

2. Abstract

Sleep concerns are common associated conditions in individuals with autism spectrum disorder (ASD), with prevalence rates estimated as high as 83%. Daytime behaviors often displayed in ASD individuals, such as inattention, hyperactivity, and restricted behaviors, are affected by disturbed sleep. Psychiatric and behavioral symptoms are often associated with sleep disturbances and may be causal or contributory factors, but may also result from (or be exacerbated by) the sleep disturbance itself. Children with ASD commonly have psychiatric comorbidities including anxiety and mood disorders, which, along with the medications used to treat these disorders, often affect sleep.

This study's goal is to model a sleep-behavior-medical comorbidity paradigm, in children and adolescents with ASD, to provide a foundation for future interventional studies that can inform treatment guidelines. We aim to define the psychiatric and behavioral comorbidities associated with disordered sleep across the spectrum of age, IQ, and functional status.

We will use the rich, multidimensional, ATN database to characterize the association of sleep concerns with psychiatric comorbidities and behavioral traits. We anticipate that differences in certain characteristics (e.g. age, IQ, medications) will allow us to identify specific sleep-behavioral phenotypes within the ASD population. Identification of these specific sleep-behavior phenotypes will provide the foundation for targeted behavioral and pharmacological treatments to improve sleep and daytime behavior.