Polysomnography exams in young children with autism

Ayelet Arazi[1,2], Ariel Tarasiuk[3,4], Gal Meiri[5], Ilan Dinstein[1,2,6]
[1]*Department of Brain and Cognitive Sciences, Ben Gurion University, Israel*
[2]*Zlotowski Center for Neuroscience, Ben Gurion University, Israel*
[3]*Wake Disorders Unit, Soroka University Medical Center, Israel-Sleep*
[4]*Physiology, Ben Gurion University, Israel Department of*
[5]*School Psychiatry Unit, Soroka University Medical Center-Pre, Israel*
[6]*Department of Psychology, Ben Gurion University, Israel*

Background: Numerous studies have reported that sleep problems are children with autism highly prevalent in with approximately half of the children exhibiting symptoms of insomnia. Studies using Polysomnography recordings have reported that children with autism exhibit decreased REM sleep and reduced sleep durations. In e performed Polysomnographythe current study, w recordings in children with autism and asked their parents to fill out the CSHQ. We explored the relationship of multiple sleep measures with autism severity as assessed by the ADOS. In addition, we examined whether power in cific frequency ranges was associated with the spe severity of autism.

Objectives: To relate measures of sleep architecture and depth as estimated from Polysomnography exams with measures of autism severity.

Methods: years 1.8±4.6 :six children with autism (mean age-Twenty) participated in Polysomnography exams Wake Disorders Unit-at the Soroka Sleep. All children completed the Autism Diagnostic Observation Schedule ADOS)) assessment. In addition, parents rated estimated their children's sleep behavior with the CSHQ. We the depth of sleep Hz13-Hz), Alpha (88-Hz), Theta (44-by computing the EEG power in the Delta (1) and Beta Hz) frequency bands, separately for each sleep stage. We also20-13) characterized the sleep architecture of each child.

Results: report with the CSHQ revealed that 89% of Parental participating children had a total sleep disturbance score of over 41, which is often used as a cutoff score for identifying sleep problems in children (mean score: y correlated with lowWe found that ADOS scores were positivel .(2.5±53 frequency EEG power (Delta: r0.51, p0.05) and negatively correlated with EEG -p0.05 and Beta: r ,0.61-power at higher frequency bands (Alpha: r p0.05 ,0.51).

Conclusions: These preliminary results suggest interesting differences in depth of sleep of children with the different autism severities. We continue to expand the examined sample to determine the validity of these initial findings.