Research Guru
Online Journal of Multidisciplinary Subjects (ISSN : 2349-266X)
Volume-19, Issue-1, June-2025
www.researchguru.net

# Effects of Digital Devices as Parenting Tools on Socioemotional Development of Preschoolers

Dr. Swati Partani
HOD & Asst. Professor Maniben Nanavati Women's College.
Swatipartani28@gmail.com

***Abstract***

*The usage of digital devices has significantly increased over the years. Researchers have found that digital devices can positively and negatively affect children's development. This current study investigated the use of digital devices by parents as a tool for their children. It also explored the effect of social demographic variables of parents on the use of digital devices as parenting tools. The research design was exploratory with a sample size of 101 parents of preschoolers (2- to 6-year-olds) collected through a convenient sampling method. The Data was collected through a standardized tool, designed by Gonsalves L. A. & Partani S. (2021) with reliability (r = .97) and content validity. The research included parents as participants, with 58.4% being female and 41.6% male. Working parents were 54.5% and non-working parents were 45.5%. With respect to the availability of the digital devices, almost 95 percent of children had access to smart/mobile phones followed by smart TV (76.23 %). The least available devices were video games (app. 5%) and e-readers (app. 2%). Further results revealed that most of the parents whether father or the mother, conversed with the child and play along with them across all the stated 15 situations. The least chosen digital device was the laptop/tablet, which might be due to availability status of the device. The socio emotional development of the most of the preschoolers was found to be average. There was no statistical significance difference found between the use of digital devices as parenting tool and socioemotional development. Similarly, there was no statistically significant effect of any demographic profile of the use of digital devices by the parent.*

***Keywords: Preschool children, Digital device, Parent, Parenting Tool, Socioemotional development.***

## INTRODUCTION

In the last few decades, the usage of digital devices has significantly increased. Parents often use digital devices as a parenting tool to keep their young children engaged and entertained. At this age, where the majority of socioemotional development is taking place, the usage of screens can impact the development process. Digitals devices provide tools for parental control and safety through the use of technology. People are aware of the fact that overuse of digital games hinder the development of children however use of academically challenging games within limitation may be favorable (Clemente-Suárez, *et al*, 2024).

Swider-Cios *et al.* (2023) highlighted a significant association between excessive screen exposure and negative socioemotional symptoms in children. Parental education and intervention are critical to mitigate these effects and promote healthier developmental activities. Slobodin (2024) found that Early screen media exposure poses risks for language/communication delays at 36 months,

especially in moderate-to-high SES families. Results underscored the need for targeted public health interventions promoting mindful screen use

Parenting patterns influence how children develop discipline, moral values, and emotional regulation. Digital literacy, when guided by parents, fosters emotional intelligence and social competence. The combination of nurturing parenting styles and effective digital literacy strategies provides a robust foundation for children's social-emotional growth (Supriyadi, *et al*., 2023). Mobile Touch-Screen Device (MTSD) usage in preschoolers is associated with changes in attentional control and limited development of socio-cognitive skills. The findings underscore the importance of balancing screen time with other developmental activities (Konok *et al*, 2021). Njiru, *et al*, (2024) emphasized the dual impact of screen usage, highlighting the importance of appropriate content and supervised use. Parents play a pivotal role in managing screen time by modeling healthy digital habits and encouraging offline activities. Research proposed that policies should focus on balanced screen exposure, age-appropriate content, and public awareness to mitigate risks.

**RATIONALE**

Post COVID-19 pandemic there is an increased use of digital devices by the parents. Parents turned to screens to keep their preschoolers engaged and entertained while balancing the many demands. The preschool years are a crucial time for social & emotional development, where kids begin to understand relationships with surrounding people, express their feelings, and nurture empathy for others. Digital devices may offer great learning and fun, but excessive screen time might reduce the preschooler's chances to connect with others and enjoy free play. This study will dwell into how parents include digital devices into their preschooler's everyday lives. It will also explore how different factors such as parent's demographic, influence the socioemotional development of preschoolers. The Following objectives were formulated to explore the different variables on the socioemotional development of preschoolers.

**OBJECTIVES**

- To explore the usage of digital devices by the parents as a tool to engage their preschoolers.
- To investigate the level of socioemotional development of preschoolers.
- To find out the effect of usage of digital devices as parenting tools on socioemotional development of preschoolers.
- To investigate the effect of demographic variables of parents on the usage of digital devices to engage their preschoolers.

**METHODOLOGY**

**Hypothesis**

$H_{01}$ - There is no statistically significant effect of the use of digital devices as parenting tools on the socioemotional development of

preschoolers.

$H_{02}$- There is no statistically significant effect of the time spent on digital devices on the socioemotional development of preschoolers.

$H_{03}$-There is no statistically significant effect of the parents' age and the use of digital devices impacting the socioemotional development of preschoolers.

$H_{04}$-There is no statistically significant effect of the parent's educational qualification and the use of digital devices on the socioemotional development of preschoolers

$H_{05}$- There is no statistically significant effect of the parent's working status and the use of digital devices on the socioemotional development of preschoolers.

$H_{06}$- There is no statistically significant effect of the parent's family status and the use of digital devices on the socioemotional development of preschoolers.

$H_{07}$- There is no significance of a parent's gender and the time their child spends on digital devices.

**Operational Definition**

**Preschoolers:** Young children who fall in the age category of 2- 6 and have either not started their school years or are currently in pre-primary, are denoted here as preschoolers.

**Digital devices:** A digital device is a machine that uses digital data to process, store, transmit, or generate information. Televisions, Video game consoles and handheld devices, mobile and smartphones, e-readers, smart home devices, tablets, computers and laptops, etc. all are classified as digital devices.

**Socio emotional Development:** Daniel Goleman's (1998) socio-emotional development aspects were adopted in the study, self-awareness (sub-dimension included emotional awareness, self-confidence), self-regulation (sub-dimensions included emotional regulation, adaptability), social awareness (sub-dimension included empathy, social skills like compliance) and relationship management (sub-dimension included communication, building relationship with peer & adults, collaboration and cooperation in play). These aspects were assessed in the questionnaire from parents' perception. (As mentioned in the tool used)

**Situations**: 15 real life situations that parents face have been inculcated to help parents articulate what they would do to manage children. The list of situations was as follows:

Situation 1) When you are out at a restaurant with your child, how likely are you to use/do each of the following?

Situation 2) When your child is having a meal (Breakfast, Snack, Lunch , and Dinner) at home, How likely are you to use/do each of the following?

Situation 3) When you are making dinner or doing chores, and want to keep the child busy, how likely are you to use/do each of the following:

Situation 4) When you are getting your child ready for bed, how likely are you to use/do each of the following

Situation 5) When your child is upset or throwing a tantrum and needs help to be

pacified and calmed down, how likely are you to use/do each of the following?

Situation 6) When your child wants to do an educational activity, how likely are you to use/do each of the following?

Situation 7) When you are rewarding your child, how likely are you to use/do each of the following?

Situation 8) When you are disciplining your child, how likely are you to use/do each of the following?

Situation 9) When you have guests over at your house and to keep your child occupied, how likely are you to use/do each of the following?

Situation 10) When you are teaching a new concept to your child or revising at home a concept that was taught in class, how likely are you to use/do each of the following?

Situation 11) When you are traveling and you want to keep your child occupied, how likely are you to use/do each of the following?

Situation 12) When you are visiting a friend's / relative's house and you want to keep your child occupied, how likely are you to use/do each of the following?

Situation 13) To engage and improve your child's hobby or enhance your child's skills, how likely are you to use/do each of the following?

Situation 14) When you are at a shop or supermarket and you want to keep your child occupied, how likely are you to use/do each of the following?

Situation 15) When you are at an appointment (doctor, dentist, salon, etc.) and you want to keep your child occupied, how likely are you to use/do each of the following?

(Figure 1).

**Sample Size**

The parents belonged to the Western Suburbs of Mumbai. For this study, 101 parents having a child in the age range of 2 years to 6 years were included out of 126 parents. Convenience Sampling Technique was used to collect data with the help of google form.

**Tool**

The data was collected through a standardized tool designed by Gonsalves L. A. & Partani S. (2021) with reliability (r = .97) and good content validity.

**Data Analysis**

After Data collection, the responses were coded. The coded sheets were then analyzed and tabulated for interpretation. Data analysis was done using percentage, arithmetic mean, Standard Deviation, t-test and ANOVA.

## RESULT AND DISCUSSION

**Demographic Profile:**

The preschoolers were distributed across various age groups, with 6.9% being 2 years old, 29.7% being 3 years old, 22.7% being 4 years old, 25.8% being 5 years old, and 14.9% being 6 years old. Among these, 3-year-olds form the largest group, while 2-year-olds make up the smallest percentage

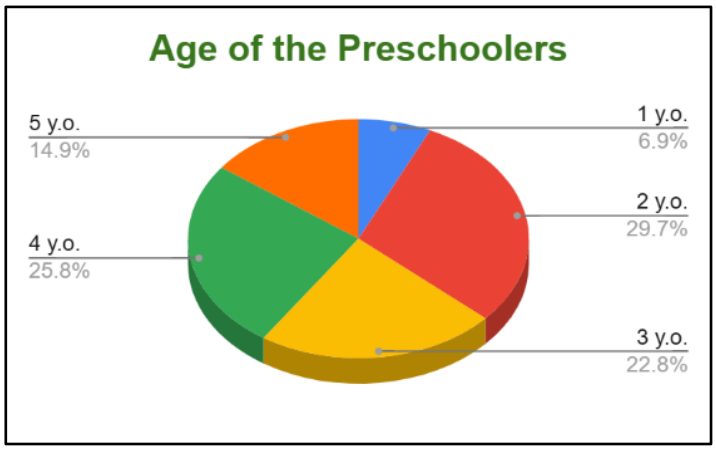


**Figure 1: Percetage of *Age of Preschoolers.***

Only 13.9% had earned their Master's degrees, while 24.8% held undergraduate degrees (Bachelors). Additionally, 27.7% had completed their graduation (HSC/12th), and another 27.7% had finished their S.S.C/10th. A smaller group, about 3.0%, had pursued other courses, including diplomas. Among the parents, 54.5% reported working and the rest 45.5% to be non-working. Also, the family status of 50.5% of parents nuclear and the other 49.5% had extended family type. As per the gender distribution of the parents included in the research, the majority of participants (parents) were females (58.4%) followed by males (41.6%). The gender of the preschoolers in the research were 44.6% Male and 55.4% female.

**Availability of Digital Devices**

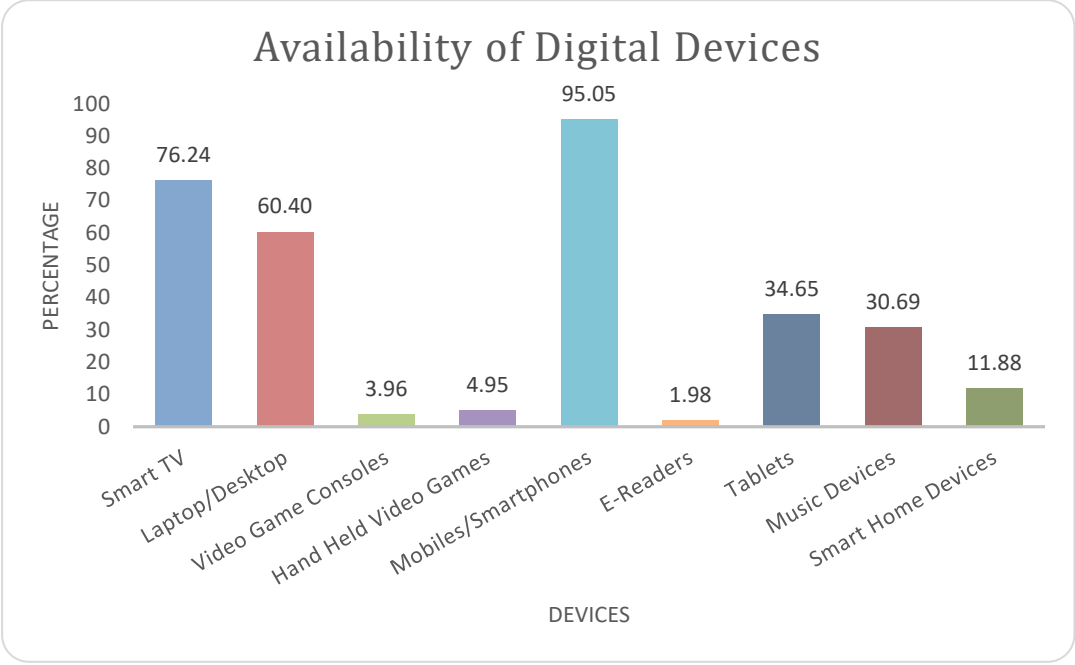


**Figure2: Percentage of availability of Digital devices**

Figure 2 shows the availability of digital devices at home. Highest available devices were smart phones (95.05%) followed by smart TV (76.24%). The least available devices

were e readers (1.98%) and video games in the given sample for the study.

Table1exlpores the usage of digital tools and other methods by the parents to engage children in day-to-day activities. Most of the parents either used mobile phones or TV to engage children in different situations. However, it has been observed that mostly when parents are not using digital devices they were conversing with the child. Might be they were able to identify the hazards of the use of digital devices, hence preferred to converse mostly.

**Table 1: Percentage of Usage of Digital Devices as Tool by Parents of the Preschool Children**

| SITUATIONS | TABLET | MOBILE | TV | LAPTOP | OTHER DEVICES | TOYS | BOOKS | CONVER SI |
|---|---|---|---|---|---|---|---|---|
| Restaurant | **25.10%** | 16.92% | Nil | Nil | Nil | 14.37% | 12.71% | 20.43% |
| Meal Time | 9.49% | 12.89% | **14.40%** | 8.26% | 10.88% | 14.79% | 9.82% | 19.48% |
| Dinner/Chores | 8.54% | 13.29% | **13.65%** | 7.49% | 10.01% | 17.54% | 12.39% | 16.68% |
| Bed Time | 8.63% | 10.48% | **10.67%** | 8.37% | 9.65% | 14.82% | 14.63% | 22.75% |
| Throwing Tantrum | 8.38% | 12.51% | **12.63%** | 8.72% | 10.84% | 17.65% | 9.27% | 20.00% |
| Educational Activi | 7.76% | **11.53%** | 9.75% | 9.21% | 8.89% | 15.30% | 17.83% | 19.72% |
| Rewarding Child | 8.36% | **12.40%** | 11.97% | 8.46% | 10.08% | 17.57% | 12.61% | 18.54% |
| Disciplining Child | 7.99% | 9.43% | **11.15%** | 8.16% | 8.56% | 16.15% | 17.30% | 21.26% |
| Guests Over | 9.14% | **13.08%** | 12.29% | 8.67% | 10.24% | 18.01% | 12.50% | 16.07% |
| Teaching a New Concept | 8.30% | **11.04%** | 10.07% | 8.58% | 8.53% | 14.87% | 18.02% | 20.77% |
| Travelling | 9.35% | **13.62%** | Nil | 3.84% | 11.19% | 17.57% | 12.43% | 19.30% |
| Visiting A Friend/ Relative | 9.57% | **14.64%** | 11.45% | 1.86% | 10.59% | 17.20% | 11.05% | 17.65% |
| Engage Hobby | 7.98% | **10.65%** | 10.16% | 8.75% | 8.5% | 17.22% | 17.00% | 19.66% |
| Shopping | 9.73% | **13.65%** | Nil | Nil | 10.47% | 17.27% | 9.91% | 21.01% |
| Appointments | 9.57% | **14.32%** | Nil | Nil | 12.15% | 16.61% | 11.91% | 17.96% |

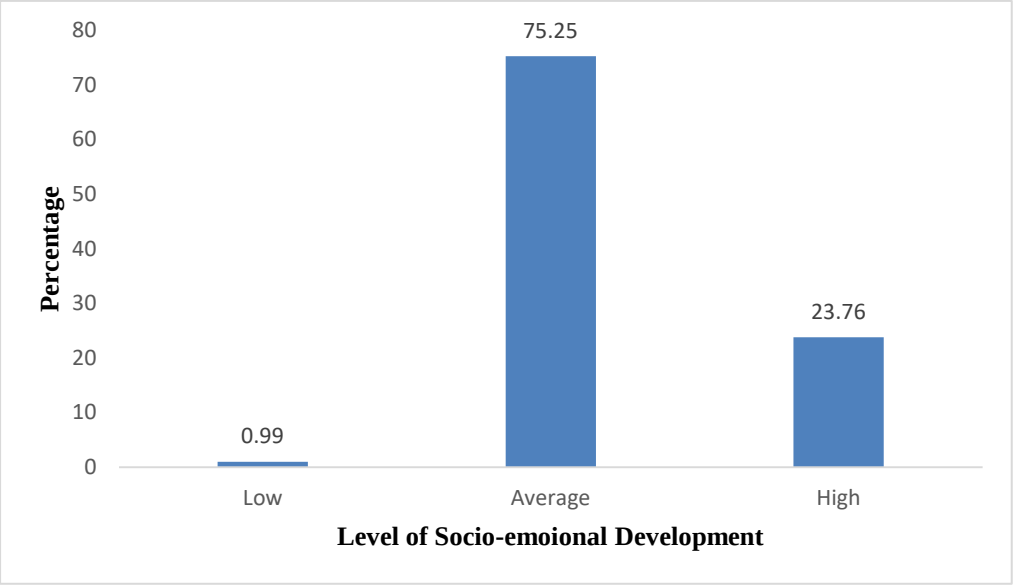


**Figure3: Percentage of level of socioemotional Development of Preschoolers**

Figure 3 shows the socio emotional development of the preschoolers as reported by the parents. Most of the parents have identified socio emotional development as average and high on the given scale.

**Table 2: Mean, SD, f-value, p-value of the use of digital devices by parents and the socioemotional development of preschoolers**

| **Level Use of Digi Devices** | ***N*** | ***Mean*** | ***SD*** | ***f- Value*** | ***p- value*** |
|---|---|---|---|---|---|
| Low | *84* | 91.84 | 11.72 | | |
| High | *17* | 95.53 | 10.11 | 1.45 | .23 |
| Total | 101 | 92.48 | 11.50 | | |

Table 2 reveals that there was no significant effect of digital devices used by the parents across situations and socioemotional development of preschoolers. This might be due to parents conversing more rather using digital devices with the children. However, the results found contrasted with a study conducted by Rocha, *et al*. in 2023, which states that preschoolers who spent excessive time with screens and multimedia devices often showed negative effects on their socioemotional development. Thus $H_{01}$ - There is no statistically significant effect of the use of digital devices as parenting tools on socioemotional development of preschoolers is accepted.

Table 3: Mean, SD, F-value, P-value of Duration of use of digital devices by parents on the socioemotional development of preschoolers

| Duration | N | Mean | SD | F-Value | P-Value |
|---|---|---|---|---|---|
| 1-3 hours | 34 | 94.82 | 7.59 | | |
| 3-6 hours | 51 | 91.92 | 12.69 | 1.41 | .25 |
| 6< hours | 16 | 89.25 | 13.94 | | |
| Total | 101 | 92.48 | 11.50 | Total | |

Table 3 reveals that there was no significant effect of the number of hours where digital devices were used as parenting tools on socioemotional development of preschoolers. In a study conducted by Madigan, et.al, in 2019, it was found that the association between poor developmental performance and increased screen time was not observed. Thus, $H_{02}$ - There is no statistical difference between the duration of time spent on digital devices by the preschoolers and the socioemotional development of children is accepted.

**Effect of Demographic Variables of Parents on Use of Digital Devices to Mange Children**

**Age**

There was no significant effect (f=1.45, p=.23) of Age of the parent on the usage of devices in various situations. In a study conducted by Veldman, *et al*. in 2023, it was found that there is limited evidence regarding the impact of parental age on children's screen time usage. While several factors were analyzed, the effect of parental age on screen time was not consistently significant across studies.

**Educational Qualification**

There was no significant effect (f=.90, p=.47) of the Qualification of the parent on the use of devices in multiple situations. A study conducted by Covolo, *et al*. in 2021, indicates that parental education levels do not significantly impact the frequency or context of device usage among children aged 0 to 5 years. The findings emphasized the consistency of digital interaction patterns across diverse parental qualifications.

**Working Status**

There was no significant effect (f=.49, p=.48) of the working status of the parent on the use of digital devices. In a study conducted by Presta, et.al, in 2024, it was found that parental working status does not significantly affect the choice or frequency of using digital devices as parenting tools.

**Family Status**

Similarly, there was no significance effect of family status on the digital devices used as parenting tools. In a study conducted by Fidan *et al*., in 2023, it was noted that family status, including educational background, does not significantly influence the use of digital devices as parenting tools, emphasizing other predictors instead.

**Gender**

Table 8 reveals that there is no significant difference between the Gender of parent and digital devices used by parents in different situations. A study conducted by Duek, *et al*, in 2020, suggests that while different approaches may align with broader gender stereotypes, there is no definitive evidence that parental gender significantly determines how children use digital devices.

Hence, all the null hypothesis are accepted, where in it was stated that there was no statistically significant effect of the parent's sociodemographic variables on the use of digital devices by the parents.

The results suggested the rise of awareness amongst parents about the appropriate usage of digital devices. Recognizing the importance of balancing digital devices, their screen time with other activities can be classified as awareness. The parents' awareness of the effects of devices on the preschooler's socioemotional development has rendered them capable to balance and regulate their child's device usage. This mindfulness resulted in reduced effects of the devices on their child's socioemotional development. To sum up, the parents' awareness has influenced their child's screen time which then reduces the effects of the devices on the child's socioemotional development. This was supported by the findings of a study conducted by Flewitt, R., *et al*, in 2024, which reflected that many parents are mindful of their use of devices around children, monitoring its presence in their homes to balance its benefits and potential harms. It shows that parents have actively controlled and limited their children's device time, emphasizing supervision and the use of safe learning websites. Thus, supporting the results received.

## CONCLUSION

The current study revealed that usage of digital devices did not influence the socio-emotional development of preschoolers. It was also found that the parent's socio-demographic did not affect the amount of time they let their children use digital devices. This study presented that parents were focusing on developing a healthy bond with the child which can ultimately lead to the healthy socioemotional development of the child.

## LIMITATION

- **Small Sample Size** :The study included a limited number of participants. A larger sample size would provide more reliable results that could better represent the general population.
- **Participants were only from western suburbs of Mumbai**: All participants were from the western suburbs of Mumbai. This limits the findings to a specific demographic.
- **Data Collected Via Survey Method**: The data has been farmed via

google forms, rendering us to believe that the participant has truthfully filled all details.

- **Restriction of the age of the child:** The study focuses on 2 to 6 year olds only. The effect of digital devices on socioemotional development may differ across different age groups.

## RECOMMENDATION

- Expand research to test the impact of digital devices on children of different age groups, such as pre-teens.
- A ready to use kit can be developed by the parents, keeping their toddler's toy/activity preferences in mind. This kit can then be carried to places that might require waiting (like a doctor's appointment or a restaurant) and can help entertain their child.
- Letting children indulge in sensory play (for e.g. water-play / sand-play) instead of digital devices to enhance motor skills and distract from digital devices.
- Analyze different parenting styles to study how they (e.g., authoritative, permissive) affect the use of digital devices as parenting tools and their impact on children's socioemotional growth.

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