

## ADAPTATION AND STUTTERING

KALAI SELVAN, M. G.\*

Stuttering remains still a mystery. In this area, in spite of extensive research, questions outnumber the answers. Many of the theories of stuttering have emerged from the field of Psychology. Many explanations are made regarding stuttering behaviour. Adaptation is one such phenomenon. For the first time, Van Riper and Hull (1935) observed the phenomenon. Johnson and Knott (1937) attempted to measure it. Eisenson and Horowitz (1945) reported decrease in stuttering with the reduction of meaning in the material. Newman (1954) found it to be present less in self-formulated speech, than in oral reading. Shulman (1955) studied increase of audience and adaptation. Peins (1961), Brenner, *et al* (1972) found it as being due to rehearsal of reading material. Donhue (1955) found less decrease in stuttering on continuously changing the reading material. Newman (1963) found contrary evidence. Wingate (1966) rejected the implications.

In the light of controversies, the present study was undertaken in order to find out the effect of adaptation to speech material and stuttering behaviour.

Here the term 'Adaptation' is used in the sense meant by Van Riper and Hull (1938), which means 'Reduction in frequency/severity of stuttering, as a function of repeated utterances in a relatively constant speaking situation.'

### Method and Materials

*Subjects:* Male subjects ranging in age from 19 to 29 years coming for consultation at All India Institute of Speech and Hearing, Mysore were taken for study.

### Material

A passage in *Hindu* (a daily), consisting of 362 words was used to facilitate self-formulated Speech after being checked for time taken for reading aloud.

for Normal individuals: 2.5 minutes

for Mild stutterers: 4 to 5 minutes

for Moderate stutterers: 6 to 7 minutes

for Severe stutterers: 10 minutes

- Mr M. G. Kalai Selvan, M.Sc, Speech Pathologist and Audiologist.

## Procedure

Research study was done at a therapy clinic room which was free from distractions at individual setting at All India Institute of Speech and Hearing Institute, Mysore.

Each of the subjects was asked to read the passage aloud. Base rate of stuttering was noted with the help of the tally counter. Five minute rest was given. During this time, the subject was instructed as to what he was required to do. Experimental sessions began. Here five trials were given. Each one consisted of silent reading of the passage by the subject and one minute for silent recalling of the passage by the subject, followed by narrating this to a passive listener.

The stuttering behaviour (i.e., blocks) was recorded by the experimenter and the observer, with the help of tally counters. Tape recorder was also used. The recorded speech, the data arrived at by the experimenter and the observer are used to arrive at the number of stuttering blocks. The words narrated by the subject was taken as the number of recalled words in each trial.

## Scoring

1. *Base rate:* in terms of the percentage of stuttering blocks with reference to words read aloud in duration of 5 minutes.

$$\text{i.e., } \frac{\text{No. of stuttering blocks}}{\text{No. of words read in 5 minutes}} \times 100 = \text{Base Rate}$$

$$2. \text{ Stuttering Index: } \frac{\text{Stuttering Blocks}}{\text{No. of words uttered during narration}} \times 100$$

$$3. \text{ Adaptation Index: } 100 \times \frac{\text{Stuttering index in the initial trial}}{\text{Stuttering Index in the initial trial}} \times \frac{\text{Stuttering index in the final trial}}{\text{Stuttering Index in the final trial}}$$

## Results

Findings indicate the following:

More blocks appeared in speech as compared to reading aloud (Ref. Table 1).

TABLE 1

Showing the *Base Rate* of *Subjects* and *Indices of Stuttering in the First trial*

| <i>Graphs</i><br><i>Subjects</i> | A  | B  | C  | D  | E  | Mean  |
|----------------------------------|----|----|----|----|----|-------|
| Base rate in reading             | 30 | 12 | 8  | 20 | 5  | 15    |
| Stuttering Index in First trial  | 38 | 36 | 10 | 39 | 31 | 30.26 |

The number of words recalled increased from trial to trial in case of all subjects indicating better adaptation and verbal fluency. Subjects also reported that they felt easier to sepak in successive trials (Ref. Table 2).

TABLE 2

Showing the No. of words recalled in the successive trials

| <i>Subjects</i><br><i>Trials</i> | A   | B   | C   | D   | E   | AU |
|----------------------------------|-----|-----|-----|-----|-----|----|
| 1st                              | 97  | 22  | 158 | 158 | 168 |    |
| 2nd                              | 148 | 70  | 212 | 212 | 236 |    |
| 3rd                              | 224 | 126 | 284 | 264 | 287 |    |
| 4th                              | 318 | 189 | 318 | 291 | 314 |    |
| 5th                              | 326 | 253 | 340 | 310 | 331 |    |

This is supported by the final table (Table 3) showing large extent of adaptation index in case of each subject. It varies from subject to subject indicating individual difference. When the stuttering indices in the initial and final trials are subjected to computation it yields  $t$  value of 4.58 which is significant at 0.01 level, showing that adaptation has benefited the small groups of stutterers.

Further aspects of study like use of different materials, oral rehearsals and different listeners, need to be done, that too with larger number of the clinical group mentioned.

TABLE 3

Showing Stuttering Indices in the 1st and 5th Trials and Adaptation Index and other necessary measures

|                                     |       |      |    |                            |       |
|-------------------------------------|-------|------|----|----------------------------|-------|
| (a) <i>Subjects</i>                 | A     | B    | C  | D                          | E     |
| Stuttering Index in the First trial | 38    | 36   | 10 | 39                         | 31    |
| Stuttering Index in the Final trial | 18    | 12   | 3  | 9                          | 2     |
| Mean in the Initial trial           | 30.8  |      |    | Mean D = 20                |       |
| Mean in the final trial             | 8.8   |      |    | SDD = 98                   |       |
|                                     |       |      |    | SEMD = 437                 |       |
|                                     |       |      |    | t=4.58 sign at 0.01 level. |       |
| (6) <i>Subjects</i>                 | A     | B    | C  | D                          | E     |
| Adaptation Index                    | 52.6, | 66.7 | 70 | 76.9                       | 93.54 |

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