

Digital Media Overuse in Children: A Literature Review with an Ayurvedic Perspective

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Abstract

The rapid growth of digital technology has made smartphones, tablets, gaming, and social media an integral part of children's daily lives. While digital media offers educational and recreational benefits, overexposure is increasingly associated with physical health issues such as obesity, poor posture, and vision problems; cognitive and emotional disturbances including hyperactivity, anxiety, and depression; as well as social challenges like isolation and peer comparison.¹⁻⁸ From an Ayurvedic standpoint, such overuse may be understood as a disturbance of Vata dosha and Manasika Vikara, resulting in insomnia, restlessness, and poor concentration.⁹⁻¹² This review evaluates existing literature on the effects of digital media overuse in children, integrates Ayurvedic insights, and explores holistic strategies such as Dinacharya (daily routine), Yoga, meditation, and Rasayana therapy.¹³⁻¹⁶ An integrated approach combining modern pediatric guidelines with Ayurveda can provide sustainable preventive and corrective measures.

Keywords: Digital media, screen addiction, children, Ayurveda, Vata imbalance, Dinacharya, Rasayana, cognitive health, pediatric lifestyle

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Introduction

In the 21st century, digital devices have become inseparable from childhood. According to global health recommendations, children should not exceed two hours of recreational screen time daily.^{1,2} However, recent studies suggest that many children spend between 4–8 hours per day on screens.^{4,5} This overuse has been linked to declining physical activity, poor sleep, reduced concentration, and social withdrawal.³⁻⁶ While modern pediatrics primarily addresses screen overuse through behavioral guidelines and parental supervision, Ayurveda offers a unique lens to interpret these problems as imbalances of dosha and manas (mind).⁹⁻¹² By combining both perspectives, a holistic management strategy can be created to protect the well-being of children.

Literature Review

1. Physical Health Impacts

Excessive screen use has been shown to reduce physical activity levels significantly in children. A sedentary lifestyle promotes obesity, poor cardiovascular fitness, and metabolic disorders.⁵ Long hours of sitting while using devices also cause posture-related musculoskeletal problems, including backache, neck stiffness, and early signs of spondylosis.⁷ Prolonged exposure to screen light, particularly blue light, suppresses melatonin secretion and disturbs circadian rhythm, resulting in sleep disorders, delayed sleep onset, and inadequate deep sleep cycles.⁶ Eye-related complaints such as digital

eye strain, dry eyes, and blurred vision are increasingly reported in pediatric age groups.^{5,15} In Ayurveda, these can be correlated with Vata-Pitta aggravation, affecting chakshurendriya (visual sense organ).^{12,15}

2. Cognitive and Psychological Impacts

Several studies demonstrate a strong link between screen overuse and impaired attention span, hyperactivity, and academic decline.⁵ Fast-paced digital media content overstimulates the developing brain, leading to information overload and poor memory retention.^{3,4} Psychologically, high exposure to digital media is associated with irritability, mood swings, anxiety, and depressive symptoms.⁴ In adolescents, problematic internet use may mimic addictive behavior patterns with features like craving, withdrawal, and loss of control.⁸ From an Ayurvedic viewpoint, this aligns with Manasika Vikara (mental disorders) such as Chittodvega (anxiety) and Avasada (depression).⁹⁻¹¹

3. Social and Behavioral Impacts

Digital media overuse not only influences personal health but also reshapes family and peer dynamics. Reduced face-to-face interaction leads to weaker communication skills, emotional detachment, and strained family bonding.^{4,8} Excessive gaming or social media engagement may replace outdoor play, thus limiting opportunities for social learning, teamwork, and creativity. Exposure to inappropriate or violent content at an early age can lead to behavioral problems, aggression, and risk-taking behavior.⁸ Social media,

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with its culture of comparison, fosters low self-esteem, body image concerns, and peer-related anxiety.⁴ Ayurveda highlights the role of Satva (mental strength) in social adjustment, and excessive digital stimulation can weaken Satva, allowing Rajas (hyperactivity, agitation) and Tamas (lethargy, isolation) to dominate.⁹⁻¹²

4. Broader Academic and Global Perspective

The American Academy of Pediatrics (2016) emphasizes that children under 18 months should avoid screen time altogether (except video chatting), while those between 2–5 years should not exceed one hour per day of high-quality content.¹ The World Health Organization (2019) recommends <2 hours recreational screen time daily for children under 5 years, coupled with regular physical activity and adequate sleep.² A population-based study found that children with more than 4 hours of screen time daily had significantly lower psychological well-being, decreased curiosity, and poor emotional regulation compared to peers with limited exposure.⁴

5. Ayurvedic Interpretation in Context of Literature

Ayurveda provides a framework to interpret these findings holistically. Prolonged use of digital devices causes Vata aggravation due to irregular sensory and mental activity, Pitta aggravation through excessive competitive engagement, and Kapha imbalance by fostering sedentary behavior. Together, these imbalances manifest as the physical, psychological, and social consequences widely reported in modern literature.^{9-12, 14}

Methodology

Study Design

Literary Research – Narrative literature review integrating modern pediatric research with Ayurvedic principles.

Aim

To analyze the health consequences of digital media overuse in children and explore integrative management strategies combining modern and Ayurvedic approaches.

Objectives

1. To evaluate physical, psychological, and social effects of digital media overuse in children.⁴⁻⁸
2. To interpret these effects through Ayurvedic principles of dosha imbalance and manas vikara.⁹⁻¹²
3. To identify preventive and corrective interventions from Ayurveda, including lifestyle, diet, Yoga, and Rasayana.¹³⁻¹⁶
4. To suggest a comprehensive framework combining modern pediatric guidelines and Ayurveda.^{1, 2, 14}

Materials

Data Sources: PubMed, Scopus, WHO and AAP guidelines, classical Ayurvedic texts (Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya, Bhavaprakasha).^{1, 2, 9-12} Study Population: Children and adolescents (2–18 years) with reference to screen use patterns and associated health effects.⁴⁻⁸

Tools: Literature review, comparative analysis of modern and Ayurvedic findings.

Ayurvedic Perspective on Digital Media Overuse Ayurveda views health as the dynamic balance of Doshas (Vata, Pitta, Kapha), Agni (digestive fire), Dhatus (tissues), and Manas (mind). Any repetitive lifestyle factor that overstimulates the senses and disturbs natural rhythms can cause doshic imbalance and lead to disease.⁹⁻¹² The problem of digital media overuse can be interpreted within this framework:

1. Vata Dosha Aggravation

Symptoms: restlessness, insomnia, dryness of eyes, anxiety, fatigue, poor concentration.⁹⁻¹¹

2. Pitta Involvement

Symptoms: irritability, aggression, headaches, premature stress.^{10, 11}

3. Kapha Imbalance

Symptoms: lethargy, obesity, poor digestion, reduced enthusiasm for outdoor play.^{11, 12}

4. Manasika Vikara (Mental Disorders)

Chittodvega (anxiety), Nidranasha (insomnia), Avasada (depression).⁹⁻¹¹

5. Ojas Depletion

Results in poor immunity, fatigue, and mental instability.^{12, 14}

Ayurvedic Preventive & Corrective Measures

Dinacharya (Daily Routine) promotes circadian rhythm balance and mental clarity.^{11, 12}

Ahara (Diet) supports brain function and balances Vata.¹³

Yoga and Meditation enhance Satva and reduce anxiety.¹⁶

Rasayana Therapy with Brahmi, Shankhapushpi, Ashwagandha and Guduchi improves memory, immunity and emotional stability.^{13, 14}

Parenting and Social Environment interventions strengthen emotional bonding and healthy habits.⁸

Mind-Body Balance Practices like Abhyanga and Nasya therapy support sense organs and mental clarity.^{10, 11}

Discussion

Modern research emphasizes neurobiological effects of overstimulation, while Ayurveda explains the same symptoms as Vata imbalance. Integrative interventions such as Dinacharya, sattvic diet, Yoga, and Rasayana directly address both physiological and psychological imbalance.¹⁴⁻¹⁶ Pediatric recommendations further strengthen prevention strategies.^{1, 2}

Conclusion

Digital media overuse is an emerging lifestyle disorder in children, impacting their physical, cognitive, and emotional health. Ayurveda explains these disturbances as Vata dosha aggravation and depletion of Ojas. Preventive and corrective measures such as structured routines, dietary guidance, Yoga, meditation, and Rasayana can complement modern strategies. An integrative, holistic approach is essential to ensure healthy development in the digital age.

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