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## Original Research

### Sleep pattern in children age ranged 6-14 years

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#### ABSTRACT:

**Background:** About 25% of all children experience some type of sleep problem at some point during childhood. The present study was conducted to assess sleep pattern in school children. **Materials & Methods:** The present study was conducted on 225 children of age ranged 6-14 years. A questionnaire was designed and all the parents were asked to respond accordingly. Sleep disturbances and possible causes were recorded. **Results:** Age group 6-8 years had 35 boys and 30 girls, 8-10 years had 28 boys and 36 girls, 10-12 years had 22 boys and 24 girls and 12-14 years had 15 boys and 10 girls. Sleep disturbances were present in 42% children while absent in 58% children. Causes for sleep disturbances were external influence in 12, nose block in 35, bed sharing in 28, ambient environment in 16 and insect bite in 4. The difference was significant ( $P < 0.05$ ). **Conclusion:** Authors found that 42% children age ranged 6-14 years had sleep disturbances. Common reason was nose block, bed sharing, external influence and ambient environment.

**Key words:** Children, Nasal, Sleep

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## INTRODUCTION

Out of many reasons for externalizing behavior in kids, sleep may be one. It is estimated in cross-sectional studies that overall 20%–30% of young children are reported to have significant bedtime problems and/or night waking. Although their types may vary, infants and toddlers find difficulty in settling down or falling asleep, preschoolers show increased cases of sleep bruxism, somnambulism, and enuresis, and adolescents present more problems due to insomnia and daytime sleepiness.<sup>1</sup> It is found that approximately 25% of all children experience some type of sleep problem at some point during childhood. However, the sleep disorders in children are under reported. This is probably because sleep disorders are commonly linked to behavior and considered a normal variation.<sup>2</sup> Inadequate sleeps

has been associated with a rainbow of physical and psychosocial health deficits, including impaired ability to concentrate and retain information, mood disorders, impaired motor skills, and poorer overall health and body's natural defense mechanism. Inadequate falling in sleep is characterized by sleep and wake difficulties resulting from "daily living activities that are inconsistent with the maintenance of quality sleep and normal daytime alertness."<sup>3</sup> Sleep disturbances can affect the daily activities of children especially scholastic performance. Early identification of sleep problems may prevent negative consequences, such as daytime sleepiness, irritability, behavioral problems, learning difficulties, motor vehicle crashes in teenagers, and poor academic performance.<sup>4</sup> The present study was conducted to assess sleep pattern in school children.

**MATERIALS & METHODS**

The present study was conducted in the department of Pedodontics. It comprised of 225 children of age ranged 6-14 years. The study protocol was approved from institutional ethical committee. All parents were informed and written consent was obtained. General information such as name, age, gender etc. was recorded. A questionnaire was designed and all the parents were asked to respond accordingly. In all sleep disturbances and possible causes were recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

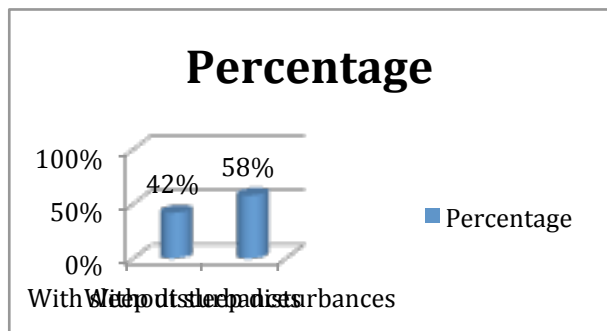
**RESULTS**

**Table I Age wise distribution**

| Age group (Years) | Boys | Girls |
|-------------------|------|-------|
| 6-8               | 35   | 30    |
| 8-10              | 28   | 36    |
| 10-12             | 22   | 24    |
| 12-14             | 15   | 10    |
| Total             | 125  | 100   |

Table II shows that age group 6-8 years had 35 boys and 30 girls, 8-10 years had 28 boys and 36 girls, 10-12 years had 22 boys and 24 girls and 12-14 years had 15 boys and 10 girls.

**Graph I Children with sleep disturbances**



Graph I shows that sleep disturbances were present in 42% children while absent in 58% children.

**Table II Causes of sleep disturbance in children**

| Causes              | Number | P value |
|---------------------|--------|---------|
| External influence  | 12     | 0.01    |
| Nose block          | 35     |         |
| Bed sharing         | 28     |         |
| Ambient environment | 16     |         |
| Insect bite         | 4      |         |

Table II shows that causes for sleep disturbances were external influence in 12, nose block in 35, bed sharing in 28, ambient environment in 16 and insect bite in 4. The difference was significant (P< 0.05).

**DISCUSSION**

Children mostly show bedtime resistance due to their enjoyment in other activities, they may be not tired yet, or their siblings/friends are still awake or because of any fear. However, bedtime resistance is not the sole reason; sleep problems also occur when children frequently wake up in the middle of the night and do not fall asleep quickly or independently.<sup>5</sup> Currently, no routine screening of childhood sleep problems exists in our country. There is a paucity of data on the prevalence of sleep problems in school going children and their relationship to scholastic performance.<sup>6</sup> The present study was conducted to assess sleep pattern in school children. We included 225 children in our study. Age group 6-8 years had 35 boys and 30 girls, 8-10 years had 28 boys and 36 girls, 10-12 years had 22 boys and 24 girls and 12-14 years had 15 boys and 10 girls. In a study done among the school children by Fatnani et al,<sup>7</sup> the prevalence of sleep problems and their relation to school grades were studied and they concluded that 25% of apparently healthy school going children had sleep disturbances and as the scholastic grades decreased, the prevalence of sleeping problems increased, signifying the fact that sleep problems might be one of the contributors for poor scholastic achievements in children. We found that sleep disturbances were present in 42% children while absent in 58% children. We observed that causes for sleep disturbances were external influence in 12, nose block in 35, bed sharing in 28, ambient environment in 16 and insect bite in 4. Natal et al<sup>8</sup> conducted a study to ask about the sleep duration, naps, and sleep habits of the child. Children’s behavior during their preliminary examination was studied and categorized according to Frankl’s behavior rating scale. Total duration of sleep accounted for a small but significant contribution in behavioral problems of children. Significant correlation was found between duration of sleep and cooperative behavior in dental operatory (R = 0.478). However, the duration of sleep was negatively correlated to the number of siblings and socioeconomic status of the family. Gupta et al<sup>9</sup> found that out of the 140 children who completed the survey, 48% of the children had sleep disturbances. The most common was disorder of initiating and maintaining sleep. The most common association was with need for accompaniment, followed by use of gadgets. The prevalence of sleep disorders is underestimated, and it is important to recognize them early. Magee et al<sup>10</sup> found that total sleep time during weekdays was 8.9 (1.2) hours and 10.7 (1.1) hours during weekends. The wakeup time was significantly delayed during weekends in all age groups. Moreover, total sleep time increased significantly during weekends in all age groups. Children using media after 8 pm and sleeping alone are also in significant sleep debt. Screen activities such as TV, internet and cellular phones in a child’s bedroom had a negative effect on children’s sleep/wake patterns and duration of sleep. Children in higher grades are sleep debt compared to younger ones. Practices such as co sleeping and

sharing bed with parents significantly improve the duration and quality of sleep.

## CONCLUSION

Authors found that 42% children age ranged 6-14 years had sleep disturbances. Common reason was nose block, bed sharing, external influence and ambient environment.

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