% of the original sample. A fourth (age 31/32) follow-up is in progress.

Key Research Questions

Some of the key questions posed by the OLS have been: Do language impairments persist? Are language impairments associated with behavioural problems in childhood, adolescence or adulthood? Do language impairments predict academic achievement, educational attainment or vocational outcomes? Are childhood language impairments associated with greater frequency of

psychiatric disorders across the lifespan? Are psychosocial outcomes of language impairment different for girls versus boys?

Recent Research Results

Language impairments often persist into adulthood.[33,34] Pure speech impairment often disappears as do most associated psychosocial problems.[2,33] In the OLS, children and adolescents with childhood language impairments had significantly elevated rates of behaviour problems and psychiatric disorders, especially anxiety, compared with typical language controls, at ages 5, 12 and 19.[2,6,7] Social phobia was more common among the speech/language cohort; communication difficulties may constitute a distinct pathway to social phobia.[35] Externalizing problems, particularly ADHD and delinquency were associated with language impairment in boys but not girls;[11] rates of antisocial personality disorder among males were almost three times higher than for typical language controls.[2] Girls with language impairment were three times more likely to have experienced sexual abuse in childhood or adolescence than girls without language impairment;[28] this difference was not due to differences in socioeconomic status between the language impaired and typical language groups.

By age 25, rates of psychiatric disorder were lower among language-impaired and typical language participants than at age 19.[36] Further, quality of life, job satisfaction and perceived social support were as high in the language-impaired group as the typical language controls.[31] Participants with language impairment were less likely than controls to participate in or complete postsecondary education; three quarters had completed high school. Young adults with language impairment were just as likely to be employed as were typical language controls, often choosing jobs in trades that likely did not require strong verbal skills. Women with language impairment had children earlier than typical language women; half had children by age 25.[31] Earlier parenting may partly reflect the poorer employment opportunities for women without postsecondary education (excluding jobs traditionally held by men, such as construction).

Conclusions

The OLS has shown that outcomes in childhood and adolescence for children with a history of language impairment are distinctly more negative than outcomes for children with speech impairments only and non-impaired children. Children with language impairments showed prominent concurrent and long-term deficits in the language, cognitive and academic domains

relative to peers without early language difficulties, and completed less education. Boys with language impairments were at risk of delinquent and antisocial behaviour; girls with language impairments were more likely to experience sexual abuse[28] and to embark on earlier parenting.[31] However, by age 25, youth with language impairments were equally likely to be employed as were the typical language controls, and the groups did not differ in quality of life or perceived social support.

Implications for the Policy and Services Perspective

Children with language impairments have relatively poor outcomes in childhood through to late adolescence. They are more likely to have anxiety disorders which have a negative impact on the quality of life of affected adults and have substantial economic and health-care costs.[37] Further, childhood language impairments tend to persist, and their impact can be observed from childhood into young adulthood. Research supports the efficacy of early language intervention.[38] Speech and language professionals should continue to educate the public and other professionals on the importance of early language intervention.

At the same time, increases in well-being from age 19 to age 25, despite continuing language deficits, suggests that differences in social contexts may play an important role in the psychosocial difficulties of language impaired youth. In particular, the demands of school environments may constitute stressors that exacerbate the problems of youth with language impairments. For example, children with language impairment may experience bullying in school,[14] and many youth with language impairment report fear of speaking in front of others.[35] Unlike youth completing compulsory education, adults with language impairment are able to select vocations consistent with their strengths that rely less on verbal skills.[16,31] These results suggest the need for strong support systems for language- impaired youth in school and attention to all aspects of their school environments. Gender also needs to be taken into account in interventions for youth with language impairment. In particular, prevention of victimization needs to be incorporated into work with language-impaired youth, particularly girls. Children with a history of speech and language impairments are more likely to have multiple problems than their non-impaired counterparts, and as such may benefit most from early intervention. This demonstrates the urgency of early identification of language impairments and the development and maintenance of proven treatment programs that address the multiplicity of adversity facing these at-risk children, while supporting their resilience and adaptation.

References

1. Baker L, Cantwell DP. A prospective psychiatric follow-up of children with speech/language disorders. *Journal of the American Academy of Child and Adolescent Psychiatry* 1987;26(4):546-553.
2. Beitchman JH, Wilson B, Johnson CJ, Atkinson L, Young A, Adlaf A, Escobar M, Douglas L. Fourteen-year follow-up of speech/language-impaired and control children: Psychiatric outcome. *Journal of the American Academy of Child and Adolescent Psychiatry* 2001;40(1):75-82.
3. Benner GJ, Nelson JR, Epstein MH. Language skills of children with EBD: A literature review. *Journal of Emotional and Behavioral Disorders* 2002;10(1):43-59.
4. Cohen NJ, Davine M, Horodezky N, Lipsett L, Isaacson L. Unsuspected language impairment in psychiatrically disturbed children: Prevalence and language and behavioral characteristics. *Journal of the American Academy of Child and Adolescent Psychiatry*. 1993;32(3):595-603.
5. Cantwell DP, Baker L. *Psychiatric and developmental disorders in children with communication disorder.* Washington, DC: American Psychiatric Association; 1991.
6. Beitchman JH, Nair R, Clegg M, Ferguson B, Patel PG. Prevalence of psychiatric disorders in children with speech and language disorders. *Journal of the American Academy of Child Psychiatry* 1986;25(4):528-535.
7. Beitchman JH, Brownlie EB, Inglis A, Wild J, Ferguson B, Schachter D, Lancee W. Wilson B. Mathews R. Seven-year follow-up of speech/language impaired and control children: Psychiatric outcome. *Journal of Child Psychology and Psychiatry* 1996;37(8):961-970.
8. Hinshaw SP. Externalizing behavior problems and academic underachievement in childhood and adolescence: Causal relationships and underlying mechanisms. *Psychological Bulletin* 1992;111(1):127-155.
9. Lynam D, Moffitt TE, Stouthamer-Loeber M. Explaining the relation between IQ and delinquency: class, race, test motivation, school failure, or self-control. *Journal of Abnormal Psychology* 1993;102(2):187-196.
10. Beitchman JH, Wilson B, Brownlie EB, Walters H, Inglis A, Lancee W. Long-term consistency in speech/language profiles: II. Behavioral, emotional, and social outcomes. *Journal of the American Academy of Child and Adolescent Psychiatry* 1996;35(6):815-825.
11. Brownlie EB, Beitchman JH, Escobar M, Young A, Atkinson A, Johnson C, Wilson B, Douglas L. Early language impairment and young adult delinquent and aggressive behavior. *Journal of Abnormal Child Psychology* 2004;32(4):453-467.
12. Conti-Ramsden G, Botting N. Emotional health in adolescents with and without a history of specific language impairment (SLI). *Journal of Child Psychology and Psychiatry* 2008;49(5):516-525.
13. Snowling MJ, Bishop DVM, Stothard SE, Chipchase B, Kaplan C. Psychosocial outcomes at 15 years of children with a preschool history of speech-language impairment. *Journal of Child Psychology and Psychiatry* 2006;47(8):759-765.
14. Conti-Ramsden G, Botting N. Social difficulties and victimization in children with SLI at 11 years of age. *Journal of Speech Language and Hearing Research* 2004;47(1):145-161.
15. Bonica C, Arnold DH, Fisher PH, Zeljo A, Yershova K. Relational aggression, relational victimization, and language development in preschoolers. *Social Development* 2003;12(4):551-562.
16. Howlin P, Mawhood L, Rutter M. Autism and developmental receptive language disorder – a follow-up comparison in early adult life. II: Social, behavioural, and psychiatric outcomes. *Journal of Child Psychology and Psychiatry* 2000;41(5):561-578.
17. Botting N, Simkin Z, Conti-Ramsden G. Associated reading skills in children with a history of Specific Language Impairment (SLI). *Reading and Writing* 2006;19(1):77-98.

18. Conti-Ramsden G, Durkin K, Simkin Z, Knox E. Specific language impairment and school outcomes. I: Identifying and explaining variability at the end of compulsory education. *International Journal of Language & Communication Disorders* 2009;44(1):15-35.

19. Whitehouse AJO, Line EA, Watt HJ, Bishop DVM. Qualitative aspects of developmental language impairment relate to language and literacy outcome in adulthood. *International Journal of Language & Communication Disorders* 2009;44(4):489-510.

20. Beitchman JH, Wilson B, Brownlie EB, Walters H, Lancee W. Long-term consistency in speech/language profiles: I. Developmental and academic outcomes. *Journal of the American Academy of Child and Adolescent Psychiatry* 1996;35(6):804-814.

21. Young AR, Beitchman JH, Johnson C, Douglas L, Atkinson L. Young adult academic outcomes in a longitudinal sample of early identified language impaired and control children. *Journal of Child Psychology and Psychiatry* 2002;43(5):635-645.

22. Catts HW, Fey ME, Tomblin JB, Zhang X. A longitudinal investigation of reading outcomes in children with language impairments. *Journal of Speech, Language, and Hearing Research* 2002;45:1142-1157.

23. Puranik CS, Petscher Y, Al Otaiba S, Catts HW, Lonigan CJ. Development of oral reading fluency in children with speech or language impairments: A growth curve analysis. *Journal of Learning Disabilities* 2008;41(6):545-560.

24. Montgomery JW, Evans JL. Complex sentence comprehension and working memory in children with specific language impairment. *Journal of Speech Language and Hearing Research* 2009;52(2):269-288.

25. Nickisch A, von Kries R. Short-term memory (STM) constraints in children with specific language impairment (SLI): Are there differences between receptive and expressive SLI? *Journal of Speech Language and Hearing Research* 2009;52(3):578-595.

26. McArthur G, Atkinson C, Ellis D. Atypical brain responses to sounds in children with specific language and reading impairments. *Developmental Science* 2009;12(5):768-783.

27. Zhang X, Tomblin JB. The association of intervention receipt with speech-language profiles and social-demographic variables. *American Journal of Speech-Language Pathology* 2000;9(4):345-357.

28. Brownlie EB, Jabbar A, Beitchman J, Vida R, Atkinson L. Language impairment and sexual assault of girls and women: Findings from a community sample. *Journal of Abnormal Child Psychology* 2007;35(4):618-626.

29. La Paro KM, Justice L, Skibbe LE, Pianta RC. Relations among maternal, child, and demographic factors and the persistence of preschool language impairment. *American Journal of Speech-Language Pathology* 2004;13(4):291-303.

30. Stowe RM, Arnold DH, Ortiz C. Gender differences in the relationship of language development to disruptive behavior and peer relationships in preschoolers. *Journal of Applied Developmental Psychology* 1999;20(4):521-536.

31. Johnson, CJ, Beitchman JH, Browlie EB. Twenty-year follow-up of children with and without speech-language impairments. *American Journal of Speech Language Pathology*. In press.

32. Beitchman JH, Nair R, Clegg M, Patel PG. Prevalence of speech and language disorders in 5-year-old kindergarten-children in the Ottawa-Carleton region. *Journal of Speech and Hearing Disorders* 1986;51(2):98-110.

33. Johnson CJ, Beitchman JH, Young A, Escobar M, Atkinson L, Wilson B, Browlie EB, Douglas L, Taback N, Lam I, Wang M. Fourteen-year follow-up of children with and without speech language impairments: Speech language stability and outcomes. *Journal of Speech Language and Hearing Research* 1999;42(3):744-760.

34. Beitchman JH, Jiang H, Koyama E, Johnson C, Escobar M, Atkinson L, Brownlie EB, Vida R. Models and determinants of vocabulary growth from kindergarten to adulthood. *Journal of Child Psychology and Psychiatry* 2008;49(6):626-634.

35. Voci SC, Beitchman JH, Brownlie EB, Wilson B. Social anxiety in late adolescence: The importance of early childhood language impairment. *Journal of Anxiety Disorders* 2006;20(7):915-930.

36. Vida R, Brownlie EB, Beitchman JH, Adlaf E, Atkinson L, Escobar M, Johnson CJ, Jiang H, Koyama E, Bender B. Emerging adult outcomes of adolescent psychiatric and substance use disorders. *Addictive Behaviors* 2009;34(10):800-805.

37. Greenberg PE, Sisitsky T, Kessler RC, Finkelstein SN, Berndt ER, Davidson JRT, Ballenger JC, Fyer AJ. The economic burden of anxiety disorders in the 1990s. *Journal of Clinical Psychiatry* 1999;60(7):427-435.

38. Leonard LB. *Children with specific language impairment*. Cambridge, Mass: MIT Press; 1998.

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