

VOICES IN THE NIGHT: A NARRATIVE REVIEW ON PEADIATRIC INSOMNIA AND ITS CONSEQUENCES IN INDIA

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ABSTRACT

Background: Paediatric insomnia is an increasing issue in India, impacting a large proportion of the child population. Treating childhood insomnia needs a variety of approaches combining parents, medical professionals, and academics in India, Early intervention and appropriate counselling will reduce the adverse consequences of insomnia. The purpose of this narrative review is to integrate available literature on the effects of paediatric insomnia in India, with a focus on the physical consequences: due to a lack of physical exercise, causing an increase in obesity and diabetes in children's psychological effects: 73% of teenagers with depression and 88% of youngsters with anxiety disorders. Social impact increased agitation, poor focus, and behavioural problems. The review aims to point out the importance of treating paediatric insomnia with all-encompassing and socially important methods by focusing awareness on these important regions. **Methods:** Indian medical journals, PubMed, Google Scholar, and other databases were used to perform a thorough literature search. The review covered both observational studies and clinical trials related to childhood insomnia in India. conducted a thorough investigation using the terms "prevention," "consequences," and "paediatric population." The publications in our collection ranged from 2010 to 2023. **Discussion:** Between 10% and 50% of children struggle with insomnia, an issue that has an important effect on this demographic. Physical consequences: children are becoming more obese and diabetic as a result of a lack of physical activity. psychological effects: 73% of adolescents with depression and 88% of children with anxiety disorders. Social effects exacerbated behavioural issues, inattentiveness, and irritability. The goals of interventions should be to increase awareness, provide early diagnosis, and adopt specific management measures that engage educators, families, and healthcare professionals to decrease these negative effects and enhance children's good developmental outcomes. **Conclusion:** Treating childhood insomnia needs a variety of approaches combining parents, medical professionals, and academics in India, Early intervention and appropriate counselling will reduce the adverse consequences of insomnia. Also, it helps to promote better social, physical, and psychological development of children. This review alarms to conduct public health programs to ensure children's mental wellness care. Awareness of a hygiene environment for promoting sleep quality should be given constantly to the teachers, parents and caretakers of the children. Paediatric insomnia can be effectively prevented by implementing these efforts to decrease adverse impacts which will help in improving children's overall health.

KEYWORDS: Paediatric, Insomnia, Sleep Difficulties, Consequences, Anxiety, Melatonin, Prevention.

INTRODUCTION

Sleeping well is essential for children' general health. Early childhood and adolescent insomnia can negatively impact a person's physical and mental health, as well as their brain development and social behaviours.^[1]

In children and adolescents, insomnia disorders were 34% prevalent worldwide.^[2] About 1 billion persons

worldwide suffer from mild to severe obstructive (OSA) sleep apnea.^[3] India is the world's second most sleep-deprived country, just behind Japan. According to a sleep study, 87% of Indians use their phones immediately prior to bed, this increases to the nation's permanent sleep epidemic.^[4]

India has the biggest number of children and adolescents worldwide, with over 434 million.^[5] Paediatric populations frequently experience interrupted sleep; according to one study, 74% of children struggle with insomnia.^[6] The most prevalent sleep disorder that paediatric healthcare professionals connect is paediatric insomnia, which has a prevalence that has been estimated to be between 10% and 50%.^[7]

According to states, 5%–20% of children suffer insomnia as children, and up to 75% of children with neurodevelopmental problems are affected.^[8] In of the 513 children in the study, 51.1% had sleep issues. Preschool were substantially more likely than school-age children to share a bed (96% vs. 85.8%).^[9] The majority of children have been exposed to screens media; 96% of them use smartphones while greater than 89% watch television. Approximately 65% of families watch television over dinner.^[10]

INSOMNIA

Insomnia is definition as a subjective experience of trouble with sleep initiation, duration, consolidation, or quality that occurs despite ample sleep opportunity and causes some type of daily impairment. Stress, scheduling

adjustments, or environmental changes can all contribute to short-term sleeplessness. It could last for several days or weeks. Chronic (long-term) insomnia is defined as insomnia that lasts longer than three months, occurs three or more times per week, and cannot be adequately explained by a medical condition.^[12] Insomnia primarily comes in two forms: Acute sleeplessness: a brief disruption in sleep caused by events like exams, travel, or sickness. Acute insomnia is typically caused by emotional or environmental disturbances and might persist for a while. CHRONIC INSOMNIA: Prolonged difficulty falling or remaining asleep most nights.^[13]

IMPORTANCE OF SLEEP

The impact of sleep disturbances on the health of young people has drawn more attention to them in recent years. Everyone needs sleep, but children especially need it because of their developing bodies and minds. As people age, their need for sleep declines. A newborn requires 16 to 19 hours of sleep every day, toddlers require two to 13 hours, preschoolers require 10 hours of sleep, and schoolchildren require nine hours.^[15] Sleep duration and quality have an impact on an individual's development of the mind and emotions, circadian rhythm regulation, and physiological functions (e.g., hormone production).^[16]

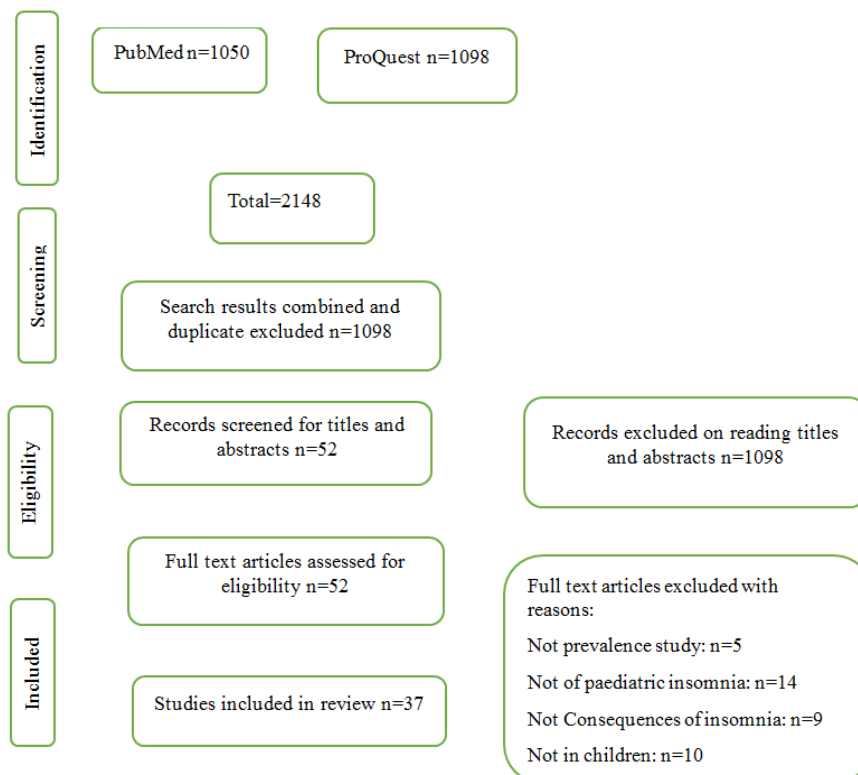


Figure 1: Flow chart illustrating the process by which articles were selected or rejected for inclusion in the study.

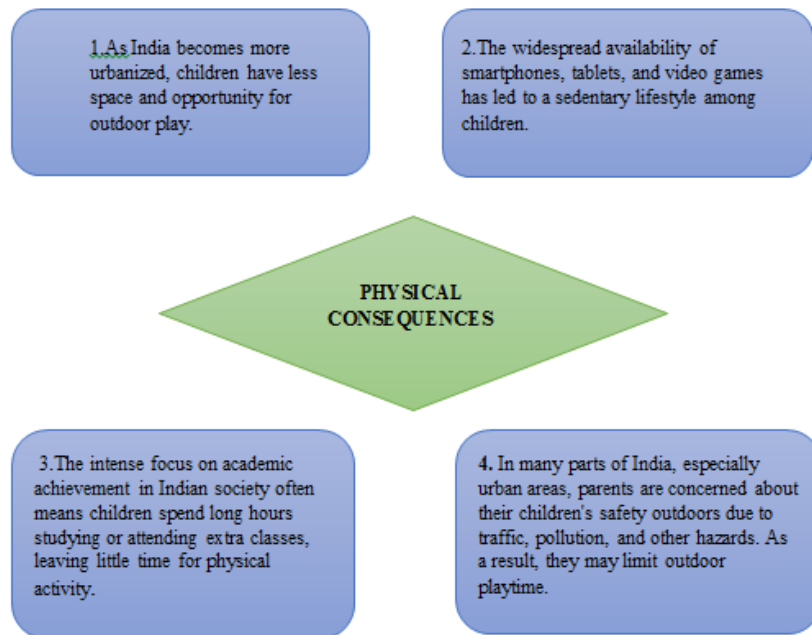
CONSEQUENCES OF INSOMNIA

SHORT TERM: include physical discomfort upon emerging, lack of sleep, tiredness, unpleasant body sensations such as heavy eye, hypersensitivity to loud and light, and low energy/motivation throughout the

day.^[17] Increased emotional reactivity and mood problems (such as irritability) have been linked to insomnia.^[18] poor connections with partners and children, a decrease in confidence and feelings of worth, and a general poor quality of life.^[19]

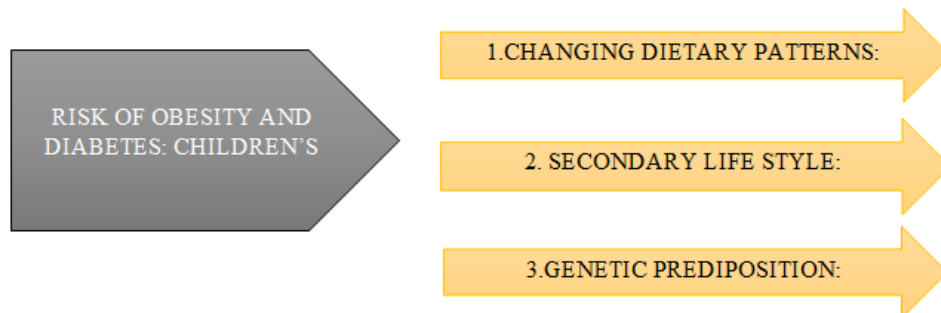
LONG TERM

PHYSICAL CONSEQUENCES: There are a number of variables that contribute to the alarming trend of children in India being not as active.^[20]

**RISK OF OBESITY AND DIABETES CHILDREN'S**

According to a recent population-based study conducted in south India, the prevalence of hypoglycaemia was found to be 3.7% in general and 12.7% among girls who

had abdominal obesity. In the most recent study conducted by the authors, 5.5% and 6.5% of obese teenagers, respectively, exhibited decreased fasting glucose and lowered glucose tolerance.

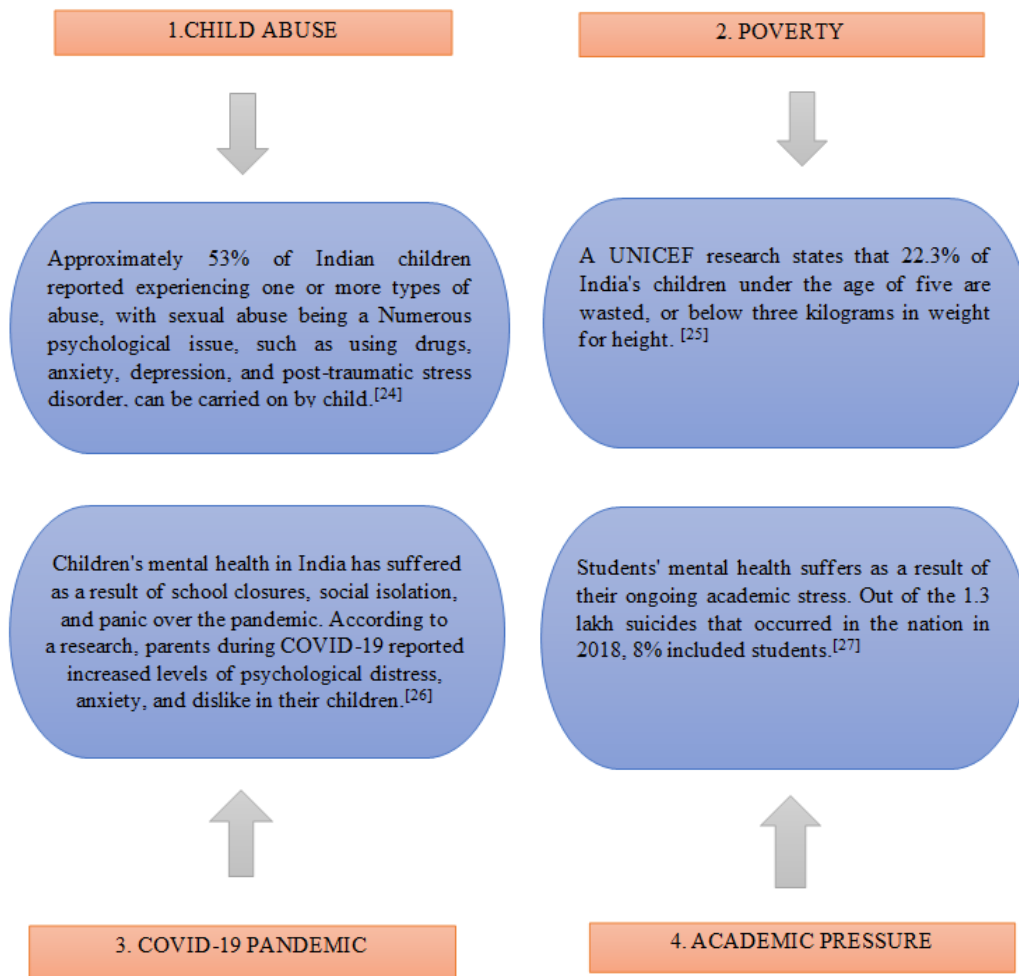


CHANGING DIETARY PATTERNS: The use of processed meals, sugary drinks, and high-fat snacks has increased as a result of urbanization and economic development. Because they are often heavy in energy and low in nutritious content, they contribute to weight gain and obesity. **2. SECONDARY LIFE STYLE:** As was already said, children in India have grown more and more lazy and spending more time indoors playing video games or exercising out. **3. GENETIC PREDIPOSITION:** Studies indicates that genetics may

be involved in the onset of type 2 diabetes and obesity.^[22]

PSYCHOLOGICAL /INDIVIDUAL CONSEQUENCES

The children's mood and anxiety problems are often accompanied by insomnia. According to 88% of adolescents with anxiety disorders and 73% of youth with depression report having trouble falling asleep.



SOCIAL CONSEQUENCES

1. IMPAIRED SOCIAL FUNCTIONING: An increasing quantity of study shows how sleep impacts school-age children's and the capacity of adolescents to adjust socially and cognitively. It assesses the relationships between a range of social/emotional and cognitive metrics, including receptive vocabulary, emotion understanding, peer acceptance, social skills, social engagement, and mood, and sleep length, quality, and schedule flexibility.^[28]

2. REDUCED INVOLVEMENT IN SOCIAL ACTIVITIES: Children who experience fatigue and excessive sleep throughout the day as a result of insomnia may become less involved in social activities. Children may be unlikely to take advantage of opportunities to socialize with colleagues, participate in extracurricular activities, or enjoy social gatherings due to feelings of fatigue or issues staying awake.^[15]

4. MISTAKES AND STIGMA: Sometimes, sad, sleep-related problems are misconstrued. Peers may tease or bully a child who doesn't get enough sleep throughout the day because they believe the child is lazy or unmotivated. adverse effects on a child's confidence in social situations and feeling of identity.^[29]

PREVENTION OF PEADIATRIC INSOMNIA PHARMACOLOGICAL TREATMENTS

Antihistamines (alimemazine, promethazine, diphenhydramine, hydroxyzine): Antihistamine agents, including hydroxyzine or diphenhydramine, represent the most widely prescribed sedatives in the paediatric population.^[30]

MELATONIN

Melatonin is a hormone that plays a key role in regulating sleep-wake cycles. It is often used as a first-line pharmacological treatment for pediatric insomnia, particularly in children with circadian rhythm disorders or delayed sleep onset. Melatonin supplements are available over-the-counter and are generally well-tolerated, but their long-term safety and efficacy in children are still being studied.^[31]

BRIGHT LIGHT THERAPY

Bright light therapy may be especially helpful for children with certain conditions that disrupt their sleep patterns, such as attention-deficit/hyperactivity disorder (ADHD) or autism spectrum disorder (ASD). Research suggests that bright light therapy can improve sleep quality and daytime functioning in children with ADHD

or ASD by regulating their circadian rhythms and reducing sleep disturbances.^[32]

NON-PHARMACOLOGICAL/BEHAVIOURAL INTERVENTIONS

Under the non-pharmacological therapeutic alternatives include CBT for older children and adolescents, behavioural interventions, parent education/training programs, sleep hygiene, and alternative therapies like massage therapy, aromatherapy, nutrition, and multivitamin or iron supplementation.^[33]

PARENT TRAINING AND PSYCHOEDUCATION

Psychoeducation is seen as an essential component in treatment children's and adolescents' sleep disorders or troubles. It provides them in improved understanding of the illnesses, self-management techniques, interaction, and regulation, all of which can lead to positive outcomes. These are some useful assets for adolescents and their parents.^[34]

RAISING AWARENESS AND BUILDING SUPPORT

Paediatric insomnia is a significant public health concern in India.

1. RAISING AWARENESS: Educating parents, teachers, and healthcare professionals about paediatric insomnia and recognizing its signs and symptoms.

2. BUILDING SUPPORT SYSTEMS: Providing resources for parents, including support groups and access to qualified healthcare professionals.

Culturally sensitive interventions: Developing sleep hygiene programs that respect and integrate Indian cultural practices.^[35] The general recommendation that children between the ages of one month and eighteen should regularly get an appropriate amount of sleep each day in order to preserve their health is supported by the research that is currently available.^[36]

CONCLUSION

Treating childhood insomnia needs a variety of approaches combining parents, medical professionals, and academics in India, Early intervention and appropriate counselling will reduce adverse consequences of insomnia. Also, it helps to promote better social, physical, psychological development of children. This review alarms to conduct public health programs for ensuring children's mental wellness care. Awareness on hygiene environment for promoting sleep quality should be given constantly to the teachers, parents and caretakers of the children. Paediatric insomnia can be effectively prevented in implementing these efforts to decrease adverse impacts which will help in improving children's overall health.

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