

Programmed Therapy Technique for Stutterers

Mithilesh Kumar
Student, A.I.I.S.H., Mysore.

It is a well known fact that stuttering is a disorder of several theories. As such it is a disorder of several therapies also. For a very long time stuttering treatment has come into picture. In recent times, the researchers have more insight into it and several therapy techniques have been developed. In earlier times. A single therapy technique for stuttering was used based on a rationale. In the present state of art, more knowledge has been gained about the stuttering phenomenon. Hence there is a new way of considering stuttering as a disorder involving many systems underlying speech production. Disruption in any or many of these would result in speech characteristics termed as stuttering. Several therapy packages have been used till date to overcome stuttering. The present study was aimed at using different therapy techniques in combination which are suitable and appropriate for the different types of dysfluencies exhibited by the stutterer. Therefore evaluation of different types of dysfluencies and selection of the appropriate technique for these dysfluencies and their usefulness were the major aims of the present study.

Four stutterers varying in degree of severity from mild to severe formed the subjects of the study. Among the four only one had mild stuttering and the others had severe stuttering. Twenty-five features were considered for evaluations which were grouped under features reflecting miscoordination of the articulatory system. Further, the features were grouped under rhythm and secondaries observed. Their speech and reading samples were audio-recorded before, during and after therapy. Different reading samples were used to avoid adaptation. The percent of occurrence of each dysfluency before therapy were computed and depending on the percentage of dysfluency, whichever feature had highest percentage was treated first by using an appropriate type of therapy technique. The different therapy techniques used in this study were (1) airflow technique; (2) airflow exercises (3) soft contacts (4) exercise for articulatory coordinations (5) exercise for laryngeal coordination and (6) generalization.

(1) Airflow technique - in this technique, initially the patient was trained to say /h/ sonorously and then the word with initial syllable prolongation. After the subject had acquired this, /h/ was made silent. This technique was used especially in those subjects who exhibited repetitions of initial syllables. By this technique the subjects were taught to maintain a smooth airflow.

(2) Airflow exercise - This technique was used in those subjects who exhibited a sudden inspiratory air intake especially in plosive release which suggests that the air pressure behind the articulator is inadequate to release the highly tensed articulators. For this, initially the subject was trained to take a deep breath and expire gently through the oral cavity. Once this was achieved, the subject was asked to prolong vowel on expiration and later this was generalized to speech.

(3) Soft contact - In this technique the subject(s) was/were trained to articulate the sounds using less pressure than he uses during stuttering itself. The subject(s) was/were asked to move the articulators with minimum or no tension in the lips, tongue and vocal folds. This technique was used when the patient showed hard contacts.

(4) Exercise for articulatory coordination - This exercise was given when the subject showed miscoordination in the articulatory system, - nasals, non-nasals for nasals or prolonged nasals, especially for the velopharyngeal port, a voluntary control of the velopharyngeal port movements were tried. In this technique initially the subject(s) was/were taught to feel the nasal air escape for nasal continuants like /m/ and /n/; and the oral escape for oral sounds like /a/ and /i/. When they were able to differentiate this nasal and oral sounds by airflow they were taught to alternate /m/ and /a/ or /i/. By this a voluntary control on velopharyngeal port movement was achieved which was further transferred to other speech sounds in speaking as well as in reading.

(5) Exercise for laryngeal coordination - This exercise was given when miscoordination of laryngeal system was indicated by the use of voicing for voiceless or voiceless/voiced. To correct this miscoordination the subject(s) was/were made to feel factually the vibration of the vocal folds during the prolongation of vowels. After that they were taught to feel the absence of vibration of vocal folds during the production of unvoiced sound such as /s/. Later on the subject(s) was/were trained to utter /a/ and /s/ alternately ie. alternating the movements of the vocal folds from vibratory position to the open position. In this way subjects could acquire voluntary control over the glottal gestures which was later transferred to speak and reading.

(6) Generalization - When the subjects's speech was fluent in the clinical situation, he was introduced to strangers one at a time and he was engaged in a dialogue. After that he was exposed to a group of individuals and deliver speech in front of them.

All the audio-recorded speech samples were given to three judges for their perceptual evaluation. The judges were provided with the measurement criteria and after the perceptual evaluation, Spearman's rank correlation test was administered which showed a very high degree of correlation between the judges Walsh test was used to find out the significant difference before and after therapy. On perceptually analyzing the speech samples of the cases, it was observed that there was a drastic reduction in the percentage of dysfluency in post therapy speech sample in reading as well as in spontaneous speech. Some of the judges reported of 0% dysfluency in two subjects (after therapy). Also, if any dysfluencies were persisting they were repetitions and articulatory fixations.

The results of the present study are encouraging and they suggest that therapy programmes utilizing specific feature elimination might serve as a useful approach. However, in this study only four stutterers were considered and it would be essential to try these individualized therapy techniques with many more stutterers to come to a conclusion. Also, the long term effect of these kinds of programs are to be evaluated.