

**PREVALENCE AND CORRELATES OF
ELECTROENCEPHALOGRAM ABNORMALITIES IN
PRESCHOOL CHILDREN WITH LANGUAGE
DISORDERS**

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ABSTRACT

Background and Objectives:

All children seem slow in early stages of learning language but some children continue to have problems. Studies show that speech and language development affects 5-10% of preschool children. A high proportion of Electroencephalogram (EEG) abnormalities and epileptic syndromes has been found in children with severe language impairments. This study aims to look at the rate of occurrence of EEG abnormalities in preschool children with language disorders and the factors that are associated with the same.

Methods:

52 Preschool children (less than 5 years) who present with complaints of language delay/regression to Department of audiology and speech pathology and Psychiatry, SDM College of Medical Sciences And Hospital, Sattur, Dharwad were included. Children with concomitant hearing impairment, orofacial anomalies and medical illness other than neuropsychiatric were excluded. After the initial assessment, children were applied with Vineland Social Maturity Scale, Edinburgh Handedness scale; Receptive and Expressive language development scale and scale for behavioral problems. EEG was done on the sample and the reports analyzed applying Chi square test, Independent t-test and Correlation coefficients. $p < 0.05$ was taken significant.

Results & Conclusion:

The mean age of the sample was 49.85 months. There was a higher number of male 32(61.5%) in comparison to females 20(38.5%). 42(80.8%) children of the

sample had abnormal EEG discharges like spikes, sharp and wave pattern, focal and generalised. Majority of the children with language delay had one or more neuropsychiatric co-morbidities, most commonly epilepsy (46.2%), followed by intellectual deficiency disorder, cerebral palsy, ADHD and Autism. There was higher prevalence of EEG abnormalities in girls compared to boys ($p=0.008$). Children with epilepsy had higher EEG abnormalities which was statistically significant ($p=0.031$). There were behavioural problems with significant observation with respect to visual problems ($p=0.002$) and feeding difficulties ($p=0.046$).

EEG is an useful tool in assessing children with language delay and may be a trial of antiepileptic medications can help these children.

Key Words: Preschool; language disorder; electroencephalogram (EEG); epilepsy