

Motor Speech Profile of Marathi Speaking Adults and Children

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Abstract : Speech is a complex, dynamic unique motor activity through which we express thoughts and emotions and respond to and control our environment. The aim was based to compare select Motor Speech parameters and their sub parameters across typical Marathi speaking adults and children. The subjects included a total of 300 divided into Group I, II, III including males and females. Subjects included were reported of no significant medical history and had a rating of 0-1 on GRBAS scale. The recordings were obtained utilizing three stimuli for the acoustic analysis of Diadochokinetic rate (DDK), Second Formant Transition, Voice and Tremor and its sub parameters. And these aforementioned parameters were acoustically analyzed in Motor Speech Profile software in VisiPitch IV. The statistical analyses were done by applying descriptive statistics and Two-Way ANOVA. The results obtained showed statistically significant difference across age groups and gender for the aforementioned parameters and its sub parameters. In DDK, for avp (ms) there was a significant difference only across age groups. However, for avr (/s) there was a significant difference across age groups and gender. It was observed that there was an increase in rate with an increase in age groups. The second formant transition sub parameter F2 magn (Hz) also showed a statistically significant difference across both age groups and gender. There was an increase in mean value with an increase in age. Females had a higher mean when compared to males. For F2 rate (/s) a statistically significant difference was observed across age groups. There was an increase in mean value with increase in age. It was observed for Voice and Tremor MFTR (%) that a statistically significant difference was present across age groups and gender. Also for RATR (Hz) there was statistically significant difference across both age groups and gender. In other words, the values of MFTR and RATR increased with an increase in age. Thus, this study highlights the variation of the motor speech parameters amongst the typical population which would be beneficial for comparison with the individuals with motor speech disorders for assessment and management.

Keywords : adult, children, diadochokinetic rate, second formant transition, tremor, voice

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