J Pediatr (Rio J). 2015;91(6 Suppl 1):S26–S35

Jornal de Pediatria
www.jped.com.br

REVIEW ARTICLE

Insomnia in childhood and adolescence: clinical aspects, diagnosis, and therapeutic approach☆

Magda Lahorgue Nunes[a,*], **Oliviero Bruni**[b]

[a] *Faculdade de Medicina, Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), Porto Alegre, RS, Brazil*
[b] *Department of Social Development and Psychology, Universidade La Sapienza, Rome, Italy*

Received 7 May 2015; accepted 9 June 2015
Available online 21 September 2015

KEYWORDS
Insomnia;
Sleep disorders;
Childhood;
Adolescence

Abstract
Objectives: To review the clinical characteristics, comorbidities, and management of insomnia in childhood and adolescence.
Sources: This was a non-systematic literature review carried out in the PubMed database, from where articles published in the last five years were selected, using the key word ''insomnia'' and the pediatric age group filter. Additionally, the study also included articles and classic textbooks of the literature on the subject.
Data synthesis: During childhood, there is a predominance of behavioral insomnia as a form of sleep-onset association disorder (SOAD) and/or limit-setting sleep disorder. Adolescent insomnia is more associated with sleep hygiene problems and delayed sleep phase. Psychiatric (anxiety, depression) or neurodevelopmental disorders (attention deficit disorder, autism, epilepsy) frequently occur in association with or as a comorbidity of insomnia.
Conclusions: Insomnia complaints in children and adolescents should be taken into account and appropriately investigated by the pediatrician, considering the association with several comorbidities, which must also be diagnosed. The main causes of insomnia and triggering factors vary according to age and development level. The therapeutic approach must include sleep hygiene and behavioral techniques and, in individual cases, pharmacological treatment.

PALAVRAS-CHAVE
Insônia;
Distúrbios do sono;
Infância;
Adolescência

Insônia na infância e adolescência: aspectos clínicos, diagnóstico e abordagem terapêutica

Resumo
Objetivos: Revisar as características clinicas, as comorbidades e o manejo da insônia na infância e adolescência.

☆ Please cite this article as: Nunes ML, Bruni O. Insomnia in childhood and adolescence: clinical aspects, diagnosis, and therapeutic approach. J Pediatr (Rio J). 2015;91:S26–35.

* Corresponding author.
E-mail: nunes@pucrs.br (M.L. Nunes).

http://dx.doi.org/10.1016/j.jped.2015.08.006

Fonte dos dados: Revisão não sistemática da literatura realizada na base dados PubMed,onde foram selecionados artigos publicados nos últimos 5 anos, selecionados com o uso da palavra chave insônia e o filtro faixa etária pediátrica. Adicionalmente foram também incluídos artigos e livros texto clássicos da literatura sobre o tema.
Síntese dos dados: Na infância existe predomínio da insônia comportamental na forma de distúrbio de início do sono por associações inadequadas e/ou distúrbio pela falta de estabelecimento de limites. Na adolescência a insônia está mais associada a problemas de higiene do sono e atraso de fase. Transtornos psiquiátricos (ansiedade, depressão) ou do neurodesenvolvimento (Transtorno do déficit de atenção, autismo, epilepsias) ocorrem com frequência em associação ou como comorbidade do quadro de insônia.
Conclusões: A queixa de insônia nas crianças e adolescentes deve ser valorizada e adequadamente investigada pelo Pediatra, levando em consideração a associação com diversas comorbidades, que também devem ser diagnosticas. As causas principais de insônia e fatores desencadeantes variam de acordo com a idade e nível de desenvolvimento. A abordagem terapêutica deve incluir medidas de higiene do sono e técnicas comportamentais, e em casos individualizados tratamento farmacológico.

Introduction

Sleep disorders (SD) are a frequent complaint in routine medical appointments and increasingly, the pediatrician must be able to adequately establish their diagnosis and management, thus avoiding referral to specialist consultations, as well as unnecessary and excessive examinations/interventions.

SD mostly present as the primary entity, but may also be associated with several organic diseases (e.g., asthma, obesity, neuromuscular diseases, gastroesophageal reflux disease, epilepsy, attention disorder, autism spectrum disorder) or psychiatric comorbidities (anxiety, depression, bullying).

Clinical presentation is variable and multiple. During the first years of life, the most frequent complaints are difficulty falling asleep and/or frequent nocturnal awakenings, followed by parasomnias (confusional arousals) and sleep-disordered breathing (obstructive apnea-hypopnea syndrome). From preschool age onwards, disorders related to inadequate sleep hygiene occur and, in adolescence, the disorders are related to circadian issues (delayed sleep phase) or excessive movement during sleep (restless leg syndrome [RLS]).

This review will assess a frequent SD, i.e., insomnia, which may present in different clinical forms during childhood, with varied management. The clinical features, diagnosis, comorbidities, and treatments will be assessed, aiming to give the pediatrician an overview of the problem and to provide tools for its diagnosis and management.

Sleep characteristics and classification of SD

Recommendations about sleep duration in children and adolescents vary according to the source used. Recently, the National Sleep Foundation published a consensus based on an expert panel, stating the ideal number of sleeping hours for every age group and a variability range that contains the acceptable number of sleeping hours (Table 1).[1]

Nocturnal awakenings occur frequently in childhood and its distribution varies with age. In the first six months of life, they are concentrated in one to two evening peaks; after the sixth month, they follow a distribution that accompanies the sleep cycle (which lasts 90–120 min) and occur more commonly in the REM stage. In these cases, it is common that the child goes back to sleep spontaneously.[2]

The classification of SD is proposed by the American Academy of Sleep Medicine and the Chronic Insomnia Definition-ICSD-3, which is the updated version of ICSD-2, was published in 2005. This classification review maintained the basic principles of the previous one, identifying seven major SD categories: insomnia, sleep-disordered breathing, central hypersomnia, circadian rhythm disorders, movement disorders during sleep, parasomnias, and others.[2] There was a standardization of diagnostic criteria for adults and children, maintaining the recognition of specific age-dependent situations. Table 2 shows the prevalence of different SD in childhood, according to the American Academy of Sleep Medicine.[3]

Insomnia definition

Insomnia can be defined as difficulty initiating sleep (considered in children as the difficulty to fall asleep without a caregiver's intervention); maintaining sleep (frequent awakenings during the night and difficulty returning to sleep without a caregiver's intervention); or waking up earlier than the usual schedule with inability to return to sleep. Insomnia can cause distress and social, professional, educational-academic, or behavioral impairment.[2]

Insomnia prevalence

SD that manifest with difficulty falling asleep and/or difficulty maintaining sleep (due to nocturnal awakenings) affect