The Association Between Disruptive Mood Dysregulation Disorder Symptoms and Sleep Problems in Children with and without ADHD

James G. Waxmonsky, Susan D. Mayes, Susan L. Calhoun, Julio Fernandez-Mendoza, Daniel A. Waschbusch, Brianna H. Bendixsen, Edward O. Bixler

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Abstract

Background
Many youth experiences persistent irritability and recurrent temper outbursts, conceptualised by DSM-5 as Disruptive Mood Dysregulation Disorder (DMDD). Sleep deprivation impairs emotion regulation which could increase rates of DMDD symptoms, especially in those with preexisting regulatory impairments, as seen with ADHD. However, there has been little examination of the relationship between chronic sleep problems and DMDD symptoms.

Methods
Associations between DMDD symptoms and sleep parameters in children were assessed using parent-report and objective measures of sleep in a general population sample (N=665) and an ADHD sample (N=784). Irritability, temper outbursts, sleep problems and other psychological problems were assessed with the Pediatric Behavior Scale. The general population study also completed overnight polysomnography (PSG).

Results
DMDD symptoms were reported in 9.2% of the community sample and 31.4% of the ADHD sample. In both samples, children with DMDD symptoms had significantly higher parent-reported sleep problems than children without DMDD symptoms. Children with sleep problems had significantly higher DMDD scores than children without sleep problems. However, DMDD symptoms were most strongly associated with oppositional behaviour. Sleep problems were not a significant contributor. Hyperactivity-impulsivity was most strongly associated with sleep problems, and DMDD was not a significant contributor. Children with and without DMDD symptoms did not differ significantly on any PSG parameter.

Conclusions
Associations between parent-reported sleep problems and DMDD symptoms were due to their shared relationship with other behavioural problems. Therefore, chronic sleep problems do not appear to be a primary source of DMDD symptoms in children with or without ADHD.