ORIGINAL ARTICLE

Spectrum of Behavioral Disorders Among Children Aged 5-15 Years in Tertiary Care Hospital of Bhopal

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Abstract

The current study was done to determine various behavioral disorders among 5-15 years of children attending Paediatric OPD and to determine underlying risk factors associated with behavioral disorders among children. This observational cross-sectional study was carried out among 200 children between 5-15 years of age using DSM IV Diagnostic Criteria. Some risk factors that lead to the manifestation of the disorder were also studied by history taking. The increasing sequence of disorders positivity was 0.5%, 1%, 1.5%, 1.5%, 2.5%, 12.5% for CD, LD, GAD, ADHD, AD and ODD, while observing 51.28% ODD cases among males, 12.5% ODD among overall subjects, 19.5% ADHD cases, 27.02% GAD, 1% LD and 0.5% CD cases. The overall observance of any one disorder was 39 (19.5%). Herein observed high prevalence of behavioral disorders requires behavioral, technical and managerial interventions and therefore is the priority intervention area in the field of public health globally, nationally and locally.

Key Words

Adolescent, Behavioral Disorders, Children, Mental Disorders, Public Health

Introduction

A mental disorder is a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress or disability or with a significantly increased risk of suffering, death, pain, disability, or an important loss of freedom. It has been underlined at Global level for appropriate intervention measures. (1-3) Mental disorders in childhood include Attention Deficit Hyperkinetic Disorder (ADHD), Oppositional Defiant Disorder (ODD), Autism Disorder (ASD), Generalized Anxiety Disorder (GAD), Learning Disorder (LD), Conduct Disorder (CD). It is often difficult to identify these problems due to lack of awareness. Child is often labeled as trouble maker, punished, ignored and ostracized by colleague's teachers and family members. Even parents find it difficult to deal with such issue. The future of the child is jeopardized. There is an urgent need to take few steps for better understanding of the problem and attend to it comprehensively (4). In India, the attempts to research in the field of mental health of school children are minimal. There are hardly any studies carried out to find the behavioral problems in children at the school level which is the crucial era of child's life. Therefore, the present study is conducted to assess the mental health of school going children. The study is cross sectional study involving the use of history of the patient and approved (American Psychiatric Association) diagnostic questionnaires. The proposed study focused to identify such neglected children and provide them their ability to channelize the energies towards constructive purposes so as to bring out the hidden potential in them. In India, the attempts to research in the field of mental health of school children are minimal (5-8). The study aimed to determine various behavioral disorders among 5-15 years of children attending Paediatric OPD and to determine underlying risk factors associated with behavioral disorders among children.

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Material and Methods

This observational cross-sectional study was carried out at pediatric OPD at People's College of Medical Sciences and Research Centre, Bhopal, MP. It was conducted during July-September 2018 after getting approval from IEC and ICMR. Study population comprising of 200 children included those between 5-15 years of age attending pediatric OPD. Approximately 50 patients report every day to the pediatric OPD selected for inclusion in the study. Those children aged 5-15 years were included in the study whose parents or guardians provided prior consent for inclusion. Exclusion criteria consisted of those not willing to participate in the study and critically ill patients. Information regarding Behavioral problems and Risk factors was gathered using DSM-IV diagnostic criteria (Diagnostic and Statistical Manual of Mental disorders. Data analysis was done by SPSS20 software.

Result

The study conducted for assessment of ADHD, ODD, ASD, GAD, LD and CD reveals remarkably high observance of ODD cases among Males [20 (51.28%) as compared to Females i.e., 05 (12.82%). However, the disorder observance in toto amongst the Males themselves included in the study was 84.61%. The overall percentage positivity rate is noted as 19.5% (*Table 1*). ODD is the only disorder in the study, which was found to have been represented across all predetermined age groups and the groups represented by symptoms. In addition, 60% of the cases identified for ODD have been found in the age group 5-8 years, whereas it is 36% and 4% for age group 9-12 years and 13-15 years respectively (*Table 2*). The study positivity for ODD was considered when there were 4, 5, 6, 7 or 8 symptoms present for at least 6 months in any of the age group considered for this study i.e., 5-8 years, 9-12 years or 13-15 years (*Table 3*).

The ASD as per DSM-IV diagnostic criteria was found in the age group 5-8 years, whereas no case was found among study population in the age group 9-12 years and 13-15 years (*Table 4*). There was no case in the age group of 13-15 years with overall 3 cases (1.5%) of the study population. (*Table 5*). The overall presence of learning disorder found in the study population was 1% (*Table 6*). The only case found among the whole population under study was having 7 symptoms as compared to minimum 3 symptoms required for identification of this disorder (*Table 7*). The overall observance of any one disorder among the listed and studied 6 disorders for the study population was 39(19.5%).

Table 1: Age and Gender wise Distribution of the Children Attendees of Tertiary Care Hospital for six Disorders

Age (Years)	Gender		ADHD		ODD		ASD		GAD		LD		CD		Total (a+b)	Total (c to n)
	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
Column ID	a	b	c	d	e	f	g	h	i	j	k	l	m	n		
5 - 8	82	36	2	0	11	5	4	1	1	0	1	0	0	0	118	25
9 -12	56	20	1	0	8	0	0	0	2	0	1	0	1	0	76	13
13 -15	4	2	0	0	1	0	0	0	0	0	0	0	0	0	6	1
Total	142	58	3	0	20	5	4	1	3	0	2	0	1	0	200	39

ADHD: Attention Deficit Hyperkinetic Disorders; ODD: Oppositional Defiant Disorder; ASD: Autism Disorder; GAD: Generalized Anxiety Disorder; LD: Learning Disorder; CD: Conduct Disorder

Table 2: Observed 'Attention Deficit Hyperkinetic Disorders' (ADHD) as per DSM-IV Diagnostic Criteria among Children Attendees of Tertiary Care Hospital

Age Group (Years)	Number of Symptoms for at least Six Months					Total	
	≤ 5	6	7	8	9		
	a	b	C	d	e	b to e	a to e
05 – 08	116	1	1	0	0	2	118
09 – 12	75	0	1	0	0	1	76
13 – 15	06	0	0	0	0	0	06
Total	197	1	2	0	0	3	200

Table 3: Observed 'Oppositional Defiant Disorder' (ODD) as per DSM-IV Diagnostic Criteria among Children Attendees of Tertiary Care Hospital

Age Group (Years)	Number of Symptoms for at least Six Months						Total	
	≤ 3	4	5	6	7	8		
	a	b	c	D	e	f	b to f	a to f
05 – 08	103	4	5	3	3	0	15	118
09 – 12	67	5	2	0	1	1	9	76
13 – 15	05	1	0	0	0	0	1	06
Total	175	10	7	3	4	1	25	200

Table 4: Observed 'Autism Disorder' (ASD) as per DSM-IV Diagnostic Criteria among Children Attendees of Tertiary Care Hospital

Age Group (Years)	Number of Symptoms Present								Total	
	≤ 5	6	7	8	9	10	11	12		
	a	b	c	d	E	f	g	h	b to h	a to h
05 - 08	113	4	1	0	0	0	0	0	5	118
09 - 12	76	0	0	0	0	0	0	0	0	76
13 - 15	06	0	0	0	0	0	0	0	0	06
Total	195	4	1	0	0	0	0	0	5	200

Table 5: Observed 'Generalized Anxiety Disorder' as per DSM-IV Diagnostic Criteria among Children Attendees of Tertiary Care Hospital

Age Group (Years)	Generalized Anxiety Disorder	
	Present	Absent
05 – 08	1	117
09 – 12	2	74
13 – 15	0	06
Total	3	197

Table 6: Observed 'Learning Disorder' as per DSM-IV Diagnostic Criteria among Children Attendees of Tertiary Care Hospital

Age Group (Years)	Learning Disorder	
	Present	Absent
05 – 08	1	117
09 – 12	1	75
13 – 15	0	06
Total	2	198

Table 7: Observed 'Conduct Disorder' as per DSM-IV Diagnostic Criteria among Children Attendees of Tertiary Care Hospital

Age Group (Years)	Number of Symptoms for at least Six Months														Total	
	≤ 2	3	4	5	6	7	8	9	10	11	12	13	14	15		
	a	b	c	d	e	f	g	H	i	j	k	l	m	n	b to n	a to n
05 – 08	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	118
09 – 12	75	0	0	0	0	1	0	0	0	0	0	0	0	0	1	76
13 – 15	06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	06
Total	199	0	0	0	0	1	0	0	0	0	0	0	0	0	1	200

Discussion

In view of the unaddressed underlined needs of comprehensive interventional frameworks for behavioral disorders and to appropriately address co-morbid conditions as well, the current study results agree with the inferences drawn by various studies (9-11). Unlike the overall percentage positivity of behavioral disorders in the children aged 5-15 years observed as 19.5% in the current study, the prevalence of behavioral disorders is

assessed to be 5.13% in North Carolina (4), 12.5% in Bengaluru, 6.3% in Chandigarh and 5-6% in other States of India (6). Noticeably high prevalence (42%) of behavioral problems with no gender difference was observed in a study from Delhi (7). Hence, this study also identifies focused areas for dealing with behavioral disorders especially ADHD and LD through capacity building of families of the affected children and adolescent like other studies viz. Indian study (5) and Taiwan based study (12). The inference of current study for overall positivity being 19.5% for behavioral disorders is in resonance with those observed in Canada, Germany and USA being 18.1%, 20.7% and 21% respectively (13, 14). The present study agrees with the observation of U.K., Southern Illinois University based studies and other important studies (2,15,16,17) for the need to address socio-economic indicators of health and developing a strong network of public health approach-based diagnostic, treatment and care cum support solutions. The prevalence of Psychiatric disorders in young adolescents of Central China (18) was assessed to be 9.74% with ADHD, ODD and GAD being 4.96%, 2.98% and 1.77% respectively. They also found ADHD to have co-morbidity of 25.15 % with ODD, 18.18% with CDD and 6.38% with GAD. The questionnaire used in the current study was as per DSM-IV criteria, which has been used extensively and in standardized clinical settings for assessment of behavioral disorders (19). However, the studies based on some other scale viz. Rutter score (8), CBCL 1.5-5 ADH Problems Scale (14), Dutch Norms for the Strength and Difficulties Questionnaire (16) or SCARED scale (17) may also interfere with the comparability of observations across various studies. SCARED is closely linked to DSM classification and hence can be used for assessment of disorders and required guidance cum treatment. The prevalence of behavioral disorders in the current study had high preponderance of male cases (97.43%) as compared to other studies showing it to be double in the males as compared to females (20).

The conduct of present study was undertaken at the tertiary health care center of Central India and it being the health care service provider of excellence may also include a large number of referred cases from the primary and secondary health care facilities. This may be one of the reasons for prevalence herein being more than those mentioned in the referenced studies in addition to other factors such as difference in the design, sample size and nature of conducted studies.

Conclusion

The high prevalence of behavioral disorders including ADHD, ODD, ASD, GAD, LD and CD is assessed here and therefore requires behavioral, technical and managerial priority intervention area in Public Health. Male preponderance of behavioral disorders also requires careful and timely attention of policy makers, programme planners and activity implementers through government, semi-government and private service, care and support provisions.

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