

DISFLUENCIES IN PRESCHOOL AND SCHOOL AGED CHILDREN

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Introduction: In the diagnosis of children who stutter, there are many individual features of speech fluency have to be examined. One of the specific aspects is related to the continuance of stuttering; variability and attitudes of the disorder in different situations. The others are closely connected with frequency and type of disfluencies. Speech therapists should be aware of all symptoms can be presented by stuttered children when they have to make decision for treatment and to take under consideration the risk of developing of persistent stuttering.

Method: The main purpose in this study was to analyze disfluencies in preschool and school aged children and to find if there are any differences between the groups. We used samples of children's speech and made transcription of their disfluency. Types of disfluencies were divided in two groups: typical and less typical for stuttering symptoms. All of them were counted like an average amount per 100 syllables: (number of disfluent syllables / total number of syllables)*100. In the study were included 20 children who stutter: 10 preschool (first group) and 10 school aged (second group). To determine stuttering severity was used SSI-3R by Riley (1994).

Contingent of the study: The contingent of the study is presented in Table 1. Total number of children included in the study was 20 (10 in each group): 5 boys and 5 girls in preschool age; 9 boys and 1 girl for the group of school aged children. By using SSI-3R we received the following data: (1) preschool children: 5 children (50%) are with mild stuttering, 4 (40%) are with moderate and 1 child (1%) is with severe stuttering; (2) school aged children: 5 children (50%) are with mild stuttering; 2 (20%) with moderate, 2 (20%) with severe and 1 child (1%) is with very severe stuttering.

Table 1. Contingent of the study.

Groups	Gender		Mean age		Stuttering severity			
	Boys	Girls	Boys	Girls	mild	moderate	severe	very severe
G1: Preschool children	5	5	5 years 5 months	4 years 4 months	5	4	1	0
G2: School aged children	9	1	9 years 4 months	11years	5	2	2	1

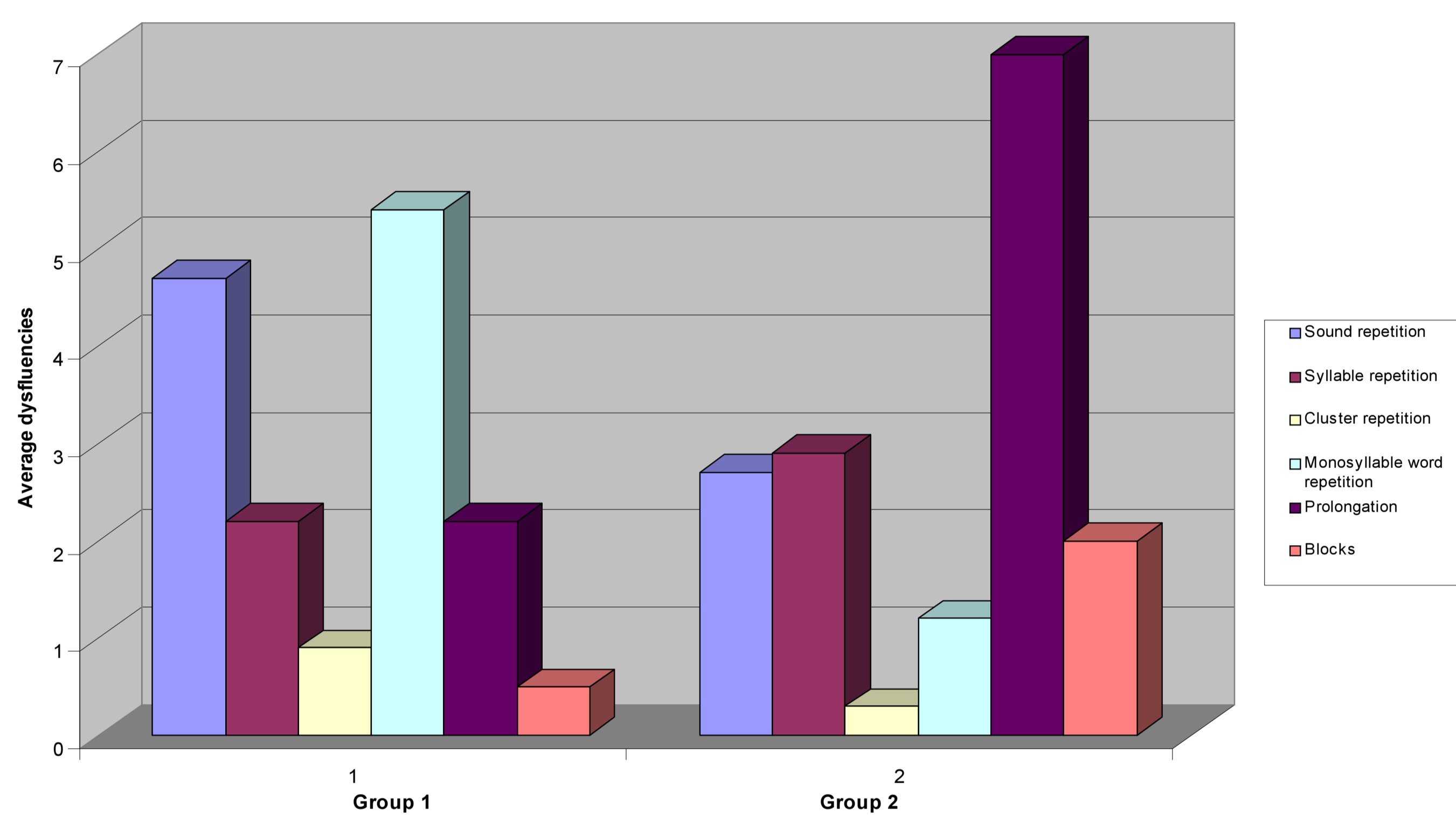


Figure 1. Typical for stuttering symptoms.

Table 2. Disfluency index regarding typical and atypical symptoms.

Subject №	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Preschool age-disfluency index (Group 1)										
Typical symptoms	12.2	14.9	16.4	10.7	9.1	15.3	30.4	9.5	10.7	32.6
Atypical symptoms	8.9	4.9	11	12.2	11.7	9.2	22.9	7.2	9.1	20.3
School age-disfluency index (Group 2)										
Typical symptoms	10.5	14.4	11.5	8.9	24.4	10	16.7	6	42.3	25.5
Atypical symptoms	7.5	16.4	3	8.2	4.4	5.4	4	10	21.4	36.4

Results: All results are presented on Figure 1, Figure 2 and Table 2.

- On Figure 1 are presented results regarding typical for stuttering symptoms
- On Figure 2 are presented results concerning atypical for stuttering symptoms
- In Table 2 is presented Disfluency index for each child with respect to typical and atypical for stuttering symptoms

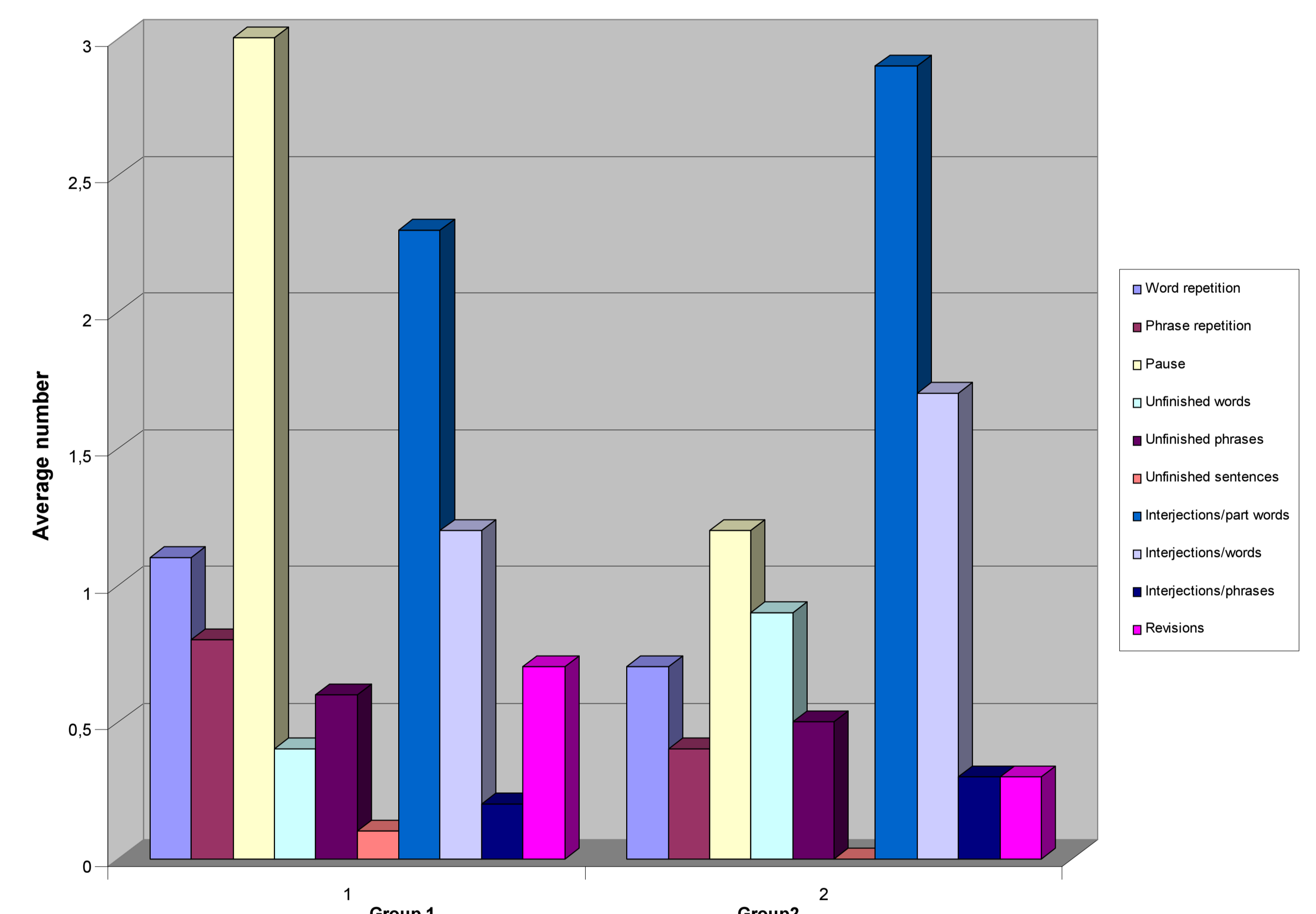


Figure 2. Atypical for stuttering symptoms.

Discussion: As we can see half of the children from both groups are with mild stuttering, and most of the others are with moderate and severe stuttering. From this point of view we can conclude that correlation between the groups toward stuttering severity is similar.

Comparing each of the symptoms was found significant difference between groups regarding sound repetitions ($p \leq 0.01$), sounds prolongations ($p \leq 0.05$), and blocks ($p \leq 0.01$). There is no significant difference ($p > 0.05$) between the groups in relation to syllable repetitions, monosyllable repetitions, cluster repetitions, phrase repetitions, multisyllable repetitions, unfinished phrases and sentences, interjections, revisions.

Main difference between preschool and school aged children is in relation to sound repetitions, sound prolongations and blocks. From the first group we found only one child (S6) presented blocks in contrast to the second group where we registered blocks in all children. Significant difference in reference to blocks could be explained with continuance of stuttering: this symptom is more typical for advanced stuttering. Similar explanation could be given for prolongations. Mean value of this type of disfluencies for the second group (7,06) is nearly to three times over than the first group (2,20). The other reason is that we counted prolongations in speech samples for half of the preschool children. Another difference is related to the loci of disfluencies. Most of prolongations in preschool children are between the words (mostly without sings of tension) in contrast to these from the second group: they are on the first sound and within the words with sings of tension. As distinguished from prolongations and blocks, sound repetitions are more typical for the preschool children in correlation 4,7:2,6 to the school aged children.

Conclusion: Data show that we have to pay attention on type of disfluencies, their frequency and loci in aim to prevent developing of chronic stuttering. According to Riley & Riley (1982) children are more likely to develop persisting stuttering if their speech is characterized by tense part-word repetitions and audible or inaudible sound blocks. For the preschool children an important part of assessment is differentiation between normal disfluencies and stuttering. There many studies, books and articles show the main differences between them (Bennett, 2005; Bloodstein, 1995; Curlee, 1999; Yairi & Ambrose, 2005, etc.). Some of the elements for distinguishing are disfluency index, number of repetitions per unit, type of disfluencies.

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