

Shrestha S

Department of Speech & Hearing
Ganesh Man Singh Memorial
Academy of ENT-Head Neck
Studies
Institute of Medicine(IOM)
Maharajgunj, Kathmandu, Nepal

Correspondence to:

Sushmita Shrestha
Ganesh Man Singh Memorial
Academy of ENT-Head & Neck
Studies
Institute of Medicine(IOM)
Maharajgunj, Kathmandu, Nepal
E-mail:cheerupsus@hotmail.com

DEVELOPMENT OF FLUENCY IN 3 TO 6 YEAR OLD NEPALESE SPEAKING CHILDREN

Objective:

The study attempts to understand the development of speech fluency in 3 to 6 year old developing Nepalese speaking children.

Material & Methods:

This prospective study was conducted at Ganeshman Singh Memorial Academy of ENT-Head Neck Studies, IOM, Kathmandu, Nepal during December 2010 to May 2011. Three different tasks namely; general conversation, story narration & song recitation were elicited to identify presence of disfluencies in children. Standard laptops with in-built microphone were used. PRAAT software version 5.1.22 was used for recording. Obtained data was transcribed using International Phonetic Alphabet (IPA) System and was subjected to statistical analysis using two-way ANOVA.

Results :

The speech of 3-6 year old normal speaking children contains almost all the disfluency types. High proportions of disfluencies such as silent pauses, sound/syllable interjection, whole word interjection and whole word & part word repetitions occurred in all the tasks in 3 year olds.

Conclusion :

Results also indicated that 3 year olds had maximum disfluencies followed by 4 year olds, 5 year olds and least in 6 year olds.

Keywords: Disfluency, Silent pauses, Sound/syllable interjection, Whole word interjection

INTRODUCTION:

Speech disfluencies are any breaks in otherwise fluent speech for example; words/sentences/phrases that are cut off, restarts / repetitions / repairs. Children aged between three and five years are commonly observed to experience disfluency¹. These disfluencies usually indicate the child is increasing his or her receptive language and/or expressive language. Study of disfluency is important for understanding the normal speech fluency characteristic which in turn would influence the judgments regarding nature of stuttering & other fluency disorders. Keeping this advantage in view, several studies have been conducted. An average of 8% and 7.4% speech disfluencies in children of age 3 to 3.6 years and 3.6 to 4 years respectively have been reported². Speech of young children comprises of different types of disfluencies; revision, interjections, and single-syllable word repetitions were the most frequently observed speech disfluencies³. The present study is focused on Nepalese speaking children of 3-6 years group. Despite implications for fluency understanding and clinical application, study on Nepalese language has not been done so far.

MATERIALS AND METHODS:

30 pre-primary Nepalese speaking children in the age range of 3 -6 years were selected for this prospective study at Ganeshman Singh Memorial Academy of ENT-Head Neck Studies, IOM, Kathmandu, Nepal during December 2010 to May 2011. They were selected randomly from children whose school records and teachers indicated to have normal intelligence and physical development. These children were native speakers of Nepalese language, from middle class background. Three different tasks were elicited to understand the disfluency in children namely; general conversation, story narration task of a short story & song recitation. Standard laptops with in-built microphone were used. PRAAT software version 5.1.22 by Boersma and Weenink (2009) was used for recording. The children were engaged in a verbal interaction on familiar topics like about their school, family, likes and dislikes. They were asked to recite national anthem as well as narrate a story. A quiet sound treated room was selected for recording purpose. The children were seated comfortably on the chair at a distance of 1 foot from the laptop placed on the table. Each subject's speech was audio recorded individually on general conversation, story narration which was followed by song recitation. Obtained data was transcribed using International Phonetic Alphabet (IPA) System.

RESULTS:

The result indicates that 3 year olds had maximum disfluencies followed by 4 year olds and 5 year olds. The 6 year olds had least total disfluencies

in the equated samples collected. Study revealed that interjections, repetitions and silent pauses were the most frequently occurring disfluencies. Especially silent pauses were evident in earlier ages, whereas interjection and repetition were almost consistent throughout the child's repertoire. With increase in age, disfluency index was found to have decreased.

DISCUSSION:

The present study when compared to similar studies for e.g. Tamil speaking (Shekinah & Boominathan, 2007) children showed differences for e.g. interjection like /hai/ was most frequent in Nepali children whereas prolongation were more seen in Tamil speaking children. This indicated cultural language variation. Interjections and revisions are also more often seen in children with normal fluency⁴. The disfluencies like part word repetitions, silent pauses and sound/syllable interjections were evident in the earlier ages and as the child progress thought the age disfluencies like whole word repetition, word interjection and incomplete phrases are frequent. Such pattern shows the child's progressive control over his language. The children of ages 5 and 6 have least disfluency as they have acquired the speech functions.

CONCLUSION:

There was general progression of fluency through the age of 3 to 6 years. Silent pause was common disfluency noticed followed by interjection & repetition. The study thus provide base for determining normative disfluency in Nepali language which will assist the clinician in differential diagnosis between normal non fluency and stuttering as well as help to assess different disfluencies present in the child. A larger sample of children is needed for providing normative cut off values of disfluencies in Nepali language. Disfluency needs to be studied in wider variety of speaking situations. Subjects can be chosen from larger social economic geographical and dialectical groups.

REFERENCES:

1. Bloodstein, O. Handbook on Stuttering, 3rd ed. Chicago: The National Easter Seal Society. 1983 .
2. Shekinah, P. S. & Boominathan, P. Disfluencies in 3-4 year old Tamil Speaking Children, Master's Dissertation, SRMCH, Chennai. 2007.
3. Carlo, E. G. & Watson, J. B. Disfluencies of 3 & 5 year old Spanish-speaking children. Journal of Fluency Disorders, 2003; 28: 3753.
4. Conture, E.G. Stuttering: Its Nature, Diagnosis, and Treatment. Boston: Allyn & Bacon. 2001.