

# Working With At-Risk Adolescents With Learning Disabilities and Attentional Disorders in Urban School Systems

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Literacy skills are fundamental to children's participation in their occupational role as students. Success in this role is prerequisite for productive social roles, optimal self-care, and participation in meaningful adult occupations later in life. A student who is not reading proficiently by the end of 3rd grade is four times likelier to drop out of high school, often leading to a cascade of deficits and social marginalization, and children in underserved communities are a population particularly at risk for deficiency in reading skills. However, the literature targeting literacy as an emerging occupational therapy practice area lacks data, specifically regarding underserved children.

**PURPOSE:** To address this gap, we developed and assessed an occupational therapy literacy program for 21 first and second graders reading below grade level. The intervention was administered via individual and small-group settings in biweekly, 45-minute sessions over 10 weeks. Interventions promoted positive associations with reading; offered opportunities for pleasurable, purposeful, child-selected literacy experiences; incorporated self-generated learning strategies and sensorimotor experiences; and emphasized coaching for children to develop habits and routines for reading participation at home. Research question: Will 1st and 2nd graders reading below grade level who received occupational therapy literacy intervention in addition to traditional classroom instruction demonstrate higher reading levels and participation compared to their peers who received only classroom instruction?

**DESIGN:** Two group, randomized controlled study.

**METHOD:** Participants were identified by their teachers as reading below grade level and were randomized into intervention and control groups. The Dynamic Indicators of Basic Early Literacy Skills (DIBELS), Test of Word Reading Efficiency (TOWRE), Dolch Sight Word List (DSWL), and Fountas and Pinnell Benchmark Assessment System (BAS) were used as quantitative pre- and post-assessments to determine whether intervention enhanced foundational reading skills and reading grade level. Qualitative data were collected pre- and post-study using the Reading Occupations and Habits Questionnaire (ROHQ). A Mann Whitney U test was used to determine if a statistically significant difference existed between intervention and control groups at baseline and post-intervention on the DIBELS, TOWRE, DSWL, and BAS scores. A Wilcoxon signed rank test was used to analyze within-group differences on the BAS and TOWRE subtests. ROHQ nominal and ordinal questions were analyzed through frequency counts; open-ended questions were analyzed by summarizing narrative responses.

**RESULTS:** Statistically significant differences with large effect sizes were found between intervention and control group post-intervention scores on the DIBELS ( $Z = -3.553$ ,  $p < .000$ ,  $d = 1.826$ ) and DSWL scales ( $Z = -3.052$ ,  $p < .002$ ,  $d = 1.256$ ). No statistically significant differences were found at posttest on the Benchmark Assessment System and Test of Word Reading Efficiency scores. Questionnaire data demonstrated that intervention group participants displayed greater reading enjoyment, increased home reading participation, improved home literacy routines, and greater agency as readers.

**CONCLUSION:** Preliminary evidence was demonstrated for the effectiveness of this occupational therapy literacy program with regard to foundational reading skills and participation.

**IMPACT STATEMENT:** Underserved children's literacy skills and participation may be best supported when embedded in highly motivating experiences incorporating self-generated learning strategies and sensorimotor experiences. Occupational therapists are well-positioned to provide such support.

## References

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