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SPEECH FLOW DISORDERS IN THE CLASSROOM – STUTTERING: SPEECH THERAPY AND EDUCATIONAL INTERVENTION

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ABSTRACT
Research shows that attitudes of adults towards children who stutter can be a factor in maintaining or reducing its dysfunction. Furthermore, a number of studies focus on the importance of the educators in the classroom, and their contributions to a successful speech or language program. It is often that studies of that genre reach the conclusion that the teacher's role is of vital importance to the life of the child who stutters, as well as to the success of the treatment sessions the child undergoes. It is also perceived that, the more the knowledge of teachers on the issue of stuttering, the more positive their attitude towards it. Moreover, as regards to attitudes of teachers towards the display of stuttering, there is a positive correlation between tolerance from the part of the teacher and the number of specimens of stuttering. In other words, the more displays of stuttering a teacher encounters, the more positive the stance adopted by him towards the issue. Taking all of the above into account, the aim of the present retrospective study is to bring forward the issue of stuttering for analysis, as an issue of education and therapy. Furthermore, practical advice is cited for confronting the issue of stuttering in the classroom, within the contours of the advancement of students' health. Moreover, in the spirit of academic openness, the present study comes to reinforce the work of educators with practical speech therapy interventions, which are useful for any teacher working with students who stutter.

KEYWORDS: Stuttering, speech disorders, speech therapy

INTRODUCTION
Stuttering is a form of communication disorder, where speech flow is interrupted by repetition (of a word, syllable or phoneme), phoneme elongation, stopping, reformulation, insertion of sounds/phonemes, which differ both quantitatively and qualitatively from those that appear in speech of non-stuttering individuals. Furthermore, individuals who stutter may also present secondary, non-verbal behaviors such as the following: gaze aversion, repetitive rhythmic limb movement, grimacing.
pursuing of the lips, closing of the eyes etc. Finally, when referring to stuttering, one must not omit its emotional implications. Many individuals who stutter feel shame, anger, disappointment, stress, denial of stuttering etc. (Kampanarou, 2007).

For decades now, research studies have been conducted as regards to speech disorders, with significant inter-disciplinary connections. For example, Yeakle, M.K & Cooper, E.B. (1986) conducted a study about teachers’ perceptions of stuttering. Their research showed that educators who had participated in speech disorder seminars were of the opinion that stuttering is not caused by psychological disorders, as opposed to educators that had not taken part in such seminars. Through those specialized seminars, educators are made aware that nowadays, the view that stuttering is due solely to psychological causes is dismissed, and it is being stressed upon them that stuttering is caused by a combination of psychological and environmental factors.

Furthermore, educators who have children who stutter in their classroom are more likely to dismiss the notion that stuttering is due to natural causes, when compared to teachers that don’t have such children. It is though possible that the former were influenced by variations of frequency and severity of the problem. Naturally, it is widely accepted that verbal fluctuation of individuals who stutter suggests that it cannot be caused by natural causes. Therefore, the view of educators who have children who stutter in their classroom appears to be correct (Toner & Shadden, 2002).

As regards to how stuttering affects performance, educators with students who stutter are at a disagreement with those who have no such students in the issue of how this disorder influences academic performance. It is indeed reported that constant interaction of educators with students who stutter leads to a reduction in overestimating the effect of that disorder in individual performance. Teachers appreciate and recognize speech therapists’ contribution in helping individuals who stutter to speak more fluently, or even flawlessly, and more than ¼ of teachers are at an agreement that speech therapists can intervene in a helpful manner. The way with which educators manage their student’s speech impediment significantly affects their school performance, their social integration, but also the evolution of the therapeutic intervention to his stuttering. According to the study by Yeakle, M.K. & Cooper, E.B. (1986), 50% of teachers believe they possess the appropriate means to respond to stuttering issues, while 1/3 of them believe that it is difficult to know how to properly approach this disorder. Educators who had taken lessons on speech disorders, who also had students with such disorders, were more confident in their strength to deal with such children, compared to those who hadn’t taken classes or had no students with speech disorders. ¼ of teachers favor the view that students who stutter should not be exempted from speaking in the classroom, while at the same time, 70% of them feel the need to avoid giving the floor to children who stutter. Teachers who have extended interactions with individuals who stutter are more demanding of them than teachers with limited experience in stuttering. Moreover, educators who possessed knowledge as regards to stuttering had a more favorable stance towards them than those who hadn’t participated in similar seminars.

Finally, the more knowledge and experience educators gather as regards to stuttering, the more realistic the views they acquire about this disorder. Also, they are encouraged to adopt a more positive stance towards this disorder and those who are affected by it, and they are more confident in their capacity to effectively deal with stuttering (Toner & Shadden, 2002).

TREATMENT TECHNIQUES AND EDUCATIONAL APPROACH TO STUTTERING

Efforts to therapeutically address stuttering stem from ancient times. Treatment methods proposed at times were analogous to the causes considered responsible for the display of stuttering (Kakouros & Maniadaki 2006). The primary goal of the treatment for stuttering, regardless of the treatment that is being followed, is to achieve effective communication. This means that individuals who stutter, with the conclusion of the treatment, must be able to say what they want, not what their stuttering allows them to say, and of course to be understood by others (Williams, 2006).

To begin with, the pedagogue should contact a speech therapist, in the case that the child is undergoing a treatment. He must be informed and inform the speech therapist as well, and also discuss his knowledge of stuttering, his feelings towards stuttering, and his feelings for the child in question. The educator’s contribution to the treatment approach is of great significance. The teacher may offer important information about the child’s speech within the school environment, his feelings, his own reactions, as well as that of others, and the effect of stuttering in school performance. This information is crucial and can form therapy goals for the clinical procedure. After all, the pedagogue is responsible for facilitating the introduction of
treatment techniques within the classroom, thus significantly contributing to their usage within the school environment.

The techniques at the pedagogue’s disposal will have the goal to enhance the child’s speech, and reduce his stress within the educational process. Such teaching methods can contribute decisively to the child’s feeling of being accepted, they can reduce the child’s stress about speech, and can assist it in adopting a healthy communicational profile (Skeat & Perry, 2008).

In conclusion, taking into account the contemporary literature, it is useful to cite the most important advice to educators of both general and special education, as regards to stuttering. An important step to be taken is to avoid interrupting or finishing the child’s sentences when it is having difficulties. It is important for the child to be allowed to complete its sentence patiently, without goading it to “Speak slowly”. The educator’s speaking tone should be slow and relaxed so as to promote ease and fluency to all children, and not stress them and cause them to feel that they need to match adult speech speed. One should be attentive to what the child says, not how it says it. Having open dialogue with students, by keeping open channels of communication with the students throughout the school year is equally important. All students require aid, and rules for rotation. In such a way, integration and smooth cooperation between all students in the classroom can be achieved. Educators should discuss with the child in what order it wants to read or be examined in class. Some children feel better when they are examined first or in the middle of the examination instead of at the end, and vice versa. The child should be given the opportunity to be examined on the days that its stuttering is milder. For every issue that cannot be addressed within the educational community, cooperation with the child’s speech therapist is required, as well as other techniques that can be introduced for the advancement of the therapeutic environment (Ramig & Dodge, 2010; Scott, 2010).

Similar types of intervention can be found below:

**Relaxation**

It is advised to begin with relaxation exercises for the mimic and bi-articular muscles. Such exercises include:

- We lean the head slightly backwards, stretching the neck muscles for 10-15 seconds. We concentrate on this exercise. We allow the head to lean forward smoothly.
- We engage the forehead by raising the eyebrows for 10-15 seconds, focusing on the tension of the stretched muscle in the area of the forehead.
- We flex the muscles surrounding the eyes for 5-10 seconds, focusing on the tension that builds between the eyes.
- We close our eyes tightly for 5-10 seconds, concentrating on the tension of shutting the eyes.
- We grit our teeth for 5-10 seconds. Focus our efforts in feeling the pressure spreading from our jaws to our temples.
- Smile widely, exposing our teeth for 5 seconds. Concentrate on the tension around the cheeks.
- We exhale for 10 seconds, holding our lips stretched outwards, while concentrating on the pressure on the lips.
- We push the tongue against the front teeth for 10 seconds, while concentrating on the pressure applied on the tongue.
- We pull our tongue backwards for 10 seconds. We feel the tension of the tongue in the lower mouth and throat.
- We yawn mildly, then more intensely, and then very intensely. During the last yawn, we close our eyes and stretch the muscles of the mouth and larynx. After the relaxation exercises, the children lie on their backs on a carpet. They are instructed to close their eyes and relax.

**Rhythm and Co-ordination**

Then, some exercises that enhance rhythm and co-ordination are necessary. Such exercises are shown below:

- Children walk in alternating directions, accompanied by music or drum sound, alternating walking speed to match the rhythm of the drum. Then they hold hands in pairs and play the horse and coachman, they walk or run according to the rhythm of the drum. In another exercise, children sit on chairs. When the rhythm is slow, they raise their legs on the chair, bringing them towards the chest, and then lower them again. When there is fast music playing (i.e. drum music) they simulate running without leaving the chair. In another exercise, children run in a circle, clapping their hands every second step. Then they are given the command “Walk!” to start walking while clapping their hands twice at each step.
**Rhythm and Speech**
Apart from the exercises aiming at adjusting the movement of articulate organs, various exercises aim at coordinating speech rhythm.

- One such exercise is to utter every word of a sentence in syllables, while at the same time knocking on the table. At first, the exercise is to be performed slowly, and then increase the tempo. The knocking should be constant, and should not stop at the end of each sentence. This helps individuals who stutter to ease into the following sentence. Gradually, we stop knocking on the table while speech continues.

**Movement and Speech**
The next step entails developing coordination between movement and speech. Such exercises include:

- **Rhythmic pacing:** Children recite children’s songs that facilitate the rhythm and pacing of the exercise.
- **Also,** we use children’s songs which are not sung but recited. We select songs that can facilitate rhythm and are accompanied by movement.

**Proper use of pauses**
The proper use of pauses is very important in speech. Patients who stutter use pauses in a flawed way. Pauses are very important for the following reasons:

- **When we pause,** we can think of what we want to say.
- **We can think of the way with which to express ourselves (sentence structure).**
- **When pausing,** we allow ourselves time to choose the words we want to use.
- **We allow ourselves time to breathe.** We usually breathe at the beginning of the sentence, and during non-verbal utterances (hmm, mm). In average, air intake should last 3-4 seconds. We should make sure that the quantity of air we inhale will be sufficient for the sentence we will utter. If we wish to speak a long sentence, then we try to take a long breath.
- **Pauses can be used to ensure that our listener has grasped the concept of our speech.**
- **We give time to the listener to ask for clarifications,** or give him the chance to ask questions, if he has not understood the content of our speech.
- **Pausing can be used to emphasize on the meaning of our speech.**
- **Also,** it allows us to control our emotions.

- **Pausing allows us to overcome negative emotions before or after stuttering (i.e. I will be “stuck” in a specific word, but this will not last long).**

**Smooth speech starting**
Usage of smooth starting is based on the theory that, when the patient stutters, the muscles responsible for vocal production do not synchronize. The main feature of this technique is slow articulation of the first sound or sounds of a sentence (Skeat & Perry, 2008). In order to achieve a smooth start, the patient should be in an standing, yet relaxed position (throat, thorax, bi-articular muscles), he should properly use diaphragmatic breathing (quick inhale, slow exhale) and he should use smooth bi-articular contacts. Having made sure of the above, we guide our patient to take a relaxed breath, then to exhale a small quantity of air, utter the first sound of the word or sentence, and then, while speaking the sound, to prolong the bi-articular contact.

**Exercise for elongated inhalation:**
This focuses on the inhalation phase. Inhalation takes place during movement, and the exercise is performed at a given tempo. We suggest the following exercises:

- **The individual stands facing a mirror.** They learn to inhale two consecutive times from the nose (i.e. pretending to hold a flower and smell it, then stop).
- **In this exercise,** the subject breathes twice, while simultaneously turning their head left and right. This can be accompanied by raising the arms.
- **In this exercise,** we ask of the subject to perform two breaths, while simultaneously leaning their head backwards.
- **After this,** we ask of the subject to breathe twice, while simultaneously turn their head left, then right. With the completion of these exercises, we ask of the individual to perform breathing exercises while walking. For example, the individual takes a step forward while simultaneously inhaling twice, immediately followed by three steps where they exhale freely. Also, we can ask of the individual to take a step forward, while simultaneously moving their head (right, left, forward or backwards), with every move accompanied by two intakes of breath. For the following three steps, they are to exhale freely.

As was mentioned before, those exercises are suggestions, and selecting and performing them requires the guidance of a specialist, as
every case is different and calls for planning of an individualized therapeutic intervention program.

CONCLUSION

In conclusion, it is the educator’s responsibility to effectively contribute in creating an environment of complete acceptance for the child that stutters by its classmates, to avoid teasing and negative comments that will affect the child’s communication skills. Teasing by classmates can have a significant adverse effect in school performance and social integration of the child (Guitar, 2006). Furthermore, close cooperation of speech therapists with teachers of students who stutter is deemed necessary throughout the school year. Ways to combat and avoid such situations primarily include consultation with the child that stutters, and the teaching of “self-defense” techniques, when confronted with classmates’ comments and behaviors (Yairi & Seery, 2011). This consultation is usually undertaken by a school psychologist specialist, or by a speech therapist. The teacher’s role is to advise the teasers themselves. Moreover, an open discussion in the classroom can prove effective, where any form of teasing needs to be publically forbidden and deemed socially unacceptable. (Ramig & Dodge, 2010). Of course, such actions require caution and full cooperation and communication with the child’s parents, as well as the child itself, as it is possible that the child is not yet ready to publically admit the issue. Furthermore, an easy way to create a tolerant classroom is informing the children about stuttering. In addition to the above, there can be a video/image presentation of individuals who stutter, or a film screening, in order to cultivate an accepting environment, founded on correct and full information. Bringing the child who stutters in the forefront can prove very useful during such a presentation, while the educator’s participation, as well as that of a visiting speech therapist could also contribute effectively towards a fully informed classroom.

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