

Interaction of Simultaneous Language Processing and Speech Motor Act in Young Stutterers

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This investigation was aimed at studying the hypothesis that "Language and speech motor processes may interfere with one another during the act of talking at least in children who are beginning to stutter" (Peters and Starkweather, 1990). Fifteen child stutterers and fifteen normal children in the age range of 6-9 years were investigated on three tasks specifically designed to test the following:

- i. Language and speech motor process interference,
- ii. Language and non-speech motor process interference,
- iii. Non-speech motor and cognitive process interference.

For Task-I, the stimulus word was presented through headphones, and the subjects were required to point to the appropriate picture from a set of four presented before them. While listening to the stimulus word and pointing to the appropriate picture, the subjects had to continuously say 'papa'. For Task-II, the pointing response remained the same but instead of saying 'papa', the subjects had to continuously tap their right feet. For Task-III, the subjects had to solve a puzzle while continuously tapping their feet.

The subjects were given a score of '1' if they could point to the right picture and '0' indicated failure. The subjects scored '1' if they said 'papa' continuously and '0' if there was any repetition prolongation etc. while saying 'papa'. Task-II was scored similarly. For Task-III, completion of puzzle earned the subjects a score of 1 and failure '0'. For foot-tapping, any stoppage earned a score of '0' and continuity T.

The results were analyzed using Wilcoxin matched pair test. Also the percent scores obtained by subjects on each task was calculated. The results indicated that while there was significant interference of language and speech motor processes in stutterers it was not so in normals. On comparing the present study with that of Deepa (1994) it was observed that the score in Task-I improved in stuttering children as age progressed.

Also, the scores on speech motor task and language task (Task-I) indicate that while the children obtained very less scores on speech motor tasks, it was not so on language task. This was observed among all the stuttering children in the present study. This finding indicates that the possibility of occurrence of the sub-group of stuttering with motoric deficit may be more than the other sub-groups.

The test could be administered to stuttering children to find out the interference along with purely language tasks and purely speech motor tasks. If found poor on language task, language could be improved and if found poor on speech motor task, speech motor task could be worked on.

As the time available for the study was very short, only 15 stuttering children were tested. It would be interesting to learn as to how the various sub-groups of stutterers would perform on this task.