



Prevalence of Stammering in School Going Children between Ages of 8 to 12 Years

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ABSTRACT

Background: Stammering is a problem and is associated with adverse, long term outcomes that impact on individual's families and academic achievement of children in the school years and affects later in adulthood.

Objective: To determine the prevalence of stammering in school going children with age bracket of 8-12 years in Govt. Schools Lahore Pakistan.

Methodology: A cross-sectional survey was conducted on 1000 school going children between ages of 8-12 years through questionnaire developed by literature review and expert opinion. The data was collected from Govt. Schools Lahore. The following information was collected for each student: name, age, gender, class, school, date of birth, number of siblings, child stuttered or not. The students were asked to read paragraph of 100 syllables. The assessment of students was taken by researcher itself.

Results: The prevalence of stammering in school children between ages of 8-12 years in Lahore Pakistan was 0.9% in 1000 population (boys 7: girls 2).

Conclusion: The prevalence of stammering was more common among boys than girls.

Keywords: Speech disorders; stammering; communication; prevalence

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INTRODUCTION

Whenever an idea springs in mind, persons simply say it with the most appropriate word. Unfortunately this is not so for the person who is suffering from fluency disorders. The person may interrupt, hesitate, repeat or block on words which are otherwise very fluent in other setting. Normal fluency is developed over time. Many children grow out of the difficulties as they mature physically, mentally and linguistically. Stammering is a speech disorder. "Speech Message is the ability to produce sounds by coordinating and moving specific oral motor structures (e.g., Tongue, mouth) at the right time".^[1] In the beginning professionals begin to stimulate the imagination then search for general principles of behavior as stammerers provide vivid account of their stammering. A move towards objectivity had begun later on, with enquiries, averted, abandoned guess work and some genuine facts started to emerge. It was studied that why speech would halt under special circumstances and in a manner that differs greatly from person to person. So speech is the physical production of sounds.^[2] In 19th century many prominent scientist worked on linguistic handicaps. Thelwall's letter to

Henry cline in 1810 was the first book on speech problems. Then in this regard, Wyllie's the disorders of speech is no doubt a book from which modern speech. Different authors define stammering as, Johnson, defines stammering as: "Anticipatory, apprehensive, hypertonic avoidance reaction".^[3] By Van Riper: "When the forward flow of speech is interrupted by a motorically disrupted sound, syllable, or word, or by the speaker's reactions thereto".^[4] Clinical features of stammering includes core behaviors: repetitions (w-w-w where is my book?), prolongations (Ssss have my money), blocks (I want....my doll), interjections (I need 'umm' a book 'umm' for reading) and secondary behaviors include eye blinking/lack of eye contact, foot tapping/finger tapping, head nodding, muscle tension, tremors on jaw/lips, verbal interjections, facial expression. Stammerer's feelings and attitudes include escape behavior and avoidance behavior: postponement, starters, substitutions, circumlocution, and anti-expectancy.^[5] Stammerer use these common strategies to minimize their stammering. They think that these strategies lessen the amount and severity of stammering but these behaviors provide them a temporary relief and



increase the stammering. There are five levels of development of stammering. 1) Normal dis-fluency (age ranges from 1.5-6 years), 2) Borderline stammering (age ranges from 1.5-6 years), 3) Beginning stammering (age ranges from 2-8 years), 4) Intermediate stammering (age ranges from 6-13 years), 5) Advanced stammering (age ranges from 14 years and above).^[6] Different theorist presents different theories regarding stammering. These theories are 1) Cerebral dominance theory, 2) Genetic theory, 3) Neurotic theories, 4) Conditioning theories.^[7] In the 18th and 19th century, the use of surgical instruments was recommended to overcome the speech disorder but later on, It was abandoned due to the bleeding to death and failure to stop stammering.^[8] There are different treatment approaches that are used to treat the stammering, they are fluency shaping, stuttering modification, electronic devices, parent-directed intervention. The purpose of therapy is to change the way the person who stutters talk, feel and also interacts with the environment.^[9] International study was done in (1964) with sample size of 12,448 primary school children. Their study showed that the prevalence of stammering in primary school children was identified as male: female ratio 5.8:1.^[10] Another international study was done in Australia with sample size of 10,425 students. Their study showed that the prevalence of stuttering in school students in Australia was identified as 0.33%, (30 males & 4 females).^[11] The aim of this study was to determine the prevalence of stammering in school going children between ages of 8 to 12 years.

METHODOLOGY

A cross-sectional survey was conducted on 1000 school going children between ages of 8 to 12 years through questionnaire developed by literature review and expert opinion. It was held at Govt. Schools Lahore. The time duration of study was 4 months. Inclusion criteria of this study were normal school going students between the ages of 8 to 12 years. Both male and female students were included in the study. While the exclusion criteria was of students with congenital and acquired disorders.

In this study, questionnaire was used as an instrument. The information session regarding stammering was conducted for every teacher within the school so they help researcher in the data collection. The following information was collected for each student: name, age, gender, class, school, date of birth, number of siblings, child stuttered or not. The students were asked to read paragraph of 100 syllables. The assessment of the students was taken by the researcher himself.

RESULTS

The mean age of children is 9.88 ± 1.187 (years). According to this 501(50.1%) were male whereas 499(49.9%) were female.

Table 1: Frequency of Primary Symptoms

Primary symptoms	Frequency	Percent
No symptom	991	99.1%
Repetition	1	.1%
Blocks	8	.8%
Total	1000	100.0%

According to this table 991(99.1%) were without primary symptoms, 1(0.1%) were with repetitions whereas 8(0.8%) were with blocks.

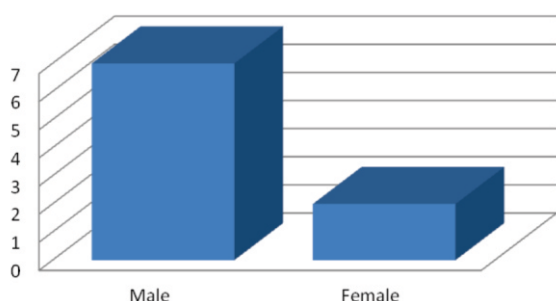
Table 2: Frequency of Secondary Symptoms

Secondary symptoms	Frequency	Percent
No symptom	991	99.1%
Finger tapping	1	.1%
Head nodding	2	.2%
Lack of eye contact	3	.3%
Muscle tension	2	.2%
Hand rubbing	1	.1%
Total	1000	100.0%

According to this table 991(99.1%) were without secondary symptoms, 1(0.1%) with finger tapping, 2(0.2%) with head nodding, 3(0.3%) with lack of eye contact, 2(0.2%) with muscle tension, whereas 1(0.1%) were with hand rubbing.



Distribution of gender among stammerers



Graph 01: Graph for Distribution of Stammering By Gender

DISCUSSION

The aim of study was to determine prevalence of stammering in primary school children between ages of 8-12 years and it was 0.9% in 1000 population (boys 7: girls 2). Stammering was common in boys. This study supports international study done in Yazd-Iran with sample size of 7881 primary school students. Their study showed that the prevalence of stammering as a speech disorder in primary school students in Yazd-Iran was identified as 1.2%. In their study, the ratio of male to female was 2.5 to 1.^[12] Other international study, "The prevalence of stuttering in, voice and speech-sound disorders in primary school students in Australia" Their sample size was 10,425 students. Their study showed that the prevalence of stuttering in school students in Australia was identified as 0.33%, (30 males & 4 females). This showed that stammering is more common in students who came from poor or weak socioeconomic.^[11] Another international study was done in (1964) with sample size of 12,448 primary school children. Their study showed that the prevalence of stammering in primary school children was identified as male: female ratio 5.8:1. Another thing which was noticed was that the stammerers were neater in their appearance. They were lacking in their confidence and they were not very open in discussion as their age fellows were giving them secret smiles as they were trying to hide their stammering.^[10] The prevalence of stammering per 1,000 in primary school was 0.9% (males 7: females 2). It was more common in boys than girls. Another international

study done by Michael Lawrence, M.D.(1998) showed that stutterers can exhibit both primary symptoms (repetitions, prolongation, blocks, pauses) as well as secondary symptoms (frustration & avoidance).^[13] which is in support of the present study. All of the above international studies showed that stammering is more common among males than females and stutterers can exhibit both primary and secondary symptoms so this study is in support with the international study done by well-known learned authors.

CONCLUSION

Stammering was common among boys. Students were showing different primary and secondary symptoms.

LIMITATIONS

Study should be conducted on large sample.

Study should be conducted from different ethnic groups in a population for proper evaluation of results. Study should be conducted in a multiple sitting

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