

Screening for Sleep Disorders in Children with the Sleep Disorders Inventory for Students

Marsha Luginbuehl, Ph.D., NCSP
President, Child Uplift, Inc.

Approximately 8-to-10 ½ million children between 1-and-18 years of age have a sleep disorder that is impairing their daytime performance.

Recent research findings in the new field of Pediatric Sleep Medicine suggest that we have a National Pediatric Health Problem in the USA. A 1999 epidemiology study in the USA estimated that 20-25% of the pediatric population have some type of sleep disorder in their childhood or adolescence (Child & Adolescent Psychiatry Clinic North America, 1999). The National Institute of Health (2001) reported that approximately 12-15% of all children and adolescents have a significant sleep disorder that negatively affects their learning, behaviors, and/or emotional regulation. This constitutes approximately 8-to-10 ½ million children between 1-and-18 years of age with a sleep disorder that is impairing their daytime performance. It is estimated that only 1-to-2 percent of these children with sleep disorders are being diagnosed and treated because professionals who work with these children do not know how to screen and identify these sleep disorders.

There are five major sleep disorders that can impair students' school performance, behaviors, health, and/or safety:

1. Obstructive Sleep Apnea Syndrome (OSAS) – is characterized by pauses in breathing (apneas) during sleep and/or hypopnea events that result in a significant decrease of oxygen to the arterial blood flow;
2. Periodic Limb Movement Disorder (PLMD) – is characterized by limb contractions resulting in repetitive jerks of the toes, feet, legs, thighs, or arms that either arouse the child out of sleep or prevent the child from getting a sufficient amount of deep, restful sleep. These children usually have a diagnosis of ADHD.
3. Restless Legs Syndrome (RLS) – is characterized by leg discomfort such as tingling, searing, or crawling sensations and irresistible urges to move the legs. It is one of the main causes of insomnia.
4. Delayed Sleep Phase Syndrome (DSPS) – is characterized by poor sleep hygiene and biological changes in the circadian rhythm during puberty, where the teen's daily internal clock becomes longer than 24 hours. DSPS results in the teen having difficulty falling asleep before 1:00 or 2:00 a.m. on school nights, and then experiencing difficulty awakening on time for school, or exhibiting excessive daytime sleepiness in early morning classes. A similar disorder called Behavioral Insomnia of Childhood (BIC) exists in younger children, but is a result of poor sleep hygiene and lack of bedtime limit setting by the parents, not a circadian rhythm change occurring in puberty.
5. Narcolepsy (NARC) – is characterized by episodes of daytime sleep attacks, disrupted nocturnal sleep, cataplexy, sleep paralysis, and hypnagogic hallucinations when falling asleep or awakening.

Research findings by sleep specialists indicate significant and dramatic improvements in students' daytime performance after their sleep disorders have been corrected. These improvements have been reported in cognition after OSAS is corrected (Friedman et al., 2004; Montgomery et al., 2005); in GPA after OSAS or other sleep disorders were corrected (Gozal, 1998; Gozal & Pope, 2001; Guilleminault, Winkle, & Simmons, 1982; Luginbuehl, 2003; Marcotte et al., 1998), and in behaviors and emotional regulation after OSAS, PLMD, RLS, DSPS, or

NARC were treated (Garetz et al., 2004; Guilleminault, Winkle, & Simmons, 1982; Huang et al., 2004; Luginbuehl, 2003; Walters et al., 2000).

Screening of these major sleep disorders needs to be undertaken on a nation-wide level by all professionals working with children if we are to seriously pursue our nation's lofty educational goal of "No Child Left Behind".

Screening of these major sleep disorders needs to be undertaken on a nation-wide level by all professionals working with children if we are to seriously pursue our nation's lofty educational goal of "No Child Left Behind". To facilitate this process, the *Sleep Disorders Inventory for Students* (SDIS) has been developed for use by professionals working with children.

For additional information on *Sleep Disorders Inventory for Students*, [click here](#).