



www.bioinformation.net
Volume 22(9)



Research Article

Received September 1, 2026; Revised September 30, 2026; Accepted September 30, 2026, Published September 30, 2026

DOI: 10.6026/973206300225870

SJIF 2026 (Scientific Journal Impact Factor for 2026) = 8.478

2022 Impact Factor (2023 Clarivate Inc. release) is 1.9

Declaration on Publication Ethics:

The author's state that they adhere with COPE guidelines on publishing ethics as described elsewhere at <https://publicationethics.org/>. The authors also undertake that they are not associated with any other third party (governmental or non-governmental agencies) linking with any form of unethical issues connecting to this publication. The authors also declare that they are not withholding any information that is misleading to the publisher in regard to this article.

Declaration on official E-mail:

The corresponding author declares that lifetime official e-mail from their institution is not available for all authors

License statement:

This is an Open Access article which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly credited. This is distributed under the terms of the Creative Commons Attribution License

Comments from readers:

Articles published in BIOINFORMATION are open for relevant post publication comments and criticisms, which will be published immediately linking to the original article without open access charges. Comments should be concise, coherent and critical in less than 1000 words.

Disclaimer:

Bioinformation provides a platform for scholarly communication of data and information to create knowledge in the Biological/Biomedical domain after adequate peer/editorial reviews and editing entertaining revisions where required. The views and opinions expressed are those of the author(s) and do not reflect the views or opinions of Bioinformation and (or) its publisher Biomedical Informatics. Biomedical Informatics remains neutral and allows authors to specify their address and affiliation details including territory where required.

Edited by P Kanguane

Citation: Shaijo *et al.* Bioinformation 22(9): 5870-5873 (2026)

Screen addiction among parents and school-aged children in Kerala, India

K.J. Shaijo¹, N. Siva Subramanian² & B. Mahalakshmi^{1,*}

¹Department of Paediatric Nursing, Nootan College of Nursing, Sankalchand Patel University, Visnagar, Gujarat, India; ²Department of Psychiatric Nursing, Nootan College of Nursing, Sankalchand Patel University, Visnagar, Gujarat, India; *Corresponding author

Affiliation URL:

<https://ncn.spu.ac.in/>

Author contact:

K.J. Shaijo - E-mail: shaijo50@gmail.com

N Sivasubramanian - E-mail: sn.fn@spu.ac.in

B. Mahalakshmi - E-mail: mb.fn@spu.ac.in

Abstract:

Screen addiction has emerged as a growing public health concern affecting both adults and children, with potential implications for family functioning and child development. Therefore, it is of interest to assess the level of screen addiction among parents and school-aged children (6–12 years) in urban areas of Cochin, Kerala. A total of 136 parent-child pairs were assessed using standardized tools. Findings revealed moderate to severe levels of screen addiction among a substantial proportion of parents and children, with a significant positive correlation between parental and children's screen addiction. Thus, data shows the need for family-centered preventive strategies to address excessive screen use.

Keywords: Screen addiction, parents, school-aged children, Kerala

Background:

The rapid expansion of digital technology has transformed daily living, making screen-based devices integral to communication, education and entertainment worldwide [1]. Excessive and uncontrolled use of screen devices has led to the emergence of screen addiction, which is considered a behavioral addiction characterized by loss of control and functional impairment [2]. Studies have shown that parental screen addiction is associated with increased stress, sleep disturbances, reduced family interaction and impaired parenting practices [3]. The widespread availability of smartphones has further intensified screen dependency among adults, particularly parents, who serve as primary role models for children's behavior [4]. Screen addiction among school-aged children has become a significant public health concern due to early exposure to digital media and prolonged screen time [5]. Excessive screen use in children has been linked to attention deficits, emotional problems, poor sleep quality, obesity and reduced academic performance [6]. Evidence suggests that unregulated screen exposure during childhood may predispose individuals to long-term addictive behaviors and psychosocial difficulties [7]. The family environment plays a pivotal role in shaping children's screen habits, with parental behavior strongly influencing children's media use patterns [8]. Several studies have reported a positive association between parental screen addiction and children's screen addiction, indicating that children tend to model parental digital behaviours [9]. High parental screen engagement may reduce quality parent-child interactions, emotional bonding and supervision, thereby increasing children's reliance on screens for stimulation and comfort [10]. Despite increasing global evidence on screen addiction, there is limited community-based evidence from urban Indian settings, particularly Kerala, where digital penetration and smartphone use are high [11]. Therefore, it is of interest to examine the level of screen addiction among parents and school-aged children in urban Kerala.

Methods:**Study design:**

A descriptive correlational study design was adopted to assess the level of screen addiction among parents and school-aged children and to examine the relationship between parental and children's screen addiction.

Study setting and participants:

The study was conducted in selected urban residential apartments of Cochin, Kerala. A total of 136 parent-child pairs

were selected. Children aged 6–12 years and their parents who were regular users of screen devices were included.

Sampling technique:

Participants were selected using a non-probability purposive sampling technique based on inclusion and exclusion criteria.

Data collection tools:

Data were collected using a structured demographic questionnaire. Parental screen addiction was assessed using the Smartphone Addiction Scale (SAS) and children's screen addiction was measured using the Problematic Media Use Measure-Short Form (PMUM-SF).

Data collection procedure:

Data were collected after obtaining informed consent from parents. Confidentiality and voluntary participation were ensured.

Statistical analysis:

Data were analyzed using descriptive statistics, Pearson's correlation coefficient and chi-square test to assess associations.

Results:

Table 1 show that more than half of the parents (51.5%) belonged to the age group of 31–40 years. Most parents were graduates (64.0%) and the majority of children (36.8%) were aged 9–10 years. Nuclear families constituted three-fourths (75.0%) of the sample. **Table 2** shows that nearly half of the parents (47.8%) and more than half of the children (56.6%) exhibited moderate screen addiction. Severe screen addiction was observed among 28.7% of parents and 27.9% of children, indicating a notable burden of problematic screen use in both groups **Figure 1**. Scatter diagram illustrates a positive relationship between parental screen addiction scores and children's screen addiction scores. As parental screen addiction scores increase, a corresponding increase in children's screen addiction scores is observed, indicating that parental screen behavior may influence children's screen use patterns.

Table 1: Demographic characteristics of parents and school-aged children (N = 136)

Variable	Category	Frequency (n)	Percentage (%)
Parent Age (years)	20–30	31	22.8
	31–40	70	51.5
	≥41	35	25.7
Parent Education	Secondary	11	8.1
	Graduate	87	64.0
	Postgraduate & above	38	27.9

Child Age (years)	6-8	44	32.4
	9-10	50	36.8
	11-12	42	30.9
Type of Family	Nuclear	102	75.0
	Joint	27	19.9
	Separated	7	5.1

Table 2: Distribution of parents and children according to level of screen addiction (N = 136)

Level of Screen Addiction	Parents' n (%)	Children n (%)
Mild	32 (23.5)	21 (15.4)
Moderate	65 (47.8)	77 (56.6)
Severe	39 (28.7)	38 (27.9)

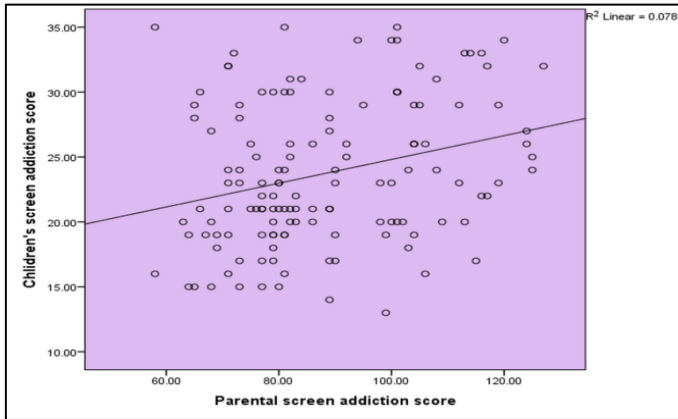


Figure 1: Scattered diagram showing correlation between parental screen addiction and children’s screen addiction

Discussion:

The present study found that a substantial proportion of both parents and school-aged children in urban Cochin showed moderate to severe levels of screen addiction and that parental screen addiction scores were positively correlated with children’s screen addiction scores. Moderate screen addiction was the commonest category in both groups (47.8% of parents and 56.6% of children), while severe screen addiction was recorded in 28.7% of parents and 27.9% of children, indicating that problematic screen use in this urban Indian setting is a shared family-level phenomenon rather than a problem confined to children. Comparable burden has been reported from other Indian settings: Rai *et al.* documented a mean parental screen time of 6.4 hours per day alongside a mean of 4.95 hours in their children, with almost all children exceeding age-appropriate recommendations [5] and John *et al.* found excess screen time in 83.2% of school children in rural India [11]. Gannon *et al.* have argued that the resulting cognitive, emotional and sleep-related harms now warrant a coordinated public health response rather than individual advice alone [1]. The conceptual basis for treating these patterns as addiction rather than as mere exposure is supported by Montag *et al.*, who emphasised that problematic use is defined by loss of control and functional impairment and depends on what people actually do online rather than on screen hours alone [2] and by Elhai *et al.*, whose systematic review linked problematic smartphone use consistently with depression, anxiety and stress [3]. Consistent with this, Chen *et al.* showed that problematic gaming, social media use and

smartphone use mediated the relationship between psychological distress and increased screen time among primary school children [7], while Choi *et al.* reported significantly higher behavioural and emotional problem scores among children who overused screens, with smartphones the main contributor [6]. The positive parent-child correlation observed in the present study is the central finding and is well supported in the recent literature. Mortensen *et al.*, in a community-based birth cohort of 1152 parent-child dyads, found that higher maternal smartphone addiction scores were associated with greater externalising and internalising difficulties in seven-year-old children, whereas total parental screen hours were not, indicating that the addictive quality of parental use matters more than its duration [10]. Shao *et al.*, in 3032 fourth-grade children, showed that parent-child technoference predicted children’s problematic smartphone use both directly and indirectly through the parent-child relationship and negative parenting styles [9]; Peng *et al.* reported a similar pathway operating through parental attachment [12] and Kazali showed that parental technoference is associated with weaker executive function in both parents and children [4]. These findings offer a plausible mechanism for the association reported here, in which heavy parental screen engagement reduces the quality of parent-child interaction and supervision and simultaneously models the very behaviour that children go on to imitate. The family environment therefore appears to be the appropriate level for intervention. Yamada *et al.* found that the absence of family rules was among the strongest correlates of excessive screen time in 12,611 Japanese elementary school children, at both the individual and the school level [8] and Domoff *et al.* showed that problematic-use severity, measured by the parent-report instrument used in the present study, predicts psychosocial difficulty over and above screen hours [13]. Experimental evidence points in the same direction: Pedersen *et al.* found that limiting household recreational screen media use substantially increased children’s physical activity [14], Schmidt-Persson *et al.* reported improved internalising symptoms and prosocial behaviour after a short family screen reduction [15] and Marshall *et al.* showed that a structured parent management programme reduced smartphone addiction symptoms in school-aged children [16]. Madigan *et al.* had earlier established the directional nature of the association between screen time and developmental outcomes [17]. Awareness, however, remains a barrier in the Indian context, with Rangan *et al.* reporting good knowledge of screen exposure guidelines in only 16% of mothers [18]. The Council on Communications and Media accordingly recommends that parents manage their own media use alongside that of their children through an individualised Family Media Use Plan, an approach that fits the pattern of shared parent-child screen addiction observed in this study. The cross-sectional design of the present study does not permit causal inference and screen addiction was measured by self-report and parent report, which may be subject to recall and social desirability bias [19]. The study conducted by Shaijo *et al.* in 2026 shows a significant reduction in mean screen addiction scores among parents and children in the experimental group

compared to the control group ($p < 0.001$). No significant change was observed in the control group, highlighting the importance of family-centered behavioural interventions in addressing screen addiction [20]. The similar study was conducted by Shija *et al.* (2026) points out that even after the reopening of schools and the resumption of in-person classes following COVID-19, smartphone addiction among school-aged adolescents has not significantly reduced [21].

Conclusion:

Moderate to severe screen addiction was common among both parents and school-aged children in urban Cochin. Parental screen addiction scores correlated positively with children's screen addiction scores. Thus Preventive strategies for screen addiction should therefore be family-centred rather than child-centred.

References:

- [1] Gannon J *et al.* *Health Policy*. 2026 **171**:105665. [PMID: 42143903]
- [2] Montag C *et al.* *J Behav Addict*. 2021 **9**:908. [PMID: 31668089]
- [3] Elhai JD *et al.* *J Affect Disord*. 2017 **207**:251. [PMID: 27736736]
- [4] Kazali E. *Cogn Process*. 2025 **27**:351. [PMID: 41217605]
- [5] Rai NT *et al.* *J Family Med Prim Care*. 2025 **14**:2210. [PMID: 40726688]
- [6] Choi Y *et al.* *Soa Chongsomyon Chongsin Uihak*. 2021 **32**:154. [PMID: 34671188]
- [7] Chen CY *et al.* *Cyberpsychol Behav Soc Netw*. 2021 **24**:654. [PMID: 33877905]
- [8] Yamada M *et al.* *Environ Health Prev Med*. 2024 **29**:16. [PMID: 38494706]
- [9] Shao T *et al.* *Psychol Res Behav Manag*. 2024 **17**:2067. [PMID: 38800525]
- [10] Mortensen SR *et al.* *Acad Pediatr*. 2023 **23**:667. [PMID: 36646316]
- [11] John R *et al.* *J Prev Med Hyg*. 2024 **64**:E457. [PMID: 38379746]
- [12] Peng Y *et al.* *Psychol Rep*. 2025 **24**:332941251329784. [PMID: 40126437]
- [13] Domoff SE *et al.* *Psychol Pop Media Cult*. 2019 **8**:2. [PMID: 30873299]
- [14] Pedersen J *et al.* *JAMA Pediatr*. 2022 **176**:741. [PMID: 35604678]
- [15] Schmidt-Persson J *et al.* *JAMA Netw Open*. 2024 **7**:e2419881. [PMID: 38995646]
- [16] Marshall B *et al.* *Aust J Psychol*. 2024 **76**:2396961. [PMID: 40666642]
- [17] Madigan S *et al.* *JAMA Pediatr*. 2019 **173**:244. [PMID: 30688984]
- [18] Rangan RS *et al.* *Clin Pediatr (Phila)*. 2026 **65**:816. [PMID: 41630437]
- [19] <https://pubmed.ncbi.nlm.nih.gov/27940794/>
- [20] Shaijo KJ *et al.* *Bioinformation*. 2026 **22**:1061. [PMID: 42109348]
- [21] Shija K *et al.* *Journal of Pioneering Medical Sciences*. 2026 **15**:40 [DOI: 10.47310/jpms2026150706]

Caveat Emptor is applicable among the literate community where required and possible. The publisher, its journal, editors and the internal/external reviewers take adequate steps to check, evaluate, correct, edit, revise and improve content where possible and required.