




## An explorative study to assess screen dependency and their associated problems among upper primary school children aged 8 to 12 years in selected schools at Kuppam

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### Abstract

**Background:** Excessive use of screens and digital media, a growing challenge for child neurology, leads to exposure to blue lights, which has an impact on the child's brain and leads to a disorder called Screen Dependency Disorder (SDD). The objectives assess screen dependency and its associated problems among upper primary school children, examine the correlation between screen dependency and associated problems, and to identify the association between screen dependency and selected socio-demographic variables.

**Materials and Methods:** Using a non-experimental descriptive correlation design and a sample of 135 students selected via simple random sampling, the research analysed screen usage patterns, related health issues, and demographic influences.

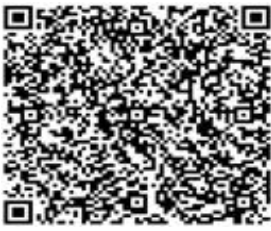
**Results:** Findings revealed that 60% of children were severely screen-dependent, with 45.9% spending 2–3 hours daily on screens, primarily using smartphones 61.5% and televisions 31.1%. Statistical analysis showed a moderate positive correlation between screen dependency and physical ( $r=0.66$ ), emotional ( $r=0.65$ ), and psychosocial problems ( $r=0.63$ ), weak positive correlation was found in academic issues with  $p<0.01$ . Demographic factors such as the child's education level, parents' occupation and education, family type, and screen time duration significantly influenced screen dependency and its associated effects.

**Conclusion:** From this study, we have concluded that allowing the children to use screen media to resolve quarrels, the presence of television in the bedroom, children using smart phones, and excessive screen time more than 2 hours over the weekend significantly increased the risk of developing screen dependency.

**Keywords:** explorative, assess, screen dependency, physical, emotional, psychosocial, academic problem, urban area

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### Introduction

In the previous days child cry for mother's milk but now a days child cry for mobile and smiles when screen of mobile phone are shown. Children became screen dependent more use of screen can cause to children sleep problem, difficulties with communication and brain development. The rising trend of excessive use of screens and digital media, a growing challenge for child neurology, leads to exposure to blue lights, which has an impact on the child's brain and leads to a disorder called Screen Dependency Disorder (SDD) [1] Screen viewing now begins in infancy with new research finding that the predominance of screen viewing in children aged under two years 'is high and looks to surge steadily across age groups. [2] Associations are emerging between screen dependency disorders such as Internet Addiction Disorder and specific neuro genetic polymorphisms; abnormal neural tissue and neural function. Although unusual neural structural and functional characteristics may be a precondition rather than a magnitude of addiction; there may also be a bidirectional relationship. As is the case with substance addictions; it is possible that intensive routine exposure to certain screen activities during grave stages of neural development may alter gene expression resulting in structural; synaptic and functional changes in the developing brain leading to SDS; particularly in children with predisposing neuro genetic profiles [2] There may also be compound/secondary effects on neural development. Screen dependency disorders; even at subclinical levels; involve high levels of unrestricted screen time; inducing greater child deskbound behavior thereby reducing vital aerobic fitness; which plays an important role in the neurological health of children; particularly in brain

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structure and function. Child health policy must therefore adhere to the principle of precaution as a prudent approach to protecting child neurological integrity and well-being. [3] Pre-school children are the group of interest since early exposure and prolonged use at the age of the most rapid brain development could cause complications that are substantial if not detected and subject to early intervention. Hence, this study aimed to develop and validate a screen-media dependency questionnaire for pre-school children. [4] Screen time (ST) not only has an impact on the child's behavior and attention, but leads to sleep disturbances and adversely impacts brain development. Studies have reported, televisions in bedrooms [5] being associated with higher screen viewing (SV); SV in infancy, with around 88.2 percent allowed daily ST, with television and mobile devices being the most commonly used and with most children living in homes where there are no parental rules regarding ST, parental television viewing time is seen to be more closely associated with children's viewing time. [6]

Given these risks, there is a pressing need for early identification and intervention to prevent potential long-term consequences. Therefore, the present study was undertaken with the following objectives to assess screen dependency and its associated problems among upper primary school children, to examine the correlation between screen dependency and associated problems, and to identify the association between screen dependency and selected socio-demographic variables.

## Materials and Methods

A Quantitative research Non experimental descriptive correlation design study was conducted in December 2024 among 135 upper primary school children by using simple random sampling technique, informed consent were taken before the study by using

**Table-1 Frequency and percentage distribution of demographic variables among Upper primary schoolchildren (N=135)**

| S. No. | Demographic variables             | Frequency (f) | Percentage (%) |
|--------|-----------------------------------|---------------|----------------|
| 1      | <b>Age (in years)</b>             |               |                |
|        | 8-10 years                        | 86            | 63.7           |
|        | 11-12 years                       | 49            | 36.3           |
| 2      | <b>Gender</b>                     |               |                |
|        | Boys                              | 66            | 48.9           |
|        | Girls                             | 69            | 51.1           |
| 3      | <b>Education status of child</b>  |               |                |
|        | 4 <sup>th</sup> standard          | 14            | 10.4           |
|        | 5 <sup>th</sup> standard          | 35            | 25.9           |
|        | 6 <sup>th</sup> standard          | 52            | 38.5           |
|        | 7 <sup>th</sup> standard          | 34            | 25.2           |
| 4      | <b>Education status of mother</b> |               |                |
|        | Illiterate                        | 16            | 10.4           |
|        | Primary                           | 24            | 19.3           |
|        | High school                       | 32            | 23.7           |
|        | Secondary education               | 44            | 32.6           |
|        | Degree                            | 19            | 14.1           |
| 5      | <b>Education status of father</b> |               |                |
|        | Illiterate                        | 1             | 0.7            |
|        | Primary                           | 15            | 11.1           |
|        | High school                       | 38            | 28.1           |
|        | Secondary education               | 36            | 26.7           |
|        | Degree                            | 45            | 33.3           |

Contd....

|    |   |    |      |
|----|---|----|------|
| 6  | <b>Occupation of the mother</b>               |    |      |
|    | Government                                    | 20 | 14.8 |
|    | Private                                       | 62 | 45.9 |
|    | Self employed                                 | 18 | 13.3 |
|    | Daily wages                                   | 35 | 25.9 |
| 7  | <b>Occupation of the father</b>               |    |      |
|    | Government                                    | 21 | 15.6 |
|    | Private                                       | 54 | 40   |
|    | Self employed                                 | 35 | 25.9 |
| 8  | <b>Types of family</b>                        |    |      |
|    | Joint family                                  | 61 | 45.2 |
|    | Nuclear family                                | 74 | 54.8 |
| 9  | <b>Monthly income of the family in rupees</b> |    |      |
|    | <20000  | 24 | 17.8 |
|    | 20001 to 30000                                | 73 | 54.1 |
|    | 30001 to 40000                                | 34 | 25.2 |
|    | >40001  | 4  | 3    |
| 10 | <b>Type of screen</b>                         |    |      |
|    | Television                                    | 42 | 31.1 |
|    | Android phone                                 | 83 | 61.5 |
|    | Tab   | 5  | 3.7  |
|    | Laptop/ computer                              | 5  | 3.7  |
| 11 | <b>Duration of watching screens per day</b>   |    |      |
|    | 1-2 hours per day                             | 38 | 28.1 |
|    | 2-3 hours per day                             | 62 | 45.9 |
|    | 3-4 hours per day                             | 15 | 11.1 |
|    | 4-5 hours per day                             | 19 | 14.1 |
|    | More than 5 hours per day                     | 1  | 0.7  |

structured self-administered questionnaire. This includes demographic variables and Questionnaire on associated problems of screen dependency.

**Statistical Analysis:** Collected data were entered and compiled using Microsoft Excel 2013 and data were analyzed using SPSS 14.0 version [SPSS, IBM Ltd]. Categorical data were presented as frequency and proportions. Continuous variables were presented as mean and standard deviation. Association between categorical variables was analyzed by Chi-Square test. Correlation was also done.

## Results

In this study, 86 (63.7%) of the upper primary school children were belongs to 8 - 10 years, 49 (36.3%) of them were belongs to 11-12 years. 66 (48.9%) of the upper primary school children are boys 69 (51.1%) of them are girls. about 14 (10.4%) of the upper primary school children were from 4<sup>th</sup>std, 35 (25.9%) of them were from 5<sup>th</sup>std, 52 (38.5%) of them were from 6<sup>th</sup>std, 34 (25.2%) of them were from 7<sup>th</sup>std. about 16(10.4%) mothers of the

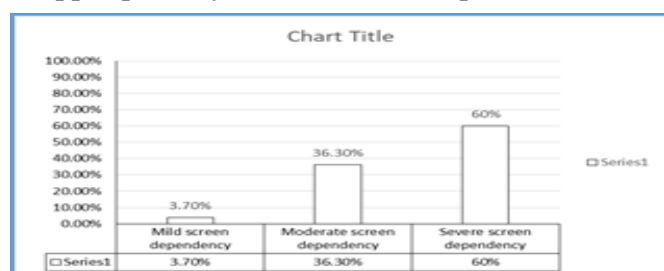
upper primary school children were Illiterate, 24 (19.3%) majority of the children mother were had Primary education ,32 (23.7%) mothers were had High school education , 44 (32.6%) mothers were had secondary education, 19 (14.1%) mothers were had Degree. about 1 (.7%) father of the upper primary school children were Illiterate 15 (11.1%) of them Primary had Primary education, 38 (28.1%) of them had High school education, 36 (26.7%) of them had Secondary education, 45 (33.3%) of them had Degree. about 20 (14.8%) mother of the upper primary school children were under Government employed, 62 (45.9%) of them were under private employed, 18 (13.3%) of them were under self-employed and 35 (25.9%) of them belongs daily wages. About 21 (15.6%) father of the upper primary school children were under Government employed, 54 (40.0%) of them were under private employed, 35 (25.9%) of them belongs self-employed, 25 (18.5%) of them belongs daily wages. majority 74 (54.8%) of the upper primary school children were belongs to Nuclear family,61 (45.2%) of them were belongs to Joint family .about 24 (17.8%) of the upper primary school children monthly income of the family is <20000, 73 (54.1%) the upper primary school children monthly income of the family is 20001 to 30000, 34 (25.2%) the upper primary school children monthly income of the family is 30001 to 40000 and 4 (3.0%) the upper primary school children monthly income of the family is >40001. about 42 (31.1%) of the upper primary school children were using television 83 (61.5%) of them were using android phone 5 (3.7%) of them were using tab and 5 (3.7%) of them were using laptop/ computer. about 38 (28.1%) of the upper primary school children Duration of watching screens per day is 1-2 hours per day, 62 (45.9%) of them were watching 2-3 hours per day, 15 (11.1%) of them were watching 3-4 hours per day, 19 (14.1%) of them were watching 4-5 hours per day and 1 (0.7%) of them were watching more than 5 hours per day. [Table – 1]

**Table–2 Frequency and percentage distribution on levels of screen dependency among upper primary school children (N=135)**

| S.No | levels of screen dependency | No. of Children | Percentage |
|------|-----------------------------|-----------------|------------|
| 1    | Mild screen dependency      | 5               | 3.7        |
| 2    | Moderate screen dependency  | 49              | 36.3       |
| 3    | Severe screen dependency    | 81              | 60.0       |

The levels of screen dependency among upper primary school children about 5 (3.7%) of them were under mild screen dependent 49 (36.3%) of them were under moderate screen dependent and 81 (60.0%) of them were under severe screen dependent. [Table-2]

**Figure-1 Bar diagram shows that percentage of levels of upper primary school children dependents**



about 5 (3.7%) of them were under Mild screen dependent, 49 (36.3%) of them were under moderate screen dependent and 81 (60.0%) of them were under severe screen dependent. [Figure-1]

**Table–3 Frequencies and Percentage on level of physical problems among upper primary school children (N=135)**

| Sl. No | Levels of physical problems | No. of Children | Percentage |
|--------|-----------------------------|-----------------|------------|
| 1      | Mild physical problems      | 5               | 3.7        |
| 2      | Moderate physical problems  | 68              | 50.4       |
| 3      | Severe physical problems    | 62              | 45.9       |

The levels of physical problems among upper primary school children About 5 (3.7%) of them were under mild physical problems and 68 (50.4%) of them were under moderate physical problems, 62 (45.9%) of them were under severe physical problems. [Table – 3]

**Table–4 Frequencies and Percentage on level of emotional problems among upper primary school children (N=135)**

| Sl. No | Levels emotional problems   | No. of Children | Percentage |
|--------|-----------------------------|-----------------|------------|
| 1      | Mild emotional problems     | 3               | 2.2        |
| 2      | Moderate emotional problems | 74              | 54.8       |
| 3      | Severe emotional problems   | 58              | 43.0       |

The levels of emotional problems among upper primary school children 3 (2.2%) of them were under mild emotional problems,74 (54.8%) of them were under moderate emotional problems 58 (43.0%) of them were severe emotional problems. [Table – 4]

**Table–5 Frequencies and Percentage On Level Of Psychosocial Problems Among Upper Primary School Children (N=135)**

| Sl. No | Levels of psychosocial problems | No. of Children | Percentage |
|--------|---------------------------------|-----------------|------------|
| 1      | Mild psychosocial problems      | 3               | 2.2        |
| 2      | Moderate psychosocial problems  | 70              | 51.9       |
| 3      | Severe psychosocial problems    | 62              | 45.9       |

**Table-6 Distribution of the level of academic performance among upper primary school children (N=135)**

| Sl. No | Levels of academic problems  | No. of Children | Percentage |
|--------|------------------------------|-----------------|------------|
| 1      | Average academic performance | 79              | 58.5       |
| 2      | Good academic performance    | 23              | 17.0       |
| 3      | Poor academic performance    | 33              | 24.4       |

The percentage of levels of academic problems among upper primary school children about 23 (17.0%) of them were having Good academic performance 79 (58.5%) of them were having Average academic performance, and 33 (24.4%) of them were having Poor academic performance. [Table – 6]

**Table-7 Correlation between level of screen dependency and physical problems among upper primary school children (N=135)**

| Variables                  | Mean  | SD    | r-value | p value |
|----------------------------|-------|-------|---------|---------|
| Level of screen dependency | 65.58 | 6.938 | 0.666   | < 0.01  |
| Physical problems          | 13.22 | 2.761 |         |         |

The correlation between level of screen dependency and physical problems that the mean score of level of screen dependency were 65.58 with a SD 65.58 and mean score of physical problems were 13.22 with a SD 2.761 and r-value = 0.666 showed there was a moderate positive correlation between level of screen dependency and physical problems among upper primary school children at the level of ( $p < 0.01$ ). [Table – 7]

**Table-8 Correlation Between Level Of Screen Dependency And Emotional Problems Among Upper Primary School Children (N=135)**

| Variables                  | Mean  | SD    | r-value | p-value |
|----------------------------|-------|-------|---------|---------|
| Level of screen dependency | 65.58 | 6.938 | 0.657   | < 0.01  |
| Emotional problems         | 20.20 | 4.248 |         |         |

The correlation between level of screen dependency and emotional problems revealed that the mean score of level of screen dependency were 65.58 with a SD 6.938 and mean score of emotional problems were 20.20 with a SD 4.248 and r-value .657 showed there was a moderate positive correlation between level of screen dependency and emotional problems among upper primary school children at the level of ( $p < 0.01$ ). [Table-8]

**Table-9 Correlation between level of screen dependency and psychosocial problems among upper primary school children (N=135)**

| Variables                  | Mean  | SD    | r value | p value |
|----------------------------|-------|-------|---------|---------|
| Level of screen dependency | 65.58 | 6.938 | 0.630   | < 0.01  |
| psychosocial problems      | 15.50 | 3.195 |         |         |

A strong positive correlation ( $r = 0.630$ ) between screen dependency levels and emotional problems, which is statistically significant ( $p < 0.01$ ). This indicates that higher screen dependency is associated with more emotional problems among the participants. [Table-9]

**Table-10 Correlation between level of screen dependency and academic performance problems among upper primary school children (N=135)**

| Variables                     | Mean  | SD    | r-value | p-value |
|-------------------------------|-------|-------|---------|---------|
| Level of screen dependency    | 65.58 | 6.938 | 0.373   | < 0.01  |
| Academic performance problems | 8.59  | 2.889 |         |         |

A moderate positive correlation ( $r = 0.373$ ) between screen dependency levels (Mean = 65.58, SD = 6.938) and academic performance problems (Mean = 8.59, SD = 2.889) among upper primary school children, which was statistically significant ( $p < 0.001$ ). This supports the hypothesis that screen Dependency is significantly associated with problems, including academic performance. [Table-10]

The level of screen dependency with the demographic variables revealed that there is a significant seen at Educational status of the child dependents at the level of ( $p < 0.001$ ), Educational status of the father at the level of ( $p < 0.20$ ), occupation of the mother at the level of ( $p < 0.001$ ), occupation of the father at the level of ( $p < 0.20$ ), Type of family at the level of ( $p < 0.03$ ) monthly income of the family at the level of ( $p < 0.02$ ), Duration watching screen per day at the level of ( $p < 0.004$ ), were found to be moderate significant and other variables were not found to be significant. [Table-11]

**Table–11 Association between levels of screen dependency with the demographic variables of upper primary school children(N=135)**

| S. No | Demographic Variables      | Levels screen dependency |          |        | Chi square | p -Value |
|-------|----------------------------|--------------------------|----------|--------|------------|----------|
|       |                            | Mild                     | Moderate | Severe |            |          |
| 1     | Age(in years)              |                          |          |        |            |          |
|       | 8-10 years                 | 1                        | 29       | 56     | 5.491      | 0.0609   |
|       | 11-12 years                | 4                        | 20       | 25     |            |          |
| 2     | Gender                     |                          |          |        |            |          |
|       | Boys                       | 0                        | 26       | 40     | 5.132      | 0.077    |
|       | Girls                      | 5                        | 23       | 41     |            |          |
| 3     | Education status of child  |                          |          |        |            |          |
|       | 4 <sup>th</sup> standard   | 4                        | 10       | 0      | 41.447     | <0.001   |
|       | 5 <sup>th</sup> standard   | 0                        | 10       | 25     |            |          |
|       | 6 <sup>th</sup> standard   | 1                        | 17       | 34     |            |          |
|       | 7 <sup>th</sup> standard   | 0                        | 12       | 22     |            |          |
| 4     | Education status of mother |                          |          |        |            |          |
|       | Illiterate                 | 0                        | 4        | 10     | 8.588      | 0.378    |
|       | Primary                    | 1                        | 12       | 13     |            |          |
|       | High school                | 3                        | 13       | 16     |            |          |
|       | Secondary education        | 1                        | 12       | 31     |            |          |
|       | Degree                     | 0                        | 8        | 11     |            |          |
| 5     | Education status of father |                          |          |        |            |          |
|       | Illiterate                 | 0                        | 0        | 1      | 17.891     | 0.022    |
|       | Primary                    | 3                        | 8        | 4      |            |          |
|       | High school                | 0                        | 12       | 26     |            |          |
|       | Secondary education        | 1                        | 13       | 22     |            |          |
|       | Degree                     | 1                        | 16       | 28     |            |          |
| 6     | Occupation of the mother   |                          |          |        |            |          |
|       | Government                 | 0                        | 3        | 17     | 65.253     | <0.001   |
|       | Private                    | 3                        | 12       | 47     |            |          |
|       | Self employed              | 0                        | 9        | 9      |            |          |
|       | Dailywages                 | 2                        | 25       | 8      |            |          |
| 7     | Occupation of the father   |                          |          |        |            |          |
|       | Government                 | 0                        | 8        | 13     | 14.993     | 0.020    |
|       | Private                    | 1                        | 19       | 34     |            |          |
|       | Self employed              | 1                        | 8        | 26     |            |          |
|       | Dailywages                 | 3                        | 14       | 8      |            |          |



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|    |  |   |    |    |        |       |
|----|--|---|----|----|--------|-------|
| 8  | Types of family                        |   |    |    |        |       |
|    | Joint family                           | 1 | 29 | 31 | 6.72   | 0.035 |
|    | Nuclear family                         | 4 | 20 | 50 |        |       |
| 9  | Monthly income of the family in rupees |   |    |    |        |       |
|    | <20000                                 | 3 | 13 | 8  | 14.142 | 0.028 |
|    | 20001 to 30000                         | 1 | 27 | 45 |        |       |
|    | 30001 to 40000                         | 1 | 8  | 25 |        |       |
|    | >40001                                 | 0 | 1  | 3  |        |       |
| 10 | Type of screen                         |   |    |    |        |       |
|    | Television                             | 3 | 12 | 27 | 3.283  | 0.773 |
|    | Android phone                          | 2 | 33 | 48 |        |       |
|    | Tab                                    | 0 | 2  | 3  |        |       |
|    | Laptop/ computer                       | 0 | 2  | 3  |        |       |
| 11 | Duration of watching screens per day   |   |    |    |        |       |
|    | 1-2 hours per day                      | 3 | 18 | 17 | 22.34  | 0.004 |
|    | 2-3 hours per day                      | 1 | 28 | 33 |        |       |
|    | 3-4 hours per day                      | 1 | 3  | 11 |        |       |
|    | 4-5 hours per day                      | 0 | 0  | 19 |        |       |
|    | More than 5 hours per day              | 0 | 0  | 1  |        |       |

Significant values were bolded

The level of screen dependency with the demographic variables revealed that there is a significant seen at Educational status of the child dependents at the level of ( $p<0.001$ ), Educational status of the father at the level of ( $p<0.001$ ), occupation of the mother at the level of ( $p<0.006$ ), occupation of the father at the level of ( $p<0.001$ ), Type of screen at the level of ( $p<0.002$ ), Duration watching screen per day at the level of ( $p<0.01$ ), were found to be moderate significant and other variables were not found to be significant. [Table – 12]

The level of screen dependency with the demographic variables revealed that there is a significant seen at Age (in years) of the child dependents at the level of ( $p<0.049$ ), Educational status of the child dependents at the level of ( $p<0.0001$ ), occupation of the mother at the level of ( $p<0.0001$ ), occupation of the father at the level of ( $p<0.014$ ), Duration watching screen per day at the level of ( $p<0.0001$ ), were found to be moderate significant and other variables were not found to be significant. [Table – 13]

the level of screen dependency with the demographic variables revealed that there is a significant seen at Age (in years) of the child dependents at the level of ( $p<0.029$ ), Educational status of the child dependents at the level of ( $p<0.0001$ ), occupation of the mother at the level of ( $p<0.0001$ ), occupation of father at the level

of ( $p<0.003$ ), Type of family at the level of ( $p<0.019$ ), Duration watching screen per day at the level of ( $p<0.01$ ), were found to be moderate significant and other variables were not found to be significant. [Table – 14]

The level of screen dependency with the demographic variables revealed that there is a significant seen at Educational status of the child dependents at the level of ( $p<0.0001$ ), Educational status of the mother at the level of ( $p<0.0001$ ), Educational status of the father at the level of ( $p<0.01$ ), occupation of the mother at the level of ( $p<0.0001$ ), occupation of the father at the level of ( $p<0.02$ ), Duration watching screen per day at the level of ( $p<0.0001$ ), were found to be moderate significant and other variables were not found to be significant.

## Discussion

The present study was conducted to assess the extent of screen dependency and its associated problems among upper primary school children (ages 8–12) in selected schools at Kuppam. A total of 135 students were selected using a simple random sampling technique. Demographic findings indicated that 63.7% of participants were aged between 8–10 years, with a nearly equal distribution of boys and girls.

**Table-12 Association between levels of emotional problems with the demographic variables of upper primary school children**

| S. No. | Demographic variables      | Physical problem |          |        | Chi square Value | p-value |
|--------|----------------------------|------------------|----------|--------|------------------|---------|
|        |                            | Mild             | Moderate | Severe |                  |         |
| 1      | Age(in years)              |                  |          |        |                  |         |
|        | 8-10 years                 | 1                | 41       | 44     | 5.887            | 0.0527  |
|        | 11-12 years                | 4                | 27       | 18     |                  |         |
| 2      | Gender                     |                  |          |        |                  |         |
|        | Boys                       | 1                | 33       | 32     | 1.858            | 0.395   |
|        | Girls                      | 4                | 35       | 30     |                  |         |
| 3      | Education status of child  |                  |          |        |                  |         |
|        | 4 <sup>th</sup> standard   | 4                | 9        | 1      | 36.155           | <0.001  |
|        | 5 <sup>th</sup> standard   | 0                | 18       | 17     |                  |         |
|        | 6 <sup>th</sup> standard   | 1                | 29       | 22     |                  |         |
|        | 7 <sup>th</sup> standard   | 0                | 12       | 22     |                  |         |
| 4      | Education status of mother |                  |          |        |                  |         |
|        | Illiterate                 | 0                | 6        | 8      | 12.487           | 0.131   |
|        | Primary                    | 2                | 9        | 15     |                  |         |
|        | High school                | 3                | 19       | 10     |                  |         |
|        | Secondary education        | 0                | 22       | 22     |                  |         |
|        | Degree                     | 0                | 12       | 7      |                  |         |
| 5      | Education status of father |                  |          |        |                  |         |
|        | Illiterate                 | 0                | 0        | 1      | 32.008           | <0.001  |
|        | Primary                    | 4                | 7        | 4      |                  |         |
|        | High school                | 1                | 14       | 23     |                  |         |
|        | Secondary education        | 0                | 19       | 17     |                  |         |
|        | Degree                     | 0                | 28       | 17     |                  |         |
| 6      | Occupation of the mother   |                  |          |        |                  |         |
|        | Government                 | 0                | 4        | 16     | 18.206           | 0.006   |
|        | Private                    | 3                | 29       | 30     |                  |         |
|        | Self employed              | 0                | 10       | 8      |                  |         |
|        | Dailywages                 | 2                | 25       | 8      |                  |         |
| 7      | Occupation of the father   |                  |          |        |                  |         |
|        | Government                 | 0                | 14       | 7      | 31.47            | <0.001  |
|        | Private                    | 0                | 28       | 26     |                  |         |
|        | Self employed              | 0                | 12       | 23     |                  |         |
|        | Dailywages                 | 5                | 14       | 6      |                  |         |



Contd...

|    |  |   |    |    |        |       |
|----|--|---|----|----|--------|-------|
| 8  | Types of family                        |   |    |    |        |       |
|    | Joint family                           | 1 | 33 | 27 | 1.655  | 0.437 |
|    | Nuclear family                         | 4 | 35 | 35 |        |       |
| 9  | Monthly income of the family in rupees |   |    |    |        |       |
|    | <20000                                 | 3 | 13 | 8  | 9.952  | 0.127 |
|    | 20001 to 30000                         | 2 | 39 | 32 |        |       |
|    | 30001 to 40000                         | 0 | 15 | 19 |        |       |
|    | >40001                                 | 0 | 1  | 3  |        |       |
| 10 | Type of screen                         |   |    |    |        |       |
|    | Television                             | 5 | 15 | 22 | 20.927 | 0.002 |
|    | Android phone                          | 0 | 47 | 36 |        |       |
|    | Tab                                    | 0 | 1  | 4  |        |       |
|    | Laptop/ computer                       | 0 | 5  | 0  |        |       |
| 11 | Duration of watching screens per day   |   |    |    |        |       |
|    | 1-2 hours                              | 2 | 21 | 15 | 20.131 | 0.010 |
|    | 2-3 hours                              | 2 | 38 | 22 |        |       |
|    | 3-4 hours                              | 1 | 6  | 8  |        |       |
|    | 4-5 hours                              | 0 | 2  | 17 |        |       |
|    | > 5 hours                              | 0 | 1  | 0  |        |       |

Significant values were bolded

Most children belonged to nuclear families and primarily used smartphones (61.5%) and televisions (31.1%). Approximately 45.9% of students spent 2–3 hours daily on screens.

The study found that 60% of children exhibited severe screen dependency. In terms of associated health issues, 45.9% reported severe physical problems, 43% had severe emotional issues, and 45.9% experienced severe psychosocial difficulties. Academic performance was also affected, with 24.4% of students performing poorly. Correlation analysis revealed a moderate positive relationship between screen dependency and physical ( $r=0.66$ ), emotional ( $r=0.65$ ), and psychosocial problems ( $r=0.63$ ), and a weak positive correlation with academic issues ( $r=0.37$ ), all statistically significant at  $p<0.01$ . Significant associations were also identified between screen dependency and various demographic variables, including the child's and parents' educational status, parents' occupation, type of family, monthly income, and duration of daily screen use. These findings support both research hypotheses (RH1 and RH2), confirming meaningful correlations and associations. The study

underscores the need for early intervention, including regular screening, parental guidance, screen time regulation, and promotion of physical activities to address and mitigate screen dependency in children.

These results align with previous research. A cross-sectional study conducted among primary school children aged 4 to 12 years in Kannur district, Kerala, found that 69.4% of children had screen time between 2 to 4 hours. Screen use was higher among boys, children from joint families, and those with parents of lower educational levels. The study found a statistically significant association between screen time and behavioral problems, including delayed language development. The researchers concluded that increasing screen use negatively affects children's behavior and developmental outcomes. [7]

## Conclusion

From this study we have concluded that assess screen dependency

**Table-13 Association between levels of emotional problems with the demographic variables of upper primary school children**

| S. No. | Demographic variables      | Levels of Emotional problem |          |        | Chi Square Value | p-value |
|--------|----------------------------|-----------------------------|----------|--------|------------------|---------|
|        |                            | Mild                        | Moderate | Severe |                  |         |
| 1      | Age(in years)              |                             |          |        |                  |         |
|        | 8-10 years                 | 0                           | 46       | 40     | 6.036            | 0.049   |
|        | 11-12 years                | 3                           | 28       | 18     |                  |         |
| 2      | Gender                     |                             |          |        |                  |         |
|        | Boys                       | 0                           | 35       | 31     | 3.427            | 0.180   |
|        | Girls                      | 3                           | 39       | 27     |                  |         |
| 3      | Education status of child  |                             |          |        |                  |         |
|        | 4 <sup>th</sup> standard   | 3                           | 10       | 1      | 32.389           | <0.001  |
|        | 5 <sup>th</sup> standard   | 0                           | 18       | 17     |                  |         |
|        | 6 <sup>th</sup> standard   | 0                           | 30       | 22     |                  |         |
|        | 7 <sup>th</sup> standard   | 0                           | 16       | 18     |                  |         |
| 4      | Education status of mother |                             |          |        |                  |         |
|        | Illiterate                 | 0                           | 7        | 7      | 14.033           | 0.081   |
|        | Primary                    | 1                           | 10       | 15     |                  |         |
|        | High school                | 1                           | 19       | 12     |                  |         |
|        | Secondary education        | 1                           | 21       | 22     |                  |         |
|        | Degree                     | 0                           | 17       | 2      |                  |         |
| 5      | Education status of father |                             |          |        |                  |         |
|        | Illiterate                 | 0                           | 0        | 1      | 14.696           | 0.065   |
|        | Primary                    | 1                           | 10       | 4      |                  |         |
|        | High school                | 1                           | 19       | 18     |                  |         |
|        | Secondary education        | 1                           | 13       | 22     |                  |         |
|        | Degree                     | 0                           | 32       | 13     |                  |         |
| 6      | Occupation of the mother   |                             |          |        |                  |         |
|        | Government                 | 0                           | 4        | 16     | 24.375           | <0.001  |
|        | Private                    | 0                           | 33       | 29     |                  |         |
|        | Self employed              | 1                           | 10       | 7      |                  |         |
|        | Daily wages                | 2                           | 27       | 6      |                  |         |
| 7      | Occupation of the father   |                             |          |        |                  |         |
|        | Government                 | 0                           | 14       | 7      | 15.946           | 0.014   |
|        | Private                    | 1                           | 31       | 22     |                  |         |
|        | Self employed              | 0                           | 12       | 23     |                  |         |
|        | Daily wages                | 2                           | 17       | 6      |                  |         |

Contd...

|    |  |   |    |    |        |        |
|----|--|---|----|----|--------|--------|
| 8  | Types of family                        |   |    |    |        |        |
|    | Joint family                           | 0 | 39 | 22 | 6.394  | 0.067  |
|    | Nuclear family                         | 3 | 35 | 36 |        |        |
| 9  | Monthly income of the family in rupees |   |    |    |        |        |
|    | <20000                                 | 2 | 15 | 7  | 8.21   | 0.223  |
|    | 20001 to 30000                         | 1 | 40 | 32 |        |        |
|    | 30001 to 40000                         | 0 | 18 | 16 |        |        |
|    | >40001                                 | 0 | 1  | 3  |        |        |
| 10 | Type of screen                         |   |    |    |        |        |
|    | Television                             | 2 | 18 | 22 | 6.486  | 0.483  |
|    | Android phone                          | 1 | 49 | 33 |        |        |
|    | Tab                                    | 0 | 3  | 2  |        |        |
|    | Laptop/ computer                       | 0 | 4  | 1  |        |        |
| 11 | Duration of watching screens per day   |   |    |    |        |        |
|    | 1-2 hours                              | 2 | 22 | 14 | 32.648 | <0.001 |
|    | 2-3 hours                              | 1 | 42 | 19 |        |        |
|    | 3-4 hours                              | 0 | 9  | 6  |        |        |
|    | 4-5 hours                              | 0 | 0  | 19 |        |        |
|    | > 5 hours                              | 0 | 1  | 0  |        |        |

Significant values were bolded

their Associated Problems Among Upper Primary School Children (8 To 12 Yrs) In Selected Schools at Kuppam. Allowing the children to use screen media to resolve quarrels, the presence of television in the bedroom, children using smart phones, and excessive screen time more than 2 hours over the weekend significantly increased the risk of developing screen dependency. Since will be identifying the associated problems like physical, emotional, psychosocial, academic performance of a Primary School children with screen Dependency School-going children need to be screened for all this associated problems and should be offered extensive counseling and intentionally disconnecting and detoxing from tech, and need to be encouraged to participate in daily sports at school.

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**Table-14 Association between levels of psychosocial problems with the demographic variables of upper primary school children**

| S. No | Demographic variables      | Levels of Psychosocial problem |          |        | Chi square Value | p-value |
|-------|----------------------------|--------------------------------|----------|--------|------------------|---------|
|       |                            | Mild                           | Moderate | Severe |                  |         |
| 1     | Age (in years)             |                                |          |        |                  |         |
|       | 8-10 years                 | 0                              | 42       | 44     | 7.059            | 0.029   |
|       | 11-12 years                | 3                              | 28       | 18     |                  |         |
| 2     | Gender                     |                                |          |        |                  |         |
|       | Boys                       | 0                              | 38       | 28     | 4.030            | 0.133   |
|       | Girls                      | 3                              | 32       | 34     |                  |         |
| 3     | Education status of child  |                                |          |        |                  |         |
|       | 4 <sup>th</sup> standard   | 3                              | 10       | 1      | 38.541           | <0.001  |
|       | 5 <sup>th</sup> standard   | 0                              | 18       | 17     |                  |         |
|       | 6 <sup>th</sup> standard   | 0                              | 31       | 21     |                  |         |
|       | 7 <sup>th</sup> standard   | 0                              | 11       | 23     |                  |         |
| 4     | Education status of mother |                                |          |        |                  |         |
|       | Illiterate                 | 0                              | 17       | 2      | 5.691            | 0.682   |
|       | Primary                    | 1                              | 11       | 14     |                  |         |
|       | High school                | 2                              | 17       | 13     |                  |         |
|       | Secondary education        | 0                              | 24       | 20     |                  |         |
|       | Degree                     | 0                              | 11       | 8      |                  |         |
| 5     | Education status of father |                                |          |        |                  |         |
|       | Illiterate                 | 0                              | 0        | 1      | 14.885           | 0.061   |
|       | Primary                    | 2                              | 8        | 5      |                  |         |
|       | High school                | 0                              | 17       | 21     |                  |         |
|       | Secondary education        | 1                              | 17       | 18     |                  |         |
|       | Degree                     | 1                              | 17       | 18     |                  |         |
| 6     | Occupation of the mother   |                                |          |        |                  |         |
|       | Government                 | 0                              | 3        | 17     | 28.14            | <0.001  |
|       | Private                    | 1                              | 30       | 31     |                  |         |
|       | Self employed              | 1                              | 8        | 9      |                  |         |
|       | Daily wages                | 1                              | 29       | 5      |                  |         |
| 7     | Occupation of the father   |                                |          |        |                  |         |
|       | Government                 | 0                              | 9        | 12     | 19.864           | 0.003   |
|       | Private                    | 0                              | 28       | 26     |                  |         |
|       | Self employed              | 0                              | 16       | 19     |                  |         |
|       | Daily wages                | 3                              | 17       | 5      |                  |         |

Contd...

|    |  |   |    |    |        |       |
|----|--|---|----|----|--------|-------|
| 8  | Types of family                        |   |    |    |        |       |
|    | Joint family                           | 0 | 39 | 22 | 7.962  | 0.019 |
|    | Nuclear family                         | 3 | 31 | 40 |        |       |
| 9  | Monthly income of the family in rupees |   |    |    |        |       |
|    | <20000                                 | 2 | 15 | 7  | 12.288 | 0.056 |
|    | 20001 to 30000                         | 1 | 39 | 33 |        |       |
|    | 30001 to 40000                         | 0 | 16 | 18 |        |       |
|    | >40001                                 | 0 | 0  | 4  |        |       |
| 10 | Type of screen                         |   |    |    |        |       |
|    | Television                             | 2 | 18 | 22 | 6.226  | 0.398 |
|    | Android phone                          | 1 | 48 | 34 |        |       |
|    | Tab                                    | 0 | 1  | 4  |        |       |
|    | Laptop/ computer                       | 0 | 3  | 2  |        |       |
| 11 | Duration of watching screens per day   |   |    |    |        |       |
|    | 1-2 hours                              | 1 | 22 | 15 | 18.502 | 0.018 |
|    | 2-3 hours                              | 2 | 37 | 23 |        |       |
|    | 3-4 hours                              | 0 | 8  | 7  |        |       |
|    | 4-5 hours                              | 0 | 2  | 17 |        |       |
|    | >5 hours                               | 0 | 1  | 0  |        |       |

Significant values were bolded

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