

Perceptual Judgement of Speech Intelligibility in Cerebral Palsied

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Cerebral palsied speech is characterized by reduced intelligibility. Intelligibility is the degree of clarity with which one's utterances are understood. It is contributed by several factors such as articulation, fluency, vocal quality and intensity, etc.

General proficiency of a CP child can best be considered in terms of language development and the degree of intelligibility. Intelligibility measures quantify the index of the disorder and help in the differential diagnosis of dysarthric speech.

The purpose of the present study was to know the following :

- > Is there any reduction in intelligibility of CP speech?
- > Is there difference between the two major types of CP, spastics and athetoids with regard to intelligibility?
- > What are the factors frequently reporting to be contributing to the reduced intelligibility of CP speech? and
- > What is the efficacy of perceptual analysis of intelligibility of cerebral palsied speech?

The subject included 6 spastics and 6 athetoids both males and females, ranging in age from 10-20 years. Sample included 3 tasks i.e. word identification, reading and story narration task. The speech samples were recorded and 3 trained (speech & language pathology students) listeners were asked to perceptually judge each subject on all the tasks separately and also asked to report the major factors contributing to the reduced intelligibility.

On the basis of analysis of the results the following conclusions were drawn

1. Reduced intelligibility is the major characteristic of CP speech, which hinder the normal communicative behavior in them.
2. The two major types of CP differed significantly in their performance on all the three tasks.
- 3.. Listeners perceived spastics speech better than athetoids speech implying better speech intelligibility in spastics as compared to athetoids.
4. The major factors reported to be contributing for poor intelligibility in spastics are slow rate of speech, strained, strangled voice, hyper nasality, reduced stress, monopitch, monoloudness and articulatory errors such as imprecise consonants and irregular articulatory breakdown.

The factors reported for athetoid group included, slow rate, inappropriate silence, voice stoppages, strained/strangled voice, hyper nasality, excessive stress, monopitch, voice tremor, monoloudness, uncontrolled variation and articulatory errors like imprecise consonants, prolonged phonemes, distortion of vowels and repetition of phonemes.

5. Perceptual analysis can be used effectively as a measure of assessing speech intelligibility as it quantifies CP speech, easily applicable to any

clinical setting when sophisticated equipments are not available, cost effective and convenient in using.

Implication for therapy:

One of the chief concerns of the clinician who deals with CP population, is to measure speech intelligibility of cerebral palsied and identify factors responsible for

their unintelligible speech, select or develop treatment protocols or compensated intelligibility treatment tasks, for the particular communication need of the individual.

Thus it would help in improving speech intelligibility and establish adequate communication skills in the social setting.