

# **A Study On Effect Of Screen Time And Play Time On Speech And Language Development In 18-60 Month Aged Children**

Authors Dr.Naveen kumar G;Dr Vinod M

-----  
Date of Submission: 29-01-2025

Date of Acceptance: 09-02-2025  
-----

## **I. Introduction**

Speech and language play a crucial role in the development of children and its delay results in subpar academic achievement, learning problems, deficient socializing. By the age of 5, roughly 6% of children are diagnosed with a speech impairment, while 5% have both speech and language impairments (1).

The external influences encompass several stimuli such as narratives, auditory impairment, educational setting, parental expertise, family atmosphere, parenting styles, and customary pastimes. An enriching environment is a crucial determinant that can impact the linguistic development of youngsters (2).

Maintaining a balance between interactive screen time and other forms of engagement, such as face-to-face interactions and outdoor play, frequent conversation, daily reading, and interactive games, is ultimately critical for promoting speech development and counteracting the negative effects of smart media. The findings showed that best practices for co-viewing with parents and caregivers may steer children (3)

The current study's findings would provide insight into whether screen time and play time had any impact on the speech and language development.

### **Need For The Study**

In this study we like to determine effect of screen time and playtime on speech and language delay, if the above association is proven then parents can be educated regarding optimal screen time and playtime.

### **Objective**

1. To estimate the effect of screen time and play time on speech and language development in 18–60-month aged children

### **Inclusion Criteria:**

- Children of age 18-60 months who come for wellness and illness visits in BGS GIMS hospital

### **Exclusion Criteria:**

- Children with visual and hearing defects.
- Uncooperative and those who do not give consent
- Syndromic babies.
- Congenital anomalies.
- Children with mental disability and developmental delay.

## **II. Materials & Methods**

**Study design:** a cross-sectional study in bgs gims hospital.

**Study period:** may 21 to may 23.

**Sample size:** For sample size calculation population size, used the following formula:  $n = z^2 \cdot [p \cdot q] / d^2$ , which is used to calculate the sample size of a qualitative variable. Sample size is 114, considering 4% allowable error

After obtaining IEC clearance, children who fulfilled the inclusion criteria were included. Detailed demographical data, data regarding screen time, play time was collected from parents and speech and language development was assessed using Extended REELS assessment. Data was entered into MS Excel and analyzed using SPSS 23 version software.

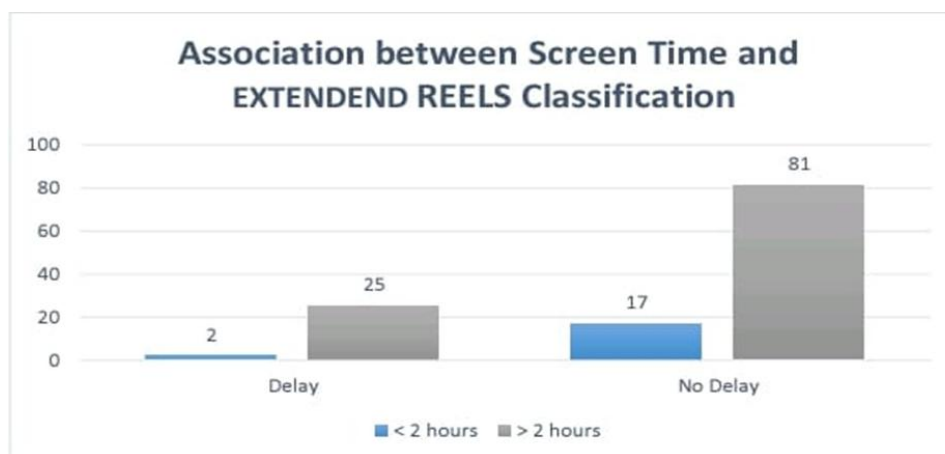
Appropriate statistical analysis was done. Categorical data was represented in frequencies & proportions. Continuous data such as Mean, SD, and chi-square were used as tests of significance for categorical variables. A P-value < 0.05 is considered as significant.

### III. Results

Screen time	EXTENDED REELS Classification		Total
	Delay	No Delay	
< 2 hours	2	17	19
> 2 hours	25	81	106
Total	27	98	125

**p-value = 0.04 (Statistically Significant)**

**Table – 1: Association between Screen time and Extended REELS.**

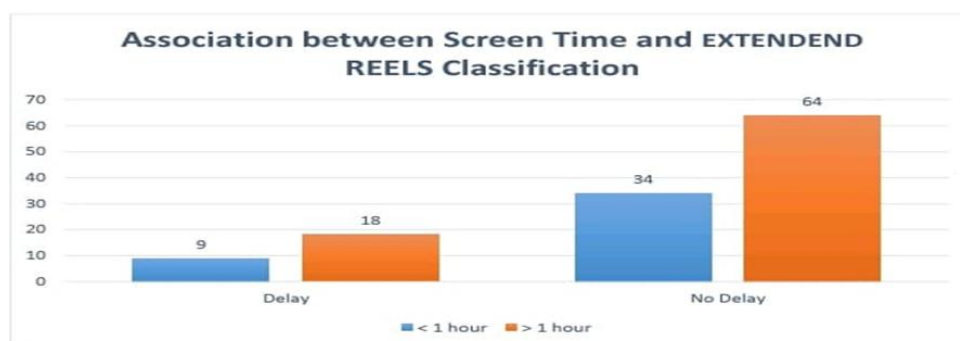


**Fig1: Association between Screen time and Extended REELS**

Play time	EXTENDED REELS Classification		Total
	Delay	No Delay	
< 1 hour	9	34	43
> 1 hour	18	64	82
Total	27	98	125

**p-value =0.90 (Not Significant)**

**Table -2: Association between Play time and Extended REELS**



**Fig 2: Association between screen time and Extended REELS**

#### **IV. Discussion**

In our study, out of 19 children with screen time <2hours 2 children had delay and among 106 children with screen time > 2hours, 25 had delay. The P value of 0.04 indicates statistically significant association with screen time and speech and languagedelay.

In our study, out of 43 children with play time<1 hour 9 children had delay and among 82 children with play time > 1 hour, 18 had delay. The P value of 0.90 indicates statistically not significant association with play time and speech and languagedelay.

Limitations: Due to the study 's single centered design and limited sample size, it is not possible to generalize our findings.

#### **V. Conclusion**

- Longer screen time is linked to higher likelihood of Speech and language delay among the participants.
- Play time had no significant effect on speech and language delay among the participants.

#### **References**

- [1] Behrman RE, Kliegman R, Jenson HB. Nelson Textbook Of Pediatrics. Elsevier España; 2004. 2694 P.
- [2] Fowler W, Swenson A. The Influence Of Early Language Stimulation On Development: Four Studies. Genet Psycholmonogr. 1979;100(1):73-109.
- [3] Alamri MM, Alrehaili MA, Albariqi W, Alshehri MS, Alotaibi KB, Algethami AM. Relationship Between Speech Delay And Smart Media In Children: A Systematic Review. Cureus. 2023 Sep 17;15(9):E45396. Doi: 10.7759/Cureus.45396. PMID: 37854747; PMCID: PMC10580299.