



Ontario Association for Families of Children with Communication Disorders (OAFCCD)

GOOD NEWS: Speech and Language Services have been empirically proven to improve educational and social outcomes for students with weak or disordered language skills

Numerous important **educational benefits** have been **demonstrated** with speech and language services for students with a wide variety of special needs and for students *at risk* for poor school achievement and social failure. Speech-language pathologists are **preventionists, collaborators, & interventionists** in **oral** language and in **written** language

There is clear evidence that **language intervention** is **effective** (Nye, et al., 87) and that the **earlier treatment** is initiated, the **better the outcome** (Schery, 85).

☞ **Significant gains in reading skills** for elementary school children (Hoffman & Norris, 94).

☞ **Phonological awareness training** in children with **language impairments in preschool and kindergarten** has revealed that children who have participated in early training programs have **performed better on reading measures in first and second grade than have children without** phonological awareness intervention (Magnusson & Naucler, 92; Warrick, Rubin, & Rowe-Walsh, 93)

☞ **Significant improvements in reading accuracy and comprehension with spoken language training in phonological processing and semantic-syntactic skills** with 10-12 year old children evidencing severe difficulties in written and higher-level spoken language (Gillon & Dodd, 95).

☞ **Significant gains in vocabulary use and generalization** for young children when **vocabulary** training was integrated into the classroom setting by the SLP and teacher. (Wilcox, et al., 91).

☞ **Significantly greater acquisition of curricular vocabulary for typically developing students** with a **collaborative or classroom-based** assistance from the **SLP** than with only regular instruction from the **classroom teacher**. **Significant acquisition of curricular vocabulary** for children with **speech and language impairments** when the **SLP** taught **collaboratively** with the classroom teacher (Throneburg, et al., 00).

☞ **Significant improvements in basic concept acquisition** (Ellis, et al., 95)

☞ **Meaningful improvements in adaptive behaviour in the classroom** (Schery & O'Connor, 92)
☞ **Significantly higher scores on listening & writing; higher abilities in understanding vocabulary and cognitive-linguistic concepts; increased writing skill development for producing relevant sentences with correct mechanics and spelling; improved ability to follow directions with new concepts, and heightened phonemic awareness. Carry-over of increased student verbal skills within other curricular areas** was also evident (Farber & Klein, 99).

☞ **Improved student questioning & problem solving skills** (Kaufman, et al., 94)

☞ **Substantial reductions in the drop-out rate** for students in secondary school (Larson & McKinley, 95)

☞ **For at risk children, lasting benefits representing a significant savings** to the social support system and society (Schweinhart, et al., 85; Warr-Leeper, 01).

**BAD NEWS:
Students with weak or disordered language skills
are at risk for educational and academic failure**

- **Language and Literacy**

- A large body of research provides **strong empirical support** for the **link between language and reading disabilities** (Catts, 93).
- Large epidemiologic study of **kindergarten** students found **5 factors** that were highly **predictive** of reading difficulties by **grade 2** with **3** of the **5** being **oral language skills**. (Catts, Fey, & Tomblin, 99)
- **Level of oral language is highly predictive of reading level**
- Over **70%** of **poor readers** in grade 2 have a **history of language deficits** in kindergarten (Boudreau & Hadberg, 99)
- **Relationship** between **language** disorders and **behavioural** disorders are **mediated** by **reading disorders** (Tomblin, Zhang, & Buckwalter, 00).

- **Bottomline: Oral language is foundational to reading and writing thus weaknesses in oral language will hinder the development of literacy.**

- **Language and Behaviour**

- **Weak language early in life predicts a later behavioural disorder** (Stevenson, Richman & Graham, 85)
- Prevalence of language disorders among behaviourally disordered is 10 times higher than in the general population (Camarata, Hughes and Ruhl, 1988); Minuiti, 91; Warr-Leeper, et al., 94)
- **52%** of **language disordered** students are **reading disordered** compared to 9% of controls.
- **29%** of **language disordered** students are **behaviourally disordered** compared to 19% of controls
- The **comorbidity of language disorders, psychiatric problems, learning disabilities and attention deficit hyperactivity/disorder** has led researchers to **conclude** that **linguistic difficulties** "may in fact be a **common background factor**" which is of the **utmost "phenomenologic and etiologic" importance** (Cantwell & Baker, 1991, pgs. 93 & 94).

- **Bottomline: Behavioural disorder is to language disorder as smoke is to fire**

Source: *From Talking to Writing: The Critical Connections*, Presentation to Speech, Language and Hearing Association of Peterborough, May 2, 2003 by Genese Warr-Leeper, Ph.D., Communication Sciences and Disorders, University of Western Ontario, London, Ontario

General References

- Hadley, P., Simmerman, A., Long, M. & Luna, M. (2000). Facilitating language development for inner-city children: Experimental evaluation of a collaborative, classroom-based intervention. *31(3)*, 280-295.
- Herrero, M. & Hechtman, L. (1994). Antisocial disorders in hyperactive subjects from childhood to adulthood: Predictive factors and characterization of subgroups. *American Journal of Orthopsychiatry*, *65(4)*, 510-521.
- Hechtman, L. & Weiss, G. (1986). Controlled prospective fifteen year follow-up of hyperactive as adults: non-medical drug and alcohol use and anti-social behaviour. *Canadian Journal of Psychiatry*, *31(6)*:557-567.
- Hoffman, P. & Norris, J. (1994). Whole language and collaborative work: Evidence from at-risk kindergartners, *Journal of Childhood Communication Disorders*, *16(1)*, 41-48.
- Larson, B. & McKinley, N. (1995). *Language Disorders in Older Students: Preadolescents and Adolescents*. Eau Claire, WI: Thinking Publications.
- Nelson, N. (1993). *Childhood Language Disorders in Context: Infancy Through Adolescence*. N.Y., N.Y.: Merrill
- Masland, R. & Masland, M. (1988). *Preschool prevention of reading failure*. Parkton, MD: York Press.
- Warr-Leeper, G. (2001) An Overview of Programs and Effectiveness Research in Early Intervention for Environmentally Disadvantaged Children. *Journal of Speech-Language Pathology and Audiology*, *24(2)*, 90-103.

References for the Relationship between Oral Language and Reading

- Bishop, D., & Adams, C. (1990). A prospective study of the relationship between specific language impairment, phonological disorder, and reading retardation. *Journal of Child Psychology and Psychiatry*, *21*, 1027-1050.
- Catts, H. (1993). The relationship between speech-language impairments and reading disabilities. *Journal of Speech and Hearing Research*, *36*, 948-958.
- Catts, H., Fey, M., Zhang, X., & Tomblin, B. (1999). Language basis of reading and reading disabilities: Evidence from a longitudinal investigation. *Scientific Studies of Reading*, *3*, 331-361.
- Clarke-Klein, S. (1994). Expressive phonological deficiencies: Impact on spelling development. In *Topics in language disorders: From phonology to metaphonology*, *14(2)*, 40-55.
- Clark-Stewart, K. & Fein, G. (1983). Early childhood programs. In MM Haith & JJ Campos (Eds.), *Infancy and Developmental Psychology*. New York: Wiley.
- Ehri, L. (2002). Learning to read and learning to spell: Two sides of a coin. *Topics in Language Disorders*, *20(3)*, 19-36.
- Hoffman, P & Norris, J. (1989). On the nature of phonological development: Evidence from normal children's spelling errors. *Journal of Speech and Hearing Research*, *32*, 787-794.
- Menyuk, P, Chesnick, M, Liebergott, J, Krongold, G, D'Agostino, R., & Belanger, A. (1991). Predicting reading problems in at-risk children. *Journal of Speech and Hearing Research*, *34*, 893-903.
- Tallal, P., Curtiss, S., & Kaplan, R. (1989). *The San Diego longitudinal study: Evaluating the outcomes of preschool impairment in language development*. Final Report, NINCDS. Washington, DC.
- Thomblin, B., Zhang, X., & Buckwalter, P. (2000). The Association of reading disability, behavioral disorders, and language impairment among second-grade children. *Association for Child Psychology and Psychiatry*, *32*, 473-482.
- Treiman, R. & Baurassa, D. (2000). The development of spelling skill. *Topics and Language Disorders*, *20(3)*, 1-18.

References for the Relationship between Oral Language Development and Behavioural Disorders

- Baker, L., & Cantwell, D.P. (1982). Psychiatric disorders in children with different types of communication disorders. *Journal of Communication Disorders*, *15*, 113-126.
- Beitchman, J.H. (1985). Speech and language impairment and psychiatric risk. *Psychiatric Clinics of North America*, *8*, 721-735.
- Camarata, S., Hughes, C., & Ruhl, K. (1988). Mild/moderate behavior disordered students: A population at risk for language disorders. *Language, Speech, and Hearing services in Schools*, *19*, 191-200.

- Cantwell, D. & Baker, L. (1987). Prevalence and type of psychiatric disorder and developmental disorders in three speech and language groups. Journal of Communication Disorders 32(1), 129-154.
- _____ (1991). Psychiatric and developmental disorders in children with communication disorder. Washington, D.C.: American Psychiatric Press.
- Catts, H. (1993). The relationship between speech-language impairments and reading disabilities. Journal of Speech and Hearing Research, 36, 948-958.
- Chess, S., & Rosenberg, M. (1974). Clinical differentiation among children with initial language complaints. Journal of Autism and Childhood Schizophrenia, 4, 99-109.
- Cohen, N. Davine, D., & Meloche-Kelly, M. (1989). Prevalence of unsuspected language disorders in a child psychiatric population. Journal of American Academy of Child and Adolescent Psychiatry, 28(1), 107-111.
- Cohen, N. (1990). Patterns of psychopathology in disturbed children with unsuspected language disorders. Poster presented at the Annual Meeting of the Society for Research in Child and Adolescent Psychopathology, January 24-26, 1990.
- Gualtieri, C., Koriath, V., Van Bourgondien, M., & Seleeby, N. (1983). Language disorders in children referred for psychiatric services. Journal of the American Academy of Child Psychiatry, 22, 165-171.
- Johnson, C., Beitchman, J., et al. (1999). Fourteen-Year Follow-up of Children with and Without Speech/Language Impairments: Speech/Language Stability and Outcomes. Journal of Speech, Language, and Hearing Research, 42(3), 744-760.
- Love, A., & Thompson, M. (1988). Language disorders and attention deficit disorders in young children referred for psychiatric services. American Journal of Orthopsychiatry, 58(1), 52-64.
- Mack, A. & Warr-Leeper, G. (1992). Language abilities in boys with chronic behaviour disorders. Language, Speech and Hearing Services in the Schools, 23(3), 214-223.
- Miniutti, A. (1991). Language deficiencies in inner-city children with learning and behavioral problems. Language, Speech and Hearing Services in Schools, 22, 31-38.
- Naylor, et al., (1994). Prevalence of language impairments and learning disabilities in school refusers. J. Am. Acad. Child Adolesc. Psychiatry. 48(2), 345-357.
- Offord, D.R., Boyle, M.C., & Racine, Y.A. (1991). The epidemiology of antisocial behavior in childhood and adolescence. In Pepler, D.J. and Rubin, K.H. The development and treatment of childhood aggression, 31-54. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.
- Redmond, S. (2002). Stability of behavioural ratings of children with SLI, Journal of Speech, Language, and Hearing Research, 45, 190-201.
- Stevenson, J., Richman, N., & Graham, P. (1985). Behavior problems and language abilities at three years and behavioral deviance at eight years. Journal of Child Psychology and Psychiatry, 26(2), 215-230.
- Warr-Leeper, G., Wright, N., & Mack, A. (1994). Language disabilities of antisocial boys in residential treatment. Journal of Behavioral Disorders. 19(3), 159-170.

References for the Educational Benefits of Speech and Language Services

- Ellis, L., Schlaudecker, C., & Regimbal, C. (1995). Effectiveness of a collaborative consultation approach to basic concept instruction with kindergarten children. Language, Speech, and Hearing Services in the Schools, 26, 69-72.
- Farber, J., Dennenberg, M, Klyman, S, & Lachman, P. (1992). Language resource room level of service: An urban school district approach to integrative treatment. Language, Speech, and Hearing Services in the Schools, 23, 293-299.
- Farber, J. & Klein, E. (1999). Classroom-based assessment of a collaborative intervention program with kindergarten and first-grade students. Language, Speech, and Hearing Services in the School, 30, 83-91.
- Gerber, S. (1987). Collaborations between speech-language pathologists and educators: A continuing education process. Journal of Childhood Communication Disorders, 11, 107-123.
- Gillon, G. & Dodd, B. (1995). The effects of training phonological, semantic, and syntactic processing skills in spoken language on reading ability. Language, Speech, and Hearing in the Schools, 26, 58-68.
- Hoffman, P. & Norris, J. (1994). Whole language and collaborative work: Evidence from at-risk kindergartners, Journal of Childhood Communication Disorders, 16, 41-48.

- Kaufman, S., Prelock, P., Weiler, E., Creaghead, N. & Donnelly, C. (1994). Metapragmatic awareness of explanation adequacy: Developing skills for academic success from a collaborative communication skills unit. *Language, Speech, and Hearing Services in the Schools*, 25, 174-180.
- Larson, V. & McKinley, N. (1995). *Language Disorders in Older Students*. Eau Claire, WI: Thinking Publications.
- Magnusson, E. & Naucler, K. (1992). On the Development of reading in good and poor readers. *International Journal of Applied Linguistics*, 1, 174-85.
- Nye, C., Foster, S. & Seaman, D. (1987). Effectiveness of language intervention with the language/learning disabled. *Journal of Speech and Hearing Disorders*, 52, 348-357.
- Norris, J. (1989). Providing language remediation in the classroom: An integrated language-to-reading intervention method. *Language, Speech, and Hearing Services in the Schools*, 20, 205-218.
- Norris, J. & Hoffman, G. (1990). Language intervention within naturalistic environments. *Language, Speech, and Hearing Services in Schools*, 21, 72-84.
- Rice, M. & Hadley, P. (1995). Language outcomes of the language-focused curriculum. In M. Rice and K. Wilcox (Eds.) *Building a language-focused curriculum for the preschool classroom: A foundation for lifelong communication, Volume I*, 155-169., Baltimore: Brookes Publishing.
- Schery, R.K. (1985). Correlates of language development in language disordered children. *Journal of Speech and Hearing Disorders*, 50, 73-83.
- Schery, T. & O'Connor, L. (1992). The effectiveness of school-based computer language intervention with severely handicapped children. *Language, Speech and Hearing Services in Schools*, 23, 43-47.
- Schweinhart, L., Berrueta-Clement, J., Barnett, W., Epstein, A. & Weikart, D. (1985). Effects of the Perry Preschool Program on youths through age 19: A summary. *Topics in Early Childhood Special Education*, 5, 26-35.
- Warrick, N., Rubin, T., & Rowe-Walsh, E. (1993). Phoneme awareness in language-delayed children: Comparative studies and intervention. *Annals of Dyslexia*; 43, 153-73.
- Warr-Leeper, G. (2001) An Overview of Programs and Effectiveness Research in Early Intervention for Environmentally Disadvantaged Children. *Journal of Speech-Language Pathology and Audiology*, 24(2), 90-103.
- Wilcox, J., Kouri, T., & Caswell, S. (1991). Early language intervention: A comparison of classroom and individual treatment. *American Journal of Speech-Language Pathology*, 1(1), 49-62