Sleep problems and its relationship with autism severity, problematic behaviour and parental distress in children with low functioning autism

Jojo Joseph[1], Natasha Jojo[2]

ACT Government | Canberra Health Services

UNIVERSITY OF CANBERRA

[1] Adult Mental Health Unit ,Canberra Health Services, [2]University of Canberra

Introduction/background

One of the most burdensome and profound complaint among parents of children with autism is disrupted sleep, with more than 40-80% of the children experiencing sleep problems compared with 25-40% in typically developing children (Reynolds& Malow,2011). Consequence of disrupted sleep is potentially serious; it may exacerbate core ASD symptom.

(Park,cho,Cho,Kim,Kim,Shin,Chung,Park,Son,Yoo,2012;Tudor,Hoffman,& Sweeney,2012.)

Objective

The main aim of the study is to assess the sleep problems and its relationship with severity of autism, daytime problem behavior and parental distress in children with low functioning autism.

Methodology

Design: Descriptive cross-sectional design

Sample :40 children aged between 6-16 years of age (mean age=13.18 SD= 2.9)

Setting: selected special schools and autism centers in Kerala.

Sampling :Convenience sampling

Tools for data collection
Children's sleep habit questionnaire (CSHQ),
Social responsive scale (SRS)
The Disruptive Behavior Disorder Rating Scale
Parenting stress index

Inclusion criteria	Exclusion Criteria
Children with low functioning autism as per DSM V, as diagnosed by a Psychiatrist which is needed for the admission to a autism centre.	Presence of active symptoms of co morbid psychiatric illness
Age 6-16 years	
Those children whose parents are available during the period of study	

Ethical considerations

a) Ethical approval was obtained from Institute Ethics committee

b) Written informed consent was taken from the child's parents

c) Parents involved in the study were explained clearly of the purpose and objectives of the same.

d) Parents selected for the study were assured of confidentiality of the information provided to the researcher.

Data Analysis

Analysis of the data was done using SPSS version 22.Significance level was taken as <0.05.

Descriptive statistics: Frequency, Percentage, Mean and standard deviation

Inferential statistics: Pearson's correlation

Results

Table1:Description of demographic variables

variable	category	n(%)
Gender	Male	27(67.5%)
	Female	13(32.5%)
Domicile	Urban	36((90%)
	Rural	4(10%)
Parental marital status	Married	34(85%)
	Separated	3(7.5%)
	Divorced	2(5%)
	Widower	1(2.5%)

Mean age of the sample was 13.18±2.9.

Table 3: Description of sleep problems in different domains

Domains of sleep problems	Minimum	Maximum	Mean±SD
Bed time resistance	8	18	13.1±2.6
Sleep onset delay	1	3	2.05±0.7
sleep duration	4	9	6.48±1.1
Sleep anxiety	3	16	8.32±3.1
Night waking	3	9	5.65±1.8
parasomnias	7	21	12.27±3.8
Sleep disordered breathing	3	12	5.05±2.16
Day time sleepiness	10	24	16.37±4.4

Most frequently reported problems were with Bed time resistance and sleep duration followed by sleep anxiety, sleep onset delay and day time sleepiness. Least reported problems were disordered breathing, parasomnias, and night waking.

Table 2 : Sleep problems in children with low functioning autism

variable	Minimum	Maximum	Mean ± SD
Sleep problem	1	74	27.45 ± 18.45

All the children participated in the study, met the criteria for sleep problems (cut off point 41) with a mean score of 27.45 and SD 18.45.

Table 4: Description of autism severity, problem behaviours and parental stress

variable	Minimum	Maximum	Mean± SD
Autism severity(SRS)	65	174	124.52± 26.73
Parental stress(PSI)	22	55	38.9± 8.66
Problem behaviour (DBDRS)	46	97	69.3± 13.77

Table 5: Relationship between different selected Variables

correlation	r	p
CSHQ & SRS	0.013	0.938
CSHQ&PSI	0.002	0.989
CSHQ&DBDRS	0.048	0.768
SRS&PSI	0.317*	0.046*
SRS & DBDRS	0.536**	0.00**
DBDRS&PSI	0.369*	0.019*

Autism severity showed statistically significant correlation with parental stress (p=0.046) and problematic behaviours (p<0.01).Parental stress also showed relation with problematic behaviours in children (p=0.019)

** significant at the 0.01 level (2-tailed)
• significant at the 0.05 level (2-tailed)

Discussion

All children participated in the current study, described as having moderate to severe sleep problems. Most frequently reported problems were with Bedtime resistance and sleep duration followed by sleep anxiety, sleep onset delay and daytime sleepiness. Least reported problems were disordered breathing, parasomnias, and night waking.

Conclusion

Children and adolescents with autism are at substantial risk for experiencing sleep problems. The clinician assessing a child with autism should do a screening for sleep disorders and make appropriate referrals as indicated. Identifying and treating sleep disorders may result in improved sleep-in children with autism.

References

Park,S.,Cho,S.C.,Cho,I.H.,Kim,B.N.,Kin,J.W.,Shin,M.S.,Chung,U.S.,Park,T.W.,Son,J.W.,& Yoo,H.J.(2012).Sleep problems and their correlates and co morbid psychopathology of children with autism spectrum disorders. Res Autism Spectr Disord,6,1068-1072.

Reynolds, A.M., & Malow , B.A.(2011).Sleep and autism spectrum disorders. pediatr Clin NorthAm,58,685-698.

Tudor, M, E., Hoffman, C. D., Sweney, D.P. (2012). Children with autism: sleep problems and symptom severity. Focus Autism Dev Disabil, 27, 254-262.