

Sleep Problems in Children with Autism Spectrum Disorder in Bangladesh: A Case–Control Study

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Background: Sleep problems in children with Autism Spectrum Disorder (ASD) are highly prevalent, but little information is available on this issue in low- to middle-income countries (LMIC) such as Bangladesh. Therefore, the present study investigated the prevalence and socio-demographic determinants of ASD sleep disturbances in a comparison with typically developing children (TDC).

Methods: A cross-sectional interview study was carried out within a total of 446 Bangladeshi mothers, whose children's mean age was 8.1±2.9 years (151 ASD [8.5±2.7 years] and 295 TDC [7.9±2.9 years]); in addition to socio-demographics, the Child Sleep Habit Questionnaire (CSHQ) was used, and a cut-off score of 41 out of 93 points considered as reflecting sleep problems.

Results: About 89.7% of the children reported having problems in sleep, with ASD reporting higher frequency vs TDC (94.00% vs 87.50%; $\chi^2=4.678$, $p=0.031$). The overall mean CSHQ score was 48.7±7.6 in total sample, whereas ASD children reported higher scores compared to TDCs (50.9±8.1 vs 47.5±7.0, $p<0.001$). Similarly, subscales of CSHQ such as sleep duration (4.23±1.56 vs 3.90±1.31, $p=0.017$), sleep anxiety (7.23±2.05 vs 6.45±1.92, $p<0.001$), night waking (3.82±1.07 vs 3.17±1.89, $p<0.001$), parasomnias (8.86±2.06 vs 7.85±2.27, $p<0.001$), and sleep disordered breathing (4.02±2.92 vs 3.43±2.07, $p=0.014$) were more problematic among ASD compared to TDC. Lastly, 28.5% of ASD reported taking sleep-related medications vs 0.3% for TDC ($n=1$).

Conclusion: Bangladeshi ASD children are highly likely to manifest sleep disturbances, which warrant urgent implementation of parental educational and support programs to mitigate the impact of sleep problems in ASD families.

Keywords: sleep problems, insomnia, ASD, autism spectrum disorder, child sleep habit questionnaire, Bangladesh

Introduction

Autism Spectrum Disorder (ASD) stands for a group of neurodevelopmental disorders that usually manifest deficits across three major behavioral components, namely (i) social interactions and communicative skills, (ii) restricted interest spectrum (eg, rigid routines or rituals, specific food and clothing preferences, and difficulty coping with the environment), and (iii) stereotyped and repetitive behaviors (eg, repetitive movement with object, recitative body movements such as rocking and hand-flapping).^{1–4} The social activities of children with ASDs (ASD) are restricted, although some ASD children are arguably able to lead independent and fulfilling lives. In general, life-long care and a supportive environment are needed for the majority of ASD, due to frequently occurring educational