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Psychiatric Morbidity Pattern in a Child Guidance Clinic at Tertiary Care Teaching Hospital, Rajkot, Gujarat A prospective Observational Study

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ABSTRACT
Mental health in children is a crucial aspect of their overall well-being, yet it often receives inadequate attention. Factors such as limited knowledge about child development and mental disorders, a lack of professionals and training, financial constraints and cultural stigma contribute to this disparity. In India, where children make up a significant portion of the population, mental health care for children is under-addressed. This study aimed to assess the behavioral patterns and socio-demographic profiles of children attending a Child Guidance Clinic (CGC) in Rajkot, Gujarat. The study included 103 patients aged up to 12 years attending the CGC between January and December 2017. The majority of patients were aged 3-6 years, male, Hindu, of middle socioeconomic status and from rural backgrounds. Intellectual developmental disorder was the most common behavioral disorder (31.06%), followed by pica, language disorder and enuresis. Significant associations were found between behavioral disorders and age group, locality and family type. However, no significant correlations were found between behavioral disorders and gender, religion, or socioeconomic status. Most patients were referred by paediatricians, indicating improving healthcare access in rural areas. Limitations included a small sample size and focus on a pediatric clinic, primarily with patients aged 3-6 years. Future research should use larger community-based surveys to further explore behavioral disorders in children and inform mental health service planning.

INTRODUCTION

Mental health denotes a state of well-being characterized by individuals realizing their potential, effectively coping with life stressors, working productively and contributing to their community[1]. Mental health disorders prevalent in childhood include OCD, anxiety, depression, ODD, CD, ADHD and developmental disorders such as speech/language delay and autism spectrum disorder[1]. Despite the emphasis on physical health in children and adolescents across all social groups, their developmental, behavioral and emotional well-being often receives insufficient attention[2]. This discrepancy arises from various factors, including limited knowledge about child development and mental disorders, a scarcity of professionals and training opportunities, inadequate financial support and weak advocacy efforts. Additionally, stigma, cultural norms, financial constraints and reluctance to seek help contribute to the underutilization of services globally[2].

In India, where children constitute nearly 40% of the population, child mental health care remains inadequately addressed in terms of service provision, research and training[3-8]. Child and adolescent psychopathology significantly affect health professionals, with psychiatric problems ranking among the top causes of disability in adolescents[3-8]. Despite this, mental health services for children lag behind those for adults in developing countries, with surveys indicating that 7-30% of children under 12 years require psychiatric evaluation or ongoing care[9,10]. Child guidance clinics (CGCs) serve as specialized facilities for studying and treating maladjustments in children of varying intellectual capacities[11]. Originating in 1922 as part of the Commonwealth Fund's Program for juvenile delinquency prevention, the first CGC in India was established in 1939 at the Tata Institute in Mumbai[11]. These clinics offer medico-social amenities for scientifically assessing and addressing children's maladjustments.

This study aims to assess the behavioral patterns and socio-demographic profiles of children attending a CGC.

MATERIALS AND METHODS

The study design was prospective, focusing on all children attending the Child Guidance Clinic at the Department of Pediatrics, PDU Medical College, Rajkot, Gujarat, throughout the period from January 2017 to December 2017.

Inclusion criteria:

- Patient having diagnosis of Psychiatric disorder using DSM-5 criteria
- Patients of either sex up to 12 years
- Patients (Parents/guardians) who have given written informed consent/assents

Exclusion criteria:

- Patients' (Parents/guardians) refusal for written informed consent/assent

Study procedures: Patients were selected on the basis of inclusion and exclusion criterias. They were explained about the nature of the study and informed written consent was taken. Patient had been clinically evaluated in detail using preformed Performa. The Performa had been filled by the pediatric resident, seating in child guidance clinic on every Friday of week. Diagnosis had been made by using DSM-5 (diagnostic and statistical manual of mental disorders-fifth edition) criteria. Intelligence quotient assessments were done by psychologist using Seguin form board test[12]. EEG, CT scan and Psychiatrics referral were done whenever indicated. Data entered in excel sheet and appropriate statistical analysis had been done using SPSS (statistical package for the social sciences) software version 18.0.

RESULT AND DISCUSSIONS

We have included total 103 patients during the study period. As per table 1 Out of 103 patients, the majority were in the age group of 3-6 years (41.75%), followed by 6-9 years (25.24%) and 9-12 years (33.01%). Additionally, 66.02% of the patients were male and 33.98% were female. The majority of patients were Hindu (85.44%), followed by Muslims (12.62%), Sikh (0.97%) and Christian (0.97%). Most patients were from rural areas (61.17%) and the rest were from urban areas (38.83%). Regarding family structure, 22.33% lived in a Three generation family, 69.90% in a nuclear family and 7.77% in a joint family. The majority belonged to middle socio-economic status (42.72%), followed by upper middle (30.10%), lower middle (21.36%), lower (3.88%) and upper socio-economic group (1.94%). The majority of patients were referred by paediatricians (58.25%), followed by medical officers (40.8%) and self-referrals (0.97%). Among

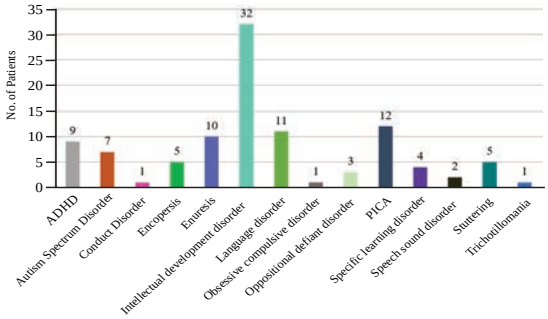

Fig. 1: Distribution of behavioral disorder of cases

Table 1: Demographic and Clinical Characteristics of study participants

Parameters		Number (N=103)	Percentage
Age	3-6 Years	43	41.75
	6-9 Years	26	25.24
	9-12 Years	34	33.01
Gender	Male	68	66.02
	Female	35	33.98
Religion	Hindu	88	85.44
	Muslim	13	12.62
	Sikh	1	0.97
	Christian	1	0.97
Regional distribution	Rural	63	61.17
	Urban	40	38.83
Family Type	Three Generation	23	22.33
	Nuclear	72	69.90
	Joint	8	7.77
Socio-Economic Status	Lower	4	3.88
	Lower-Middle	22	21.36
	Middle	44	42.72
	Upper-Middle	31	30.10
	Upper	2	1.94
Source of referral	Pediatrician	60	58.25
	Medical Officer	42	40.78
	Self	1	0.97
IQ level of children aged 5 years and above by Stanford-Binet classification of intelligence (n=89)	140 Above	0	0
	120-140	0	0
	110-120	2	2.25
	90-110	22	24.72
	80-90	32	35.95
	70-80	5	5.62
	50-70	26	29.21
	25-50	2	2.25
	Below 25	0	0

Table 2: Distribution of behavioural disorder of cases

Diagnosis	No. of Patients	Percentage
ADHD	9	8.74
Autism Spectrum Disorder	7	6.80
Conduct Disorder	1	0.97
Encopresis	5	4.85
Enuresis	10	9.71
Intellectual Developmental Disorder	32	31.07
Language Disorder	11	10.68
Obsessive Compulsive Disorder	1	0.97
Oppositional Defiant Disorder	3	2.91
PICA	12	11.65
Specific Learning Disorder	4	3.88
Speech Sound Disorder	2	1.94
Stuttering	5	4.85
Trichotillomania	1	0.97
Total	103	100.0

children aged 5 years and above, most had an IQ level between 80 and 90 or below, indicating a below-average IQ level, with 22 children scoring between 90-110, 32 between 80-90 and 26 between 50-70.

Out of 103 patients, 8.74% (n = 9) of the patients were diagnosed with ADHD, 9.70% (n = 10) of the patients were diagnosed with Enuresis, 31.06% (n = 32) of the patients were diagnosed with Intellectual Developmental Disorder, 10.67% (n = 11) of the patients were diagnosed with Language Disorder and 11.65% (n = 12) of the patients were diagnosed with PICA. This shows that majority of the patients had Intellectual Development Disorder (Table 2 and Fig 1). As per the chi-square between age group and diagnosis, χ^2 (26) = 54.263, p= 0.001. This shows that there is statistically significant interaction between age group and diagnosis (p<0.05). Thus, it can be said that children in the age group of 3-6 years have higher chances of having the above stated disorders followed by children in the age group of 9-12 years and 6-9 years (Table 3).

A as per the chi-square between gender and diagnosis, $\chi^2(13) = 12.219$, p = 0.510. This shows there is no statistically significant interaction between gender and diagnosis (p>0.05). That is, there are equal chances for both male and female children to have behavioral disorders (Table 4). As per the chi-square between religion and diagnosis, χ^2 (39) = 27.445, p = 0.917. This shows there is no statistically significant interaction between religion and diagnosis (p>0.05). That is, religion does not have any interaction with behavioural disorders. Children belonging to any religion can have behavioural disorders (Table 5).

As per the chi-square between locality and diagnosis, $\chi^2(13) = 24.514$, p = 0.027. This shows there is statistically significant interaction between locality and diagnosis (p<0.05). This shows there is significant interaction between locality and behavioural disorders. That is, children belonging to rural areas have higher tendency to have behavioral disorders as compared to children in urban areas (Table 6). As per the chi-square between family type and diagnosis, $\chi^2(26) = 39.423$, p = 0.044. This shows there is statistically significant interaction between family type and diagnosis (p<0.05). This shows there is significant interaction between family type and disorders. That is, children belonging to nuclear family have higher tendency to have behavioral disorders as compared to children in joint or three generation family (Table 7).

As per the chi-square between diagnosis and level of socio-economic status, $\chi^2(52) = 54.745$, p = 0.371. This shows there is no statistically significant interaction between diagnosis and socio-economic status (p>0.05). That is, children belonging to all the social class have tendency towards behavioural disorder (Table 8). During the study period, 103 patients sought care at the child guidance clinic. A notable male predominance (66.01%) was observed, consistent with findings by Jayaprakash et al. (63.63%) and Chaudhury *et al*., (64.79%) whereas Amol *et al*. reported a prevalence of female patients (58%)[13-15].

The higher prevalence of males attending the clinic may be attributed to the greater attention and care typically provided to male children by parents. Additionally, boys tend to have a higher frequency of behavioral disorders, which are more easily recognized, as noted by Malhotra *et al*[10]. The dominant age subgroup was 3-6 years (41.74%), followed by 9-12 years, contrasting with Chaudhury *et al*., where 6-9 years was dominant[14]. This difference could be due to the clinic's location within a pediatric department and higher referrals by the RBSK medical officer. Regarding religion, the majority of cases were

Table 3: Age specific distribution of behavioural disorder of cases

	Age			
Diagnosis	**3-6 Years**	**6-9 Years**	**9-12 Years**	**Total**
ADHD	4	3	2	9
Autism Spectrum Disorder	5	2	0	7
Conduct Disorder	0	0	1	1
Encopresis	3	2	0	5
Enuresis	1	5	4	10
Intellectual Developmental Disorder	10	5	17	32
Language Disorder	7	2	2	11
Obsessive Compulsive Disorder	0	1	0	1
Oppositional Defiant Disorder	1	2	0	3
PICA	9	3	0	12
Specific Learning Disorder	0	0	4	4
Speech Sound Disorder	2	0	0	2
Stuttering	1	0	4	5
Trichotillomania	0	1	0	1
Total	43	26	34	103

Table 4: Gender specific distribution of behavioural disorder of cases

	Sex		
Diagnosis	**Male**	**Female**	**Total**
ADHD	6	3	9
Autism Spectrum Disorder	5	2	7
Conduct Disorder	1	0	1
Encopresis	3	2	5
Enuresis	6	4	10
Intellectual Developmental Disorder	22	10	32
Language Disorder	7	4	11
Obsessive Compulsive Disorder	1	0	1
Oppositional Defiant Disorder	3	0	3
PICA	5	7	12
Specific Learning Disorder	2	2	4
Speech Sound Disorder	2	0	2
Stuttering	5	0	5
Trichotillomania	0	1	1
Total	68	35	103

Table 5: Religion specific distribution of behavioural disorder of cases

	Religion				
Diagnosis	**Hindu**	**Muslim**	**Christian**	**Sikh**	**Total**
ADHD	7	2	0	0	9
Autism Spectrum Disorder	7	0	0	0	7
Conduct Disorder	1	0	0	0	1
Encopresis	4	1	0	0	5
Enuresis	8	1	1	0	10
Intellectual Developmental Disorder	27	5	0	0	32
Language Disorder	8	2	0	1	11
Obsessive Compulsive Disorder	1	0	0	0	1
Oppositional Defiant Disorder	3	0	0	0	3
PICA	12	0	0	0	12
Specific Learning Disorder	4	0	0	0	4
Speech Sound Disorder	2	0	0	0	2
Stuttering	3	2	0	0	5
Trichotillomania	1	0	0	0	1
Total	88	13	1	1	103

Table 6: Regional distribution of behavioural disorder of cases

	locality		
Diagnosis	**Urban**	**Rural**	**Total**
ADHD	6	3	9
Autism Spectrum Disorder	3	4	7
Conduct Disorder	1	0	1
Encopresis	2	3	5
Enuresis	6	4	10
Intellectual Developmental Disorder	4	28	32
Language Disorder	4	7	11
Obsessive Compulsive Disorder	0	1	1
Oppositional Defiant Disorder	2	1	3
PICA	8	4	12
Specific Learning Disorder	1	3	4
Speech Sound Disorder	0	2	2
Stuttering	2	3	5
Trichotillomania	1	0	1
Total	40	63	103

Hindu (85.43%), followed by Muslim (12.62%), which may be explained by the majority of people in the area being Hindu.

Family structures predominantly consisted of nuclear families (70.87%), followed by three-generation families (22.8%) and joint families (7.76%), consistent with Singhal *et al*[16]. Most patients (61.16%) resided in rural areas, contrasting with Srinath *et al*.'s findings of urban predominance, indicating a significant correlation between locality and behavioral disorders[17]. A relative predominance of the middle socioeconomic group (42.71%) was observed, similar to Jayaprakash *et al*. and Malhotra *et al*.'s

Table 7: Distribution of behavioral disorder of cases in relation to family type

Diagnosis	Family type			
	Nuclear	Joint	Three Generation	Total
ADHD	6	1	2	9
Autism Spectrum Disorder	7	0	0	7
Conduct Disorder	1	0	0	1
Encopresis	3	1	1	5
Enuresis	5	1	4	10
Intellectual Developmental Disorder	28	1	3	32
Language Disorder	7	1	3	11
Obsessive Compulsive Disorder	0	1	0	1
Oppositional Defiant Disorder	2	0	1	3
PICA	7	0	5	12
Specific Learning Disorder	2	1	1	4
Speech Sound Disorder	0	1	1	2
Stuttering	4	0	1	5
Trichotillomania	0	0	1	1
Total	72	8	23	103

Table 8: Co-relation of Socio-Economic Status with behavioral disorders

Diagnosis	Socio economic status					
	Lower Class	Lower-Middle Class	Middle Class	Middle-Upper Class	Upper Class	Total
ADHD	0	2	5	2	0	9
Autism Spectrum Disorder	1	1	2	2	1	7
Conduct Disorder	0	0	0	1	0	1
Encopresis	0	1	2	2	0	5
Enuresis	0	1	4	5	0	10
Intellectual Developmental Disorder	1	8	18	5	0	32
Language Disorder	1	3	4	3	0	11
Obsessive Compulsive Disorder	0	0	0	1	0	1
Oppositional Defiant Disorder	0	1	1	0	1	3
PICA	0	4	3	5	0	12
Specific Learning Disorder	0	0	1	3	0	4
Speech Sound Disorder	0	1	1	0	0	2
Stuttering	1	0	3	1	0	5
Trichotillomania	0	0	0	1	0	1
Total	4	22	44	31	2	103

findings, suggesting that being a referral center, the clinic attracted more children from this group due to their awareness of the importance of child mental health and the availability of services[10,13].

The study focused on assessing the behavioral patterns of children attending the child guidance clinic, including 103 children up to 12 years old. The majority of these children suffered from intellectual developmental disorders (31.06%), a finding consistent with Chaudhury *et al* and Chapagai *et al*., possibly due to mandatory testing for admission to special schools for handicapped children[14,18]. In the present study, 8.73% of patients were diagnosed with ADHD, a lower prevalence compared to Bhat *et al*.'s findings of 31.4%[19]. Some Western studies have reported ADHD prevalence rates as high as 50%, while a study from Thailand reported a lower prevalence of 5%[8,20]. The lower clinical prevalence in our study may be attributed to childhood problems being less readily recognized and treated, or children possibly being taken to indigenous healers or facing severe punishment or expulsion from school for misconduct.

Regarding school dropout rates, 16.2% of patients in our study dropped out, which was lower than both the state (37.38%) and national (38.83%) levels[21]. This lower dropout rate in our study may be because we focused only on school dropout due to behavioral disorders. Limitations include a small sample size and focus on a pediatric clinic, primarily with patients aged 3-6 years, suggesting increasing awareness and early detection of behavioral disorders. Future research should use larger community-based surveys to explore these disorders further.

CONCLUSION

The study revealed that most patients were aged 3-6 years, male, Hindu, of middle socioeconomic status and from rural areas. Intellectual developmental disorder was the most common (31.06%), followed by pica, language disorder and enuresis. Significant associations were found between behavioral disorders and factors like age group, locality and family type, which can guide mental health service planning for vulnerable groups. However, no significant correlations were found with gender, religion, socioeconomic status. Most patients were referred by pediatricians (59.22%), indicating improving rural healthcare access.

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