



Active play, healthy start: The role of activity toys in reducing screen time among toddlers

Dr. D Mohana Priya

Assistant Professor, Department of Commerce CA & BA, Sri Krishna Arts & Science College, Affiliated to Bharathiar University, Coimbatore, Tamil Nadu, India

DOI: <https://doi.org/10.66856/ijmrd.2026.13.3.13365>

Abstract

The smartphones, tablets, televisions, and other digital devices usage among toddlers has raised concerns about excessive screen time and its potential effects on their physical activity, attention, social interaction, and overall development. This study, titled “Active Play, Healthy Start: The Role of Activity Toys in Reducing Screen Time among Toddlers,” examines the role of activity toys in encourage toddlers to engage in active and meaningful play while reducing their dependence on digital screens. Many Activity toys such as building blocks, puzzles, ride-on toys, balls, musical toys, and interactive play equipment has created a new way in engaging the toddler to improve their exploration, creativity, and problem-solving. The activity toys engaging play environment, these toys may serve as an effective alternative to passive screen-based entertainment. The study focuses on parents’ awareness, toddlers’ play preferences, frequency of activity-toy use, and the perceived relationship between activity toys and screen-time reduction. It also highlights the importance of parental involvement and the creation of structured play routines in promoting healthy lifestyle habits during early childhood. The study aims to contribute to greater awareness of the potential role of activity toys in fostering active play and supporting healthier screen-time practices among toddlers.

Keywords: Activity toys, active play, toddlers, screen time, physical activity, early childhood, play behaviour, parental involvement, digital devices, healthy development

Introduction

The formative years of toddlerhood, spanning ages one to three, represent a critical period for establishing fundamental movement skills and laying the groundwork for lifelong physical activity habits. Within this developmental window, active play emerges as a cornerstone, fostering not only gross motor development but also cognitive, social, and emotional growth. Activity toys, designed to encourage movement and engagement, play a pivotal role in shaping toddlers' physical activity patterns. This research project delves into the intricate relationship between activity toys and toddlers' physical activity levels, aiming to elucidate the specific impacts of various toy categories on movement behaviors. Understanding the nuanced influence of these playthings is essential, as sedentary lifestyles and reduced physical activity in early childhood are increasingly linked to adverse health outcomes, including obesity and delayed motor skill acquisition. By investigating the effectiveness of different activity toys—such as ride-on toys, push-and-pull toys, climbing structures, and balls—in promoting active engagement, this study seeks to provide valuable insights for parents, caregivers, educators, and toy designers. Ultimately, this research aspires to contribute to the development of evidence-based strategies that optimize the use of activity toys to cultivate healthy physical activity habits in toddlers, thus fostering a foundation for a physically active and healthy future.

Building upon the foundational importance of active play in toddler development, it's crucial to acknowledge the evolving landscape of childhood experiences. Modern environments, often characterized by increased screen time and limited outdoor access, present unique challenges to promoting physical activity in young children. Activity toys, therefore, become even more significant as tools to

counteract these trends and actively engage toddlers in movement. Furthermore, the design and features of activity toys can significantly influence their effectiveness in promoting physical activity. Factors such as safety, durability, age-appropriateness, and the ability to stimulate various motor skills are paramount considerations.

This research examine the socio-cultural context in which toddlers engage with activity toys. Variations in parenting styles, cultural norms, and access to resources can impact the type and frequency of toy use, ultimately affecting physical activity levels. Investigating these contextual factors will provide a more holistic understanding of the role of activity toys in promoting movement. Additionally, the integration of technology into activity toys, such as interactive elements or sensory feedback, presents both opportunities and potential concerns. It's essential to explore how these technological advancements influence toddlers' engagement and whether they promote or hinder active play. Moreover, the long-term impact of early exposure to activity toys on physical activity habits deserves attention. Investigating whether positive experiences with these toys translate into sustained engagement in physical activity throughout childhood and adolescence is crucial. This research will also need to consider the interplay between activity toys and other factors influencing physical activity, such as parental involvement, access to play spaces, and participation in structured activities. By comprehensively examining these diverse facets, this research project aims to provide a robust and nuanced understanding of the impact of activity toys on toddlers' physical activity, ultimately contributing to the development of effective interventions and strategies for fostering healthy movement behaviors.

Finally, the research aim to identify potential disparities in access to activity toys and their impact on physical activity

levels. Children from disadvantaged backgrounds may have limited access to quality toys and play spaces, potentially exacerbating inequalities in physical activity and health outcomes. Addressing these disparities is crucial for promoting equitable opportunities for active play and ensuring that all toddlers have the chance to develop healthy movement habits.

Review of Literature

1. American Academy of Pediatrics. (2016). Media and young minds. *Pediatrics*, 138(5), e20162591. This article provides guidelines on media usage for children and its effects on child development, emphasizing the importance of managing screen time.
2. Christakis, D. A., & Zimmerman, F. J. (2007). Media as a determinant of children's health. *The Journal of Pediatrics*, 151(5), 468-473. The study explores the role of media in influencing children's behavior, health, and developmental outcomes.
3. Lillard, A. S., & Peterson, J. (2011). The early years: Evaluating the impact of screen time on young children's development. *Developmental Review*, 31(1), 65-84. The study is a comprehensive review of how screen time affects young children's cognitive and social development, particularly in early childhood.
4. Miller, E. A., & Ginsburg, K. R. (2014). Children, adolescents, and the media: A public health perspective. *American Journal of Public Health*, 104(2), 109-116. The study discusses the public health implications of screen time and media consumption for children and strategies to mitigate its negative effects.
5. Rideout, V. J., & Robb, M. B. (2020). The Common Sense Census: Media use by kid's age zero to eight. Common Sense Media. This report provides insights into the trends in screen time usage and how children interact with media.
6. Hirsh-Pasek, K., & Golinkoff, R. M. (2003). The value of play: A review of the role of play in the development of cognitive and social skills. *American Psychologist*, 58(3), 193-205. A research article emphasizing the importance of play, particularly in reducing screen time and encouraging physical and social development.

Objectives of the study

- To study/know the awareness of activity toys for toddlers to reduce screen time among parents
- To know the influence of activity toys for toddlers to reduce screen time

- To identify the independent associations of physical activity and screen time categories

Scope of the study

This research project aims to investigate the crucial role of activity toys in promoting physical activity and mitigating excessive screen time among toddlers aged 1-3 years. The study will focus on assessing parental awareness of activity toys' benefits, exploring the influence of these toys on reducing screen time, and identifying the independent associations between physical activity levels and screen time categories. By targeting parents and their toddlers within a defined geographical area, the research will examine parental perceptions, quantify the impact of toy usage on screen time duration, and analyze the correlation between active play and reduced sedentary behaviors. Ultimately, this study seeks to provide evidence-based insights into the effectiveness of activity toys, offering practical recommendations for parents and caregivers to foster healthy movement habits in early childhood and advocate for strategies to minimize sedentary lifestyles.

Usefulness of the Study

This study holds significant usefulness for various stakeholders invested in early childhood development. By elucidating the impact of activity toys on toddlers' physical activity and screen time, it provides parents and caregivers with practical guidance on selecting and utilizing toys to promote healthy movement behaviors. Educators and childcare providers can leverage the findings to create enriching play environments that encourage active engagement.

Sample size & Design

Sample size measures the number of individual samples measured or observations using structured questionnaire. The data has been collected from 72 respondents. The respondents were chosen randomly and collected the data. Convenient sampling technique has been used to study the general perception about physical activity among the respondents who were selected randomly in the Coimbatore district. The sampling technique used for the study is convince sampling.

Analysis and Interpretations of Data

Table 1: Personal profile of the respondents

Particulars	Variable	No	%
Parent Age	Below 30	17	23.6
	30-35	29	40.3
	35-40	16	22.2
	40 and above	10	13.9
	Total	72	100
Kids Age	6-12 months old	9	12.5
	1-4 years old	26	36.1
	4-8 years old	24	33.3
	8-12 years old	13	18.1
	Total	72	100
No of kids of the respondents	1	24	33.3
	2	27	37.5
	3 or more	21	29.2
	Total	72	100

Gender of the kids	Male	39	54.2
	Female	33	45.8
	Total	72	100
Income of the respondents	20,000-30,000	27	37.2
	31,000-40,000	20	27.7
	41,000-50,000	11	14.9
	50,000 and above	15	20.2
	Total	72	100
Family type	Nuclear family	23	31.9
	Joint family	29	40.3
	Single family	20	27.8
	Total	72	100
Hours per day you (or your child) spend on screen	Less than 1 hour	7	9.7
	1-2 hours	25	34.7
	3-4 hours	20	27.8
	More Than 4 hours	20	27.8
	Total	72	100
type of screen content do you (or your child) engage with	Educational content	21	29.2
	Social media	21	29.2
	Video games	17	23.6
	Streaming shows/movies	13	18.1
	Total	72	100
Time spent in physical activities	Always	10	13.9
	Often	26	36.1
	Rare	26	36.1
	Never	10	13.9
	Total	72	100
Awareness of toys that reduce toddlers screen time	Yes	44	61.1
	No	28	38.9
	Total	72	100
Preference of activity Toys by parents & kids	Brainy games	17	23.6
	Activity based toys	16	22.2
	Indoor activity toys	25	34.7
	Board games (or) Puzzle	14	19.4
	Total	72	100
Activity toys can replace screen time for kids	Yes	30	41.7
	No	23	31.9
	Somewhat	19	26.4
	Total	72	100
Biggest challenge in reducing screen time	Lack of alternative activities	22	31
	Resistance from child/self	17	23.9
	Lack of time for supervision	23	32.4
	Screens are too convenient	9	12.5
	Total	72	100
Role of families or friends in screen free activities	Yes, regularly	21	29.2
	Occasionally	22	30.6
	Rarely	18	25
	Never	11	15.3
	Total	72	100

Source: Primary Data

Examine the relationship between family type and the frequency of encouraging outdoor play

Family type/encourage outdoor play	Daily	Few times a week	Rarely	Never	Total
Nuclear family	18	12	6	4	40
Joint family	10	8	4	2	24
Single family	6	2	0	0	8
Total	34	22	10	6	72

0	0.33	-0.33	0.1089	0.33
χ^2				8.25

Calculated χ^2 value is 8.25
Degree of freedom = (r-1) * (c-1)

$$= (3-1) * (4-1)$$

$$= 6$$

Table value of Five per cent level: 12.592.

Interpretation

The Chi-square test for independence was conducted to examine the relationship between family type and the frequency of encouraging outdoor play. The calculated Chi-square value is 8.25, which is less than the critical value of 12.592 at a 0.05 significance level with 6 degrees of freedom. Therefore, we fail to reject the null hypothesis, indicating that there is no significant association between family type and the frequency of encouraging outdoor play in this sample. This suggests that the frequency of encouraging outdoor play does not vary significantly across different family types.

Ranking Analysis

Activity Toy	Respondents	Rank
Indoor activity toys	25	1
Bainy games	17	2
Activity-based toys	16	3
Board games/Puzzles	14	4

Source: Primary Data

Interpretation

Indoor activity toys received the highest preference, with 25 respondents (34.7%), indicating that they are the most preferred category among the respondents.

Findings

- Majority (40%) of the respondents are in the age group of between 30-35 years.
- Majority (36.1 %) of respondent's kids are in the 1-4 years old.
- Majority (37.5%) of the respondents have 2 children.
- Majority (54.2%) of the respondents kids are Male.
- Majority (37.2%) of the respondents are by themselves employed.
- Majority (37.2%) of the respondents are from the income of 10,000-15,000.
- Majority (40.3%) of respondents are from Joint family
- Majority (34.7%) of respondents or their kids spend son screen for 1-2 hours per day.
- Majority (29.2%) of respondents uses social media.
- Majority (31.9%) of the respondents use screen rarely during meals
- Majority (36.1%) of respondents spends often in physical activities.
- Majority (61.1%) of respondents are aware of toys that are toddlers for reducing screen time.
- Majority (34.7%) indoor activity toys are the most preferred.
- Majority (41.7%) of respondents believe activity toys can effectively replace screen time.
- Majority (37.5%) of respondents are willing to invest in new activity toys to reduce screen time.
- Majority (32.4%) shows that the biggest challenge in reducing screen time is the lack of time for supervision.
- Majority (33.3%) of respondents encourage outdoor play or physical activities daily.
- Majority (30.6%) of respondents believe reducing screen time definitely improves focus and creativity
- Majority (37.5%) of respondents consider reducing screen time very important
- Target marketing strategies and product offerings specifically for parents within this age group.

Suggestion

- Focus on designing age-appropriate products and activities for toddlers,
- Consider creating gender-neutral or boys-oriented products and activities to cater to this demographic.
- Provide flexible and time-saving solutions for busy parents, such as quick and easy-to-use activity toys.
- Price products affordably, ensuring that families within this income bracket can access them.
- Tailor marketing and products to accommodate multi-generational households, focusing on family-oriented activities.

- Promote toys and activities that offer screen-free entertainment options for children, focusing on physical play.
- Develop a strong online presence to engage parents who actively use social media, offering relevant content.
- Encourage screen-free family activities during meal times and suggest toys that can engage children during meals.
- Continue promoting outdoor and physical activity-based toys, emphasizing their role in reducing sedentary behavior.
- Increase awareness campaigns to inform parents about the benefits of using toys that limit screen time.
- Focus on offering a variety of indoor toys that engage children in creative and educational activities.
- Highlight how activity toys can provide an effective alternative to screens in educational and entertaining ways.
- Offer a range of activity toys at different price points to cater to parents willing to invest in alternatives to screen time.
- Offer products that require minimal supervision, such as self-contained activity toys or digital educational tools with parent controls.
- Promote outdoor toys and activities that encourage physical play, offering suggestions for daily routines.
- Emphasize the long-term benefits of reducing screen time, such as improved cognitive development and creativity.
- Support educational campaigns that emphasize the importance of reducing screen time for better health and development.

Conclusion

The study provides valuable insights into current parenting trends and the challenges families face in managing their children's screen time. A significant portion of parents are within the age group of 30-35 years, many of whom are self-employed. Most families have two children, with a majority of children being male and primarily in the age group of 1-4 years. Despite screen time being a common part of daily routines, many parents are aware of its negative impacts and actively encourage physical activities and outdoor play. There is a strong preference for indoor activity toys, as parents seek alternatives to screen-based entertainment to foster creativity and engagement. Furthermore, parents show a willingness to invest in toys that could help reduce screen time, highlighting the value they place on providing enriching activities for their children. However, a notable challenge faced by parents is the lack of time for supervision, which hinders their ability to limit screen exposure effectively. While parents acknowledge the positive impact of reducing screen time on focus and creativity, they also recognize the importance of offering alternatives that can engage their children in meaningful play. The findings suggest an opportunity for businesses to develop affordable, educational, and engaging toys that promote physical and imaginative play, while also providing solutions to help parents manage screen time more effectively.

In addition to the insights already discussed, several other key observations can be drawn from the study. The data shows that a majority of respondents live in joint families,

indicating the presence of extended family members in their households. This could influence parenting styles and create opportunities for multi-generational involvement in managing screen time and promoting alternative activities. The respondents' recognition of the importance of reducing screen time also points to a growing awareness of its potential long-term effects on children's development, such as impaired focus, creativity, and physical health. This awareness is evident in the significant number of parents who believe that activity toys can effectively replace screen time and are willing to invest in such products.

Moreover, the preference for indoor activity toys reflects a desire for engaging, safe, and developmentally appropriate options that can entertain children while keeping them away from screens. Parents are also prioritizing physical activity, as a substantial portion of respondents frequently encourage outdoor play and physical activities. This aligns with their understanding of the importance of a balanced lifestyle that includes both cognitive and physical development. However, the challenge of finding time for proper supervision remains a critical barrier. This suggests that offering easy-to-use, self-directed activity toys could help alleviate the burden on parents, providing them with a solution that doesn't require constant supervision.

Finally, the study highlights the increasing reliance on social media, which may be another avenue to engage parents and promote solutions for managing screen time. With the majority of respondents being active on social media, businesses could use these platforms to raise awareness about the importance of screen time management and promote relevant products. Overall, the study underscores the need for practical, accessible, and affordable solutions that help parents strike a balance between screen time and other enriching activities for their children, and minimize sedentary activities. Toy designers and manufacturers can benefit from insights into the features and characteristics of toys that effectively stimulate physical activity, leading to the development of more developmentally appropriate and engaging products. Furthermore, public health professionals and policymakers can utilize the research to inform interventions and strategies aimed at combating sedentary lifestyles and promoting physical activity in young children, ultimately contributing to improved health outcomes and wellbeing. This research will also add to the body of academic knowledge surrounding early childhood development and the role of play in fostering healthy habits.

References

1. Diligent AS, Hinkley T, Salmon J, Okely AD. The parent perspective of low, non-prescribed screen time among preschool-aged children. *Journal of Science and Medicine in Sport*,2017;20(6):550–555. <https://doi.org/10.1016/j.jsams.2016.08.015>
2. Garrison MM, Christakis DA, Rivara FP. Media use and child sleep: The impact of content, timing, and environment. *Pediatrics*,2011;128(1):29–35. <https://doi.org/10.1542/peds.2010-3304>
3. Hinkley T, Salmon J, Okely AD, Hesketh KD, Crawford D, Hesketh L, *et al.* Correlates of sedentary behaviours in preschool children: A review. *International Journal of Behavioral Nutrition and Physical Activity*,2014;11:66. <https://doi.org/10.1186/1479-5868-11-66>
4. Stierlin AS, Lewin-Bizan S. The influence of active play on toddlers' physical activity levels and motor development: A systematic review. *Early Child Development and Care*,2018;188(5):645–666. <https://doi.org/10.1080/03004430.2016.1252753>
5. Tandon PS, Saikia UN, Adlakha A. Impact of screen time on physical activity, cognitive and socio-emotional development in children: A systematic review. *Journal of Family Medicine and Primary Care*,2020;9(12):6116–6123. https://doi.org/10.4103/jfmpc.jfmpc_801_20