

**Critical Review:
Efficacy for SLP – Teacher Collaboration for Classroom Based Intervention**

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This paper presents a critical review, examining the efficacy of collaboration between SLPs and teachers for classroom intervention. Studies used experimental group designs to analyse the effects of collaborative speech and language intervention. Overall, findings suggest that children who receive therapy as part of a collaborative classroom based intervention make superior gains in some areas when compared to control groups. However, these studies present with some qualitative weaknesses and should be interpreted with caution.

Introduction

Do children with speech and language difficulties benefit from collaboration between SLPs and teachers for classroom intervention? This proposed intervention method involves the speech language pathologist collaborating with the classroom teacher for the assessment and intervention of speech and language services within the classroom. This service delivery model holds potential for better management of SLP caseloads, treatment for mildly affected or unidentified students, and increased generalization skills. Some limitation of classroom based intervention include professional attitude barriers, accommodating further programming in the school curriculum, and attending to individual needs of a unique client base.

Objective

The following articles consider this question and analyse research outcomes of a collaborative intervention approach within the school system. The main objective of this paper is to

critically evaluate the available evidence for using a collaborative approach within the classroom, highlighting the benefits and limitation for clinical application.

Methods

Search Methods

Computerized databases, including PubMed, Psycinfo, and, Google Scholar, were searched using the following search strategy:

((collaborative*) OR (classroom) AND ((SLP) AND (teacher))) limited to articles written in English between 1990 to present.

Selection Criteria

All studies collected for this review considered the implications of applying speech and language goals to classroom activities with increased collaboration between the teachers and speech language pathologists.

Results

Outcomes

Five experimental, cohort design studies and 1 qualitative design study were reviewed. All studies found students participating in the early classroom intervention did improve for some *some* (if not all) speech and language goals targeted.

Farber, J.G. and Klein, E.R. (1999) consider the efficacy of collaborating to improve speech and language abilities and consequently improve academic abilities. This study uses the Maximizing Academic Growth by Improving Communication (MAGIC) program with kindergarten and grade one students in 12 elementary schools over one school year. A regular curriculum classroom provided a control group for which to compare against the results of students in the MAGIC group. At baseline, both groups of students represented similar economic, ethnic, and prognostic factors. Results were compared and analysed using a Mixed Group ANOVA analysis of variance. Given that the two groups were not matched, but compared, this statistical analysis provided sufficient statistical significance for reliable findings. The results of this study indicate significant improvement in vocabulary and cognitive linguistic concept comprehension. Improvements are also noted in writing and spelling abilities, indicating collaboration for this intervention was beneficial for the students involved.

Ellis, L., Schlaudecker, C., and Regimbal, C. (1995) evaluate basic concept learning in 40 kindergarten

children over an eight week intervention period. This intervention program uses collaborative planning and a consultative intervention program. Control groups were represented by data gathered from junior kindergarten and kindergarten students of previous years. Although data was compared against different cohorts, it is important to mention that all subjects were similar in socio economic status, ethnicity, and prognostic factors. An ANCOVA was used as appropriate comparison of mixed group from different cohorts. Ellis, et al (1995) also compared pre and post scores, used confidence intervals and Pearson r comparisons to obtain appropriate statistical significant data. The results of this program support prior research which indicates that large group instruction benefits the learning of young children and that collaborative intervention is also beneficial for at-risk children.

Throneburg, R.N., et al (2000) examine three different service delivery models over a 12 week period in 12 classrooms (kindergarten to grade three) at 2 different schools. The service delivery models include a collaborative approach, classroom-based intervention with SLP and teachers working independently, and the traditional pull out model for the development of vocabulary skills. Pre and post testing was completed for each group and post hoc analysis was completed to increase the statistical relevance of the findings collected. Generally, groups represented similar economic, ethnic and prognostic factors. The results of this paper support the theory that collaborative intervention is beneficial to both students with speech and/or language disorders as well as typically

learning students. Collaborative delivery presents as more effective than other deliveries in this study.

van Kleeck, A., Gillam, R.B., and McFadden, T.U. (1998) look at 16 preschool and junior kindergarten students with speech or language delays over a nine month intervention period. As a control comparison, data from preschool and junior kindergarten groups from a previous year were used. At baseline, both groups of students represented similar economic, ethnic, and prognostic factors. Findings were compared and analysed using a Mixed Group ANOVA analysis of variance. Provided two groups of students were not matched, but still compared, this statistical analysis provided sufficient statistical significance for reliable findings. Collaborative programming focuses on phonological awareness using tasks in rhyming and phoneme awareness. The findings of this study indicate that especially for phoneme awareness, collaborative instructions are beneficial.

Wilcox, M.J., Kouri, T.A., and Caswell, S.B. (1991) examine both collaborative and traditional service delivery models to evaluate effectiveness on initial lexicon development in the clinical, classroom, and home setting. This study involves 20 young children, ages 20 – 47 months, participating in an either classroom or pull out intervention programs over 24 sessions (12-16 weeks). Groups included children with similar economic, ethnic, and prognostic indicators. A least squares mixed analysis was completed to increase the statistical power of the findings. Results of this study indicate no significant difference in amount of lexical items

learned between the two groups, however significant differences are noted when generalization is considered. Classroom collaborative intervention presents superior to traditional, individual therapy sessions, within this study, when considering the transfer of lexical items used at home.

Finally, a qualitative study by Beck, A. and Dennis, M. (1997) examines questionnaires as a means to highlight professional perceptions on collaborative approaches to intervention. This study analyses both quantitative (scaled ratings) and qualitative (open ended questions) data to reveal that teachers and SLPs often agree on areas around intervention (i.e. student performance, generalization benefits, peer interactions, etc). Analysis considers the percent of responses by each group in order to draw conclusions. Qualitative responses are grouped and analyzed by percents within groups. Findings indicate that both SLPs and teachers feel collaborative approaches are ideal, however are least employed. This qualitative information is valuable and appropriate to add further information about the research question outlined because these findings are indicative of how professionals will accept a collaborative, team approach to speech and language interventions.

Weaknesses

The aforementioned papers have similar design weaknesses. Due to the nature of the research collected, teachers and clinicians were not blinded to the treatment groups, as they were implementing the treatment to students. Teacher bias may have played a role in

the findings collected from these papers; however, teacher bias was accounted for by Farber & Klein (1999) when researchers created "T2" groups: a group of randomly selected students from the regular curriculum who visited the experimental classroom for the teacher-speech pathologist collaborative intervention lessons only. Another shortcoming of these studies, again due to the nature of the research, was difficulty assigning total randomized groups. Whenever possible, children would be chosen randomly to take part in therapy or control groups, however, schools and classrooms were chosen mostly on availability, need, and interest in participating. The studies take place within the mid and north east United States and primarily with students of low-middle to upper-middle socioeconomic status, resulting in somewhat limited ability to generalize the results.

Conclusions

Based on the research designs used, the appropriate statistical analysis, and the relevant research explored, all of the papers mentioned have a valuable contribution in the attempt to answer the research question put forward. However, due to the inherent limitations of the studies, results should be interpreted with caution and further research should be conducted in this area.

Recommendations

The above research summarizes the available evidence for providing collaborative services in the classroom. The experimental design studies reviewed use a cohort design or group comparisons and appropriate analysis of variance to demonstrate meaningful

results which indicate that clients participating in classroom based intervention are at least as likely to benefit from this form of treatment as with traditional pull out models.

These results have important clinical implications for clinicians working in the school systems. Given that research indicates that both clients and typical language learners have the potential to benefit from collaborative speech and language services, SLPs now have the means to accommodate larger caseloads and reach children at risk who may not have been otherwise identified. Clients with linguistic concept, vocabulary, phonological awareness and carryover goals demonstrated the most successes with collaborative intervention.

Clinicians should take some caution in examining the research available, as design limitations are present. Limited randomization and lack of researcher blinding may confound to alter the effectiveness of the design study. Another clinical limitation to consider is the evidence available for different goals.

While classroom intervention presents superior for the aforementioned goals, research for different tasks is not exhaustive and should be considered in future studies. Improved randomization and blinded assessment/reassessments would also improve the quality of these findings and should be considered by future authors to improve research studies.

Each client is unique and clinical goals should be addressed using a service delivery model that is both effective and

highly beneficial to that particular client and the goals.

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