Title	A Randomized Controlled Trial and Economic Evaluation of Direct Versus Indirect and Individual Versus Group Modes of Speech and Language Therapy for Children with Primary Language Impairment
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Aim

To compare the outcomes of direct individual, indirect individual, direct group, and indirect group modes of language therapy for primary school-age children with primary language impairment (PLI) relative to a comparison group receiving community-based speech and language therapy services; to study the evidence for long-term benefits of therapy for such children at 12-month followup; and to compare the 4 approaches in terms of cost.

Conclusions and results

The results from both the intention-to-treat analyses of the outcomes from the 161 children randomized who met the eligibility criteria, and the protocol analyses of the outcomes from the 152 children for whom post-baseline data were available, revealed no significant post-intervention differences between direct and indirect modes of therapy, nor between individual and group modes on any of the primary language outcome measures, after adjusting for the effects of regression to the means. The evidence showed some benefits of direct therapy from a speech and language therapist (SLT) in secondary outcome measures. Parents and teachers were positive about the children's progress and the project. All four intervention modes were acceptable to parents and schools.

Intervention delivered 3 times a week for 30 to 40 minutes over 15 weeks also yielded significant improvements in age-corrected standardized scores for expressive language, but not for receptive language, relative to those receiving community-based SLT services. Children with specific expressive language delay were more likely to improve than those with mixed receptive-expressive difficulties, and non-verbal IQ was not a significant moderating variable.

Within-trial economic evaluation identified indirect therapy, particularly indirect group therapy, as the least costly of the modes investigated, with direct individual therapy as the most costly option. However, these cost differences should not be over-interpreted.

Recommendations

Well-trained, well-supported, and well-motivated speech and language therapy assistants can be effective surrogates for speech and language therapists in delivering services in schools to children with PLI who do not to require the specialist skills of a qualified SLT.

Generalizing the central estimates of the relative cost of different therapy modes observed here to other educational/health systems is possible, but the differences reported in resource use need to be qualified by the level of program intensity and other characteristic features of education and therapy services that may differ from those observed in the trial.

Methods

See Executive Summary link above.

Further research/reviews required

- Identify effective interventions for receptive language problems and investigate the efficacy of the relationship between dose and treatment effect in both expressive and receptive language.

- Investigate models of integrative service delivery, eg, the partnership between SLTs and schools, cluster models of delivery via integrated community schools, and the involvement of class teachers, classroom assistants, and parents/carers.

- Identify characteristics of children who are most likely to succeed with indirect intervention approaches, and evaluate alternative methods of working with those who may benefit from different modes.

- Conduct research to refine the therapy manual.

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