

diagnostic delay, nocturnal disturbed sleep, shorter sleep latency and greater number of Sleep Onset REM Periods at Multiple Sleep Latency Test. On the other hand, treatment and disease duration, positively influenced the behavioral evolution. The psychosocial health of pediatric NC also turned out to be worse than in healthy controls, while the physical health showed no significant differences.

**Conclusions** We found a specific psychopathological profile in a large pediatric NC sample, compared with another neurological chronic disease (epilepsy) and healthy controls. Symptoms of withdrawal, depression and somatic complaints, were specific of NC, and not observed in the two other groups. Effective treatment, and self-awareness of the disease should be promoted in NC children for the positive impact on behaviour and psychosocial health.

### 1815 SLEEP PROBLEMS AND ADHD. EPIDEMIOLOGICAL STUDY IN SCHOOL CHILDREN IN ANDALUSIA, SPAIN

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ADHD and sleep-problems frequently overlap and their relationship is complex and bidirectional. The association between ADHD and sleep-problems has been little studied in our community.

**Objectives** To find out the frequency of sleep-problems among ADHD children from 6–14 year old in Andalusia, Spain.

**Methods** Prevalence study. Target population: school-students 6–14y=686.332 children; centres=2.493. Multistage cluster sampling centres=74.

**Method** Questionnaires-DSM-IV-TR-ADHD and performance Vanderbilt-parents-and-teachers, sleep-questionnaire (BEARS), interview and medical examination.

**Results** N=1963.

Meet criteria-DSM-IV-R-ADHD=157, male=111, female=46; ADHD-IA=62, ADHD-HI=31, ADHD-C=64; control=197 Comorbidity ADHD-sleep-problems: Sleep-problems in the first year of life: 36%-ADHD, 25%-control. (p=0.03). Bedtime resistance:30%-ADHD, 6%-control.(p=0.000). Daytime sleepiness:10%-ADHD, 1.5%-control. (p=0.000). Night- Awakenings:14%-ADHD, 2%-control.(p=0.000). Snoring: 20%-ADHD, 5.6%-control.(p=0.000) Sleepwalking and sleep terrors:14%-ADHD, 2.5%-control.(p=0.000). Periodic limb movements in sleep: 51%-ADHD, 8%-control.(p=0.000). Enuresis:18%-ADHD, 4.6%-control.(p=0.000)Regular time for bed: only 36%-ADHD. Bedsharing:18%-ADHD.≥ 3 sleep problems: 36%-ADHD. 12%- control. The association between ADHD subtypes and sleep-problems showed significant differences.

**Conclusions** The children with ADHD had more sleep-problems that control children.

The relationship between sleep disorders and ADHD should be considered by paediatricians as part of the global approach to the management of ADHD.

### 1816 SLEEP PATTERN AND SLEEP DISORDERS IN PRESCHOOL-AGED CHILDREN

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The purpose of this study determine sleep pattern, sleep disorders and factors affecting on preschool-aged children.

**Material-method** The research was conducted on 999 patient 2–6 years presenting patient out-patient clinic. Parents were given a survey containing questions about the sociodemographic and sleep.

**Results** 30.9% of children were entering to bed in the hours 20.00 to 22.00 and 67.0% of children were entering to bed in the hours 22.00 to 00.00. Sleeping and waking hours of children were found to be compatible with their parents (p=0.001). 50.2% of children with bedtime from 20.00 to 22.00 were fall asleep immediately and 22.6% of children with bedtime from 22.00 to 00.00 were fall asleep immediately (p=0.001). We found that 62.9% of children snoring, 72.5% of children with mouth breathing, 38.7% of the children stopped breathing, 79.3% of the children were restless sleep, 80.2% of children saw a nightmare, 43.1% of the children gnashed teeth during the sleep. We found that snoring, mouth breathing were more than and sleeping hours were later for son children and nightmares were more frequent in girls (p<0.05). We found that snoring, mouth breathing, restless sleep and frequent waking findings were more frequent in children with symptoms of attention deficit hyperactivity than in the other group.

**Conclusions** In the preschool-aged children, sleep disorders were common in. Sleep disorders were more frequent in children with hyperactivity symptoms. Primary care assessment of preschool-aged children should be questioned their sleep problems.

### 1817 DISCOVERED DEAD DURING SLEEP IN CAUSAL PATHWAY OF MORTALITY AMONG CHILDREN WITH CEREBRAL PALSY: CASE SERIES AND SYSTEMATIC REVIEW

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**Background and Aims** To report thirteen cases of children with cerebral palsies (CP) discovered dead during sleep (DDDS) and to synthesize the research literature on CP survival.

**Method** We utilized case series to describe the common features among patients DDDS between 1993 and 2011. Using our medical records, we extracted data on demographics, treatment, and comorbidities. In addition using the appropriate search terms, we searched the Medline and other electronic data bases for articles published between 1966 and 2011. Further, we synthesized the literature and provided evidence on clinical conditions that could be associated with CP mortality in relation to DDDS, obstructive sleep apnea syndrome (OSAS) and sleep related breathing disorders (SRBD) management.

**Results** Between 1993 and 2011 there were 177 reported deaths, of which 13 occurred as a result of being DDDS at home. All the deceased patients had Gastrointestinal feeding tube, seizure, respiratory disorders, and were non-ambulatory. A greater proportion had scoliosis and hip dislocation surgeries. DDDS in our sample may be associated with these conditions; and OSAS/SRBD as evidenced in literature.

**Conclusion** Pulmonary problems and disorders were the most common co-morbidity, due probably to oxygen desaturation (< 70%), prolonged sleep apnea such OSAS and SRBD. Since there were no data on Polysomnography (PSG) and autopsy, it was difficult to account for specific sleep disorders that might have contributed to DDDS. We recommend a routine PSG and treatment of OSAS and SRBD, given their high prevalence among CP patients, especially those with disturbed nocturnal sleep and noisy breathing.

### 1818 SLEEP DISTURBANCES IN EPILEPTIC CHILDREN

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**Aim** Sleep disturbances are frequently seen in the epileptic patients. This may be because of either own epilepsy, or by chance, or because of the antiepileptics used. We tried to figure out the effects of epilepsy and antiepileptic drugs on the sleep structure.

**Methods** We questioned 35 epileptic patients, who are followed up by Medical Faculty of Trakya University, Department of Pediatrics, Division Pediatric Neurology, and their 35 healthy siblings with Pediatric Sleep Questionnaires which were filled up by patients' families. Patients' structures of sleep were evaluated by asking the following questions regarding behaviours in night sleep and daytime sleep, behaviours in daytime, attention deficit disorder with hyperactivity.

**Results** We have ascertained that totally questionnaire points of epileptic childrens' behavioral problems, sleep-related behavioral disorders, breathe problems, frequency rate of wake up at nights, sweating during sleep, long lasting fall a sleep time, difficulty on fall asleep, nightmare problems, feeling weary after sleep, somnambulism scores were higher than the ones of their healthy siblings. Also as the epileptic group were evaluated according to their antiepileptic treatment we did not find a significant difference between the different antiepileptic treatments.

**Conclusions** Sleep disturbances frequently faces in the epileptic facts and there are few studies about this issue. As indicated in our study, sleep structure is not normal in epileptic patients eventhough seizures are under control by treatment. The evaluation of sleep disturbances should be the main part of further treatment of epileptic patients.

#### 1819 SLEEPING BRUXISM AND OROFACIAL DYSFUNCTION IN CHILDREN AND ADOLESCENTS

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**Background and Aim** Sleep bruxism (SB) is a parafunctional oromotor habit that can pose a threat to the integrity of the masticatory system. Thus, this study aimed to evaluate temporomandibular disorders (TMD) and orofacial dysfunction in children and adolescents with SB, taking on a case-control study design.

**Methods** Three hundred and sixteen subjects aged from 7 to 17 years were examined. From these, 52 presented SB (Case Group) according to parent's report about teeth grinding or clenching at least three time a week and presence of dental wear facets according clinical examination. The Control Group was composed by 104 gender/age/dentition phase-matched subjects. The mean age was 10.86±2.32 years. TMD was evaluated according to the Research Diagnostic Criteria for Temporomandibular Disorders (RDC/TMD) Axis I. For orofacial dysfunction diagnosis, it was used The Nordic Orofacial Test Screning (NOT-s). The data were analyzed using descriptive statistics, Shapiro-Wilks, unpaired *t* test, Mann-Whitney, Qui-square and Fisher's exact tests, when indicated, considering  $\alpha=0.05$ .

**Results** The prevalence of SB was higher in boys (60%) than girls ( $P<0.05$ ). The presence of TMD was similar in both groups ( $P>0.05$ ). Subjects with SB presented NOT-S scores significant higher than subjects without SB ( $P=0.002$ ), as well as girls in relation to boys in Case ( $P=0.010$ ) and Control ( $P=0.019$ ) groups for NOT-s interview. Habits, impairment in chewing, in swallowing and in masticatory muscles were determinant factors upon orofacial dysfunction.

**Conclusions** TMD was not implied in BS, but the orofacial dysfunction could be considered influencing factor in children and adolescents with SB.

#### 1820 FACTORS ASSOCIATED WITH OBJECTIVE SLEEP PATTERN IN SCHOOL AGE CHILDREN LIVING IN TEHRAN CITY

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**Objective** Our objective was to identify factors associated with sleep pattern in school age children living in Tehran city.

**Study Design** This was a cross-sectional study of 6–9 year olds children (n=270) who recruited by multistage sampling among primary school in Tehran city. Sleep pattern and efficiency was measured for 7 consecutive days using Actigraph accelerometer. Height and weight were directly measured using standardized equipment. Other factors including age, gender, history of preterm birth, birth weight, playing video game, watching TV, family income and parental educational level gathered by standard questionnaire.

**Results** 7days and weekdays sleep duration was significantly shorter ( $p<0.05$ ) in older children while there was not the same for weekend sleep duration. After adjusting for age we found no significant associations between measured factors and sleep pattern. There was no significant gender difference for sleep pattern, but girls had better ( $p<0.05$ ) sleep efficiency during 7 days and weekdays compared to boys.

**Conclusions** Sleep efficiency showed an inverse correlation with sleep duration. No significant relationship was found between sleep efficiency during 7 days, weekdays and weekend with the personal and the environmental factors.

#### 1821 SLEEP REPORTED COMPLAINTS WITH PARENTS AMONG THE PEDIATRIC BETWEEN 3 MONTHS AND 14 YEARS OLD PRESENTED IN IRANIAN PEDIATRICS

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**Background** Every disruption in the start, continue or decrease of quantity or quality of the sleep are considered as sleep disorders. The major cause of sleep disorders in children are temporary and spontaneously improve.

**Methods** In a cross-sectional study, children who presented to the Najmiyeh hospital in Tehran during 2009 and 2010 were enrolled. Children 3 months to 14 years with any chronic disorders who were referred for routine screening and vaccination in this age range were included and the data was collected by using a questionnaire included demographic and clinical. The data were analyzed using SPSS software version 17th by statistical frequency, chi-square, Student *t* test and Mantle Hanzel tests and *P*value  $< 0.05$  was considered significant.

**Results** The 301 children were studied. Mean age was 26.60±31.59 months with a standard deviation. The study population sex ratio, male to female equal to 53.3% and 46.4% is equivalent to 161 to 140. 55.48% of the parents brought the child with complaints of sleep. The underling variables including sex, age, affect the prevalence of parent report sleep disorders ( $P$ value  $< 0.05$ ).

**Conclusion** We suggest that further programmed evaluations are needed to evaluate children according to their age and the children should be assessed for sleep disorders in any range of the ages.

#### 1822 EFFECT OF NEEDLE LENGTH FOR RESPONSE TO HEPATITIS B VACCINE IN MACROSOMICNEONATES: A PROSPECTIVE RANDOMIZED STUDY

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