

## Sleep Problems Under-Reported by Parents in Iranian Children

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**Abstract-** Sleep problems are common in childhood, but there are limited studies regarding that in Iranian children and awareness of the sleep problems and their complication in Iranian parents. We arranged this study in which parents of children attending for a sick visit or routine growth control to assess whether sleep problems are under-reported at general pediatric visits. In a cross - a sectional study from April 2010 to April 2011 in 301 children aged 2-14 years old attending to pediatric clinics were enrolled. To investigate the general orientation of parents about their child sleep problem we asked them a global question at first regarding sleep of their child. After that, the Persian version of BEARS questionnaire was completed by them. Only 30 (9.9%) parents reported sleep problems in their children in response to primary global question but by collecting the data from BEARS questionnaire it was revealed 45.18% (136/301) of children had one or more of sleep disorders at all. As mentioned 136 (45.18%) children had slept problems of which the most frequent complaint (15.28%) was related to bedtime problems. The second complaint (11.96%) was awakening during the night children. A significant association between sleep problems and child gender was not found. Co-sleeping with parents was found in 55.48% of all children in this study. Despite the high prevalence and adverse effects of sleep disorders, the present study suggests that parents underreport sleep problems at consultation. We suggest children should be assessed for sleep disorders in monitoring and health screening visits.

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**Keywords:** Sleep disorders; Children; Parent's awareness; Bedtime problems

### Introduction

The term 'sleep disorders' can be used to describe a diverse collection of conditions, over 80 different sleep disorders are listed in the International Classification of Sleep disorders (1).

In newborns, the amount of sleep is divided fairly equally between night and day. Nighttime sleep gradually becomes consolidate over the first year into a single uninterrupted block of time, and daytime sleep gradually decreases over the first three years. By the age of four, most children no longer require a daytime nap. Nighttime sleep requirements also gradually decrease, so that by adolescence they are similar to the sleep needs of an adult.

Sleep problems are common in childhood. 20% to

30% of all children experience some type of sleep disorders during childhood (2). Sleep disturbance is one of the top five parental concerns presented to the pediatrician (3). These include bedtime problems, excessive daytime sleepiness, and awakenings during the night, and regularity of sleep and snoring.

Families and children's academic, neurocognitive and behavioral performance are reported to be negatively affected by chronic sleep problems (4). A child who goes to bed unwillingly or wakes many times during the night can be highly disruptive to a family (5).

There are limited studies regarding sleep problems of Iranian children. Lack of awareness of the sleep problems and their complication in Iranian parents can lead to under diagnosis of these problems.

To assess whether sleep problems are under-reported

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at general pediatric visits, we conducted this study in which parents of children aged 2 to 14 years old attending for sick visit or routine growth control, reported by questionnaire the frequency of their children sleep problems over the previous six months.

## Materials and Methods

This cross-sectional study was conducted from April 2010 to April 2011 in Najmiyeh hospital in Tehran. During this period, 301 children aged 2-14 years old were enrolled of whom 161 were boys (53.48%) and 140 were girls (46.51%). Inclusion criteria included children referred for assessment of growth and development, vaccine or had any other complaints. Exclusion criteria include the following: sleep disturbance in acute physical problem, children with chronic disorders such as chronic neurological disorders (cerebral palsy), mental disabilities (hyperactivity, etc.) and parents of children who were not cooperating. After obtaining parents' consent, the Persian version of BEARS questionnaire was completed by them. The BEARS questionnaire includes Bedtime problems, Excessive daytime sleepiness, Awakening during the night, Regularity and duration of sleep and snoring. These five major sleep domains provide a comprehensive screening tool for the sleep disorder affecting children in the age range of 2-18 years.

To investigate the general orientation of parents about their child sleep problem, we asked them a global question at first before the completion of questionnaire "Do you have any problem or point about your child sleep?" Their Yes or No response was compared ultimately with results of the questionnaire to show the awareness degree of parents about sleep disorders as a whole.

It can be deduced from investigations, sleep disorders are higher in males (6). Therefore, we also investigated the effect of gender in this paper.

The study was approved by the research and ethics committee of Baqiyatallah University.

## Results

Only 30 children's parents (9.9%) reported sleep problems in response to the primary global question and in 90.1 % equivalent to 271 children did not report sleep problems. Ultimately by collecting the data from BEARS questionnaire it was revealed 45.18% (136/301) of children had one or more of sleep disorders at all.

As mentioned, 136 children (45.18%) had slept problems of which the most frequent complaint related to bedtime problems was seen in 15.28% (46 children). The second complaint was awakening during the night (11.96% equivalent to 36 children). Snoring was reported in 6.97% of children. Excessive daytime sleepiness and regularity, duration of sleep were reported in 2.3% and 8.63%, respectively (Table-1).

Significant correlation and association between sleep problems and child gender was not found. Co-sleeping with parents was found in 55.48% of all children in this study.

**Table 1. Sleep disorders according to BEARS**

<b>Bedtime problem</b>	33.82%	46
<b>Awakening during The night</b>	26.47%	36
<b>Regularity and Duration of</b>	19.11%	26
<b>Snoring</b>	15.44%	21
<b>Excessive daytime</b>	5.14%	7
<b>Sleepiness</b>		
<b>Total</b>	100	136

## Discussion

Despite the high prevalence and adverse effects of sleep disorders, the present study suggests that parents underreport sleep problems at consultation. The discrepancy between their first response to the primary question and the questionnaire data revealed that they were not aware of sleep problem as a whole.

Stein *et al.*, have reported similar findings, who found that although 10.8% of 4-12 year olds (n=472) reported persistent sleep problems (sleep behavior Questionnaire) within the previous 6 months, less than 50% of parents discussed sleep at consultation (7). Smedje and *et al.*, also reported that while sleep problems were common in their sample of 1844 five to seven year olds, it was only raised at consultation by 6.7% of parents (8). In the other study Blunden *et al.*, suggested that chronic sleep problems in Austrian children are significantly under reported by parents during general practice consultations despite a relatively high frequency across all age groups.

Blunden *et al.*, concluded that there is a need for increased awareness of children's sleep problems in the community and for these to be more actively addressed at consultation. Under-reporting of sleep problems may be multifactorial. It is possible that parental under-reporting was influenced by their limited awareness of the importance and potential sequels of sleep problems in children, such as reduced academic performance, neurocognitive function and increased problematic daytime behavior (4). This fact would indicate a need

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for wider community education about the importance of sleep health in children and the timely recognition of sleep problems. Generally, it has been suggested that reliance on the biomedical model for history taking at consultation may also inhibit and thus decrease parental reporting of sleep problems (9). Chervin *et al.*, concluded that children with PSQ-identified sleep problems at two general pediatrics' clinics seldom had these problems addressed, diagnosed or treated despite discussions about some aspect of their sleep in the large majority of cases. These findings support the expansion of clinician and parent education about sleep disorders in children (10).

Reviewed medical records of children with sleep problems and found that pediatric clinicians seldom addressed sleep problems. In a survey of over 600 community pediatricians, approximately 20% of the respondents did not routinely screen for sleep problems in school aged children in well-child visit, about 25% of routinely screened toddlers and preschoolers for snoring, and less than 40% questioned adolescents directly about sleep habits, despite the respondents' acknowledgement of the importance of sleep's impact on health, behavior, and school performance (11).

Studies have shown that co-sleeping is common and from 35- 55% of preschoolers and 10- 23% of school-aged children have had this problem (12). In current study co-sleeping with parents was found in 55.48% of children. This higher frequency of this finding may be due to cultural reasons. Finally given the importance of sleep problems and their side effect in children's development and a significant percentage of its abundance, physicians and health workers should always consider it and ask parents about that. As mentioned above there is an obvious necessity for parents and society education especially in developing countries such as Iran about sleep problems and related complications. It seems that checking sleep problems in monitoring visits and health screening of children should be taken into consideration.

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