

“The Effectiveness of Early Speech Intervention in Children with Apraxia of Speech Aged 2-4 years”.

Literature Review

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THEORETICAL BACKGROUND

- The term ‘apraxia’ refers to the lack of praxis, whereas the term ‘dyspraxia’ refers to the difficulty in performing an action. According to Duffy (2013) apraxia of speech is a neurogenerative disorder with neuromuscular deficits, where the brain lacks of programming significant sensory-motor messages. This causes weakness of oral motor movements, producing abnormal phonetic and prosody outcomes. Apraxia is a disorder which affects the programming and coordination of oral motor muscles during speech.
- Childhood Apraxia of Speech: Developmental Dyspraxia or Oral Dyspraxia are also used for apraxia. Children with apraxia will never be able to acquire the phonemes of their language like typically developed children, so early intervention has a key role in rehabilitation.

MAIN OBJECTIVES

The main aims of the research were:

- the assessment of the effectiveness of early speech intervention
- the effectiveness of specific therapeutic approaches applied in the speech of children aged 2-4 years old, who were previously diagnosed with apraxia.

METHODOLOGY

- Research was conducted in a variety of data bases with PubMed to be the most effective. In addition, research and articles were retrieved from the American Speech-Language Association.
- A total of 233 articles were found, but only 8 met the inclusion criteria.
Participant Information
- Male and female children aged 2-10 years who had started receiving speech intervention at an earlier stage of their lives.
- They were diagnosed with apraxia of speech.
- During assessment they had to achieve higher scores in perception skills than in expressive skills.
- No other comorbidities to be present.
- They were monolingual speakers who lived in European countries, Australia, New Zealand and the USA.
- The grade range of the disorder was from mild-severe.
- Reading skill was required when this was obligatory by the therapeutic tool which was used.

RESULTS

Articles were divided into five categories based on the method or approach used:

- Speech Motor Learning Approach (SML)
- Augmentative and Alternative Communication (AAC)
- Rapid Syllable Transitions Treatment (ReST)
- Prompts for Restructuring Oral Muscular Phonetic Targets (PROMPT)
- Integrated Phonological Awareness Intervention (IPA)
- All approaches and treatments showed significant or simple improvement in the speech of the children.
- Groups of children who received intensive speech intervention more than once a week, scored better results in articulation and intelligibility at syllable, single word and phrase level as well as functional communication.
- Significant improvement in motor skills.
- Vocabulary, grammar and syntax aspects of language were increased and gradually developed.
- Improvement in word stress and non-real syllables.
- Improvement in generalisation of social interaction skills in real context.
- Improvement in phonemic awareness, letter-symbol recognition, reading and writing skills.

CONCLUSIONS

- All approaches and treatments gave satisfactory results after they had either been applied separately or in combination.
- Each individual showed improvement at different level, maintenance and generalisation in continuous speech.
- Intensive speech therapy sessions are needed covering longer period of time for expanding vocabulary at single, real word level.
- The Speech Motor Learning Approach in combination with tactile-kinaesthetic cues, oral feedback and intensive intervention showed higher progress than using the approach solely, particularly in children with severe apraxia of speech.

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