

Effects of intervention on the speech intelligibility of children with cerebral palsy and dysarthria

L. Pennington, N. Miller, E. Roelant, S. Robson, N. Steen.

Introduction: Previous research has demonstrated that speech and language therapy which focusses on controlling breath support, phonation and speech rate increased the speech intelligibility of children with dysarthria and cerebral palsy aged 11-17 years by approximately 15%.

Aims: To investigate if the therapy is associated with increased intelligibility by younger children with cerebral palsy and dysarthria.

Methods: Fifteen children (9M; 6 F) with dysarthria and cerebral palsy aged 5-11 years (mean 8 years) participated in a modified time series design. Children received three 30-45 minute sessions of individual therapy per week for six weeks. Intelligibility in single words and connected speech was compared across five points: one week and six weeks before therapy, one, six and twelve weeks after its completion. Three familiar listeners and three unfamiliar listeners scored each recording. Mean percentage intelligibility was compared using general linear modeling techniques.

Results: Following therapy gains in intelligibility of single words and connected speech, as perceived by familiar and unfamiliar listeners, by approximately 10%.

Interpretation: Therapy was associated with increases in speech intelligibility for this group of younger children. Therapy appears to be of benefit to children of a wide age range. Effects should be explored in a randomized controlled trial.