CLINICAL PROFILE OF PSYCHIATRIC MORBIDITY AMONG CHILDREN VISITING OUTPATIENT DEPARTMENT OF TERTIARY CARE CENTER

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ABSTRACT

Background: Psychiatric morbidity among children includes disorders of psychological development (e.g. autistic disorders and specific learning disorders), mental retardation (MR) and behavioral disorders with onset usually occurring in childhood (e.g. enuresis and hyperkinetic disorders). Age is an important factor in the clinical profile pattern of the psychiatric morbidity. **Material & Methods:** a total number of 300 children of age 1 to 16 years were included in study by simple random sampling. The mental health and psychiatric morbidity were evaluated after a thorough clinical examination. Intelligence quotient was calculated and recorded. All the diagnoses were made on the basis of DSM 4th Edition, Text Revision criteria. **Results:** Most the study participants belonged to the age group of 7–16 years (72%), out of the total 70% were boys and 30% were females. Most of the study participants were from rural background (64%) and 61% of the study participants were from nuclear families. ADHD was the most common diagnosis in present study reported in 32.6% of the study participants, this was followed by MR which reported in 28.3% of the study participants. 11.3% of the study participants had PDD and 5.6% of the study participants had borderline intellectual functioning. **Conclusion:** the psychiatric morbidity was found higher in ≥7 years of age group with male gender predominance. Most of the study participants were from a rural background living in nuclear families. ADHD and MR were the most common psychiatric disorders reported.

Key words: ADHD, Children, Psychiatric Morbidity.

INTRODUCTION

According to the WHO "Caring for Children with Mental Disorders" reports that globally, near about 20% of children suffer from mental health disorders. The reports stated that there is a considerable magnitude of psychiatric morbidity among children and adolescents **(1)**. Psychiatric morbidity among children includes disorders of psychological development (e.g. autistic disorders and specific learning disorders), mental retardation (MR) and behavioral disorders with onset usually occurring in childhood (e.g. enuresis and hyperkinetic disorders). Age is an important factor in the clinical profile pattern of the psychiatric morbidity **(2)**. Although many disorders which often observed among adults

may also affect children, but there are various specific category of mental health disorders which commonly diagnosed among children (3).

The overall prevalence of mental health and behavioral disorders according to various community-based epidemiological studies in India, published that varying prevalence rates of psychiatric morbidity ranging from 10 to 100 per 1000 population (4). Various researches from 1990 to 2017 reported that near about twenty percent of children were observed to meet the lifetime criteria for a Diagnostic and Statistical Manual of Mental Disorders (DSM mental disorder) (5). The long term based cohort studies to find out the pattern and outcomes of mental health and behavioral disorders among children reported that outcomes of mental health disorders were substance abuse, criminality, adult psychiatric disorders and under-employment (6).

Although, as we stated above there were few epidemiological community-based studies conducted in India, but there was very less cross-sectional or prospective clinic or hospital based studies from India were conducted (7). Since, clinic or hospital-based studies are more important to know the prevalence and resource allocation particularly in-service planning. Hence, we conducted present study on hospital-based scenario to find out the clinical profile of psychiatric morbidity among children visiting outpatient department of our tertiary care center.

MATERIALS & METHODS

The present cross-sectional observational study was conducted at department of psychiatry of our tertiary care hospital. Study duration was one year from June 2016 to July 2017. Sample size was calculated from the epi info software version 7.0 at acceptable margin of error of 5% and confidence interval of 95% with the 95% power of the study. The calculated sample size was 300 which also include loss to follow up cases. Since there is no loss to follow up cases in the present study, hence a total number of 300 children of age 1 to 16 years were included in study by simple random sampling. Clearance from Institutional Ethics Committee was taken before start of study. A preteseted questionnaire was used to evaluate and record the sociodemographic data of the children. The mental health and psychiatric morbidity were evaluated after a thorough clinical examination.

Intelligence quotient was calculated and recorded. All the diagnoses were made on the basis of DSM 4th Edition, Text Revision (DSM-IV TR) criteria. In cases of dual diagnosis, by the DSM-IV-TR, the primary diagnosis was given to the condition that was the main reason for attending the outpatient department and the other was considered to be comorbid. [20]. Those who did not receive a DSM-IV TR criteria for diagnosis were excluded from the study. Data were entered in the MS office 2010 spread sheet and Epi Info v7. Data analysis was carried out using SPSS v22. Qualitative data was expressed as percentage (%) and Pearson's chi square test was used to find out statistical differences between the study groups and sensitivity, specificity, positive predictive value and negative predictive value were calculated. If the expected cell count was < 5 in more than 20% of the cells then Fisher's exact test was used. All tests were done at alpha (level significance) of 5%; means a significant association present if p value was less than 0.05.

RESULTS

In the present study, a total of 300 study participants were enrolled from the outpatient department on the basis of DSM-IV TR criteria for diagnosis. Most the study participants belonged to the age group of 7–16 years (72%) and 28% were in the age group of 1-6 years. Out of the total 70% were boys and 30% were females. Most of the study participants were from rural background (64%) and 61% of the study participants were from nuclear families. On the basis of vocational status 69% of study participants were students. (Table 1)

Table 1: Distribution of study participants on the basis of sociodemographic data (N = 300).

Sociodemographic varibles		Number of cases
Age (years)	1-6	84 (28%)
	7-16	216 (72%)
Sex	Male	210 (70%)
	Female	90 (30%)
Family type	Nuclear	183 (61%)
	Joint	117 (39%)
Residence	Rural	192 (64%)
	Urban	108 (36%)
Vocation	Student	207 (69%)
	Nil	93 (31%)

On the basis of clinical profile of psychiatric morbidity among study participants it was found that attention-deficit hyperactivity disorder (ADHD) was the most common diagnosis in present study reported in 32.6% of the study participants, this was followed by mental retardation which reported in 28.3% of the study participants. 11.3% of the study participants had pervasive developmental disorder (PDD) and 5.6% of the study participants had borderline intellectual functioning. Comorbid psychiatric disorders were found in 53 (17.66%) of the study participants. Nine study participants with MR had comorbid ADHD, twenty-five study participants with PDD had comorbid MR, four study participants had borderline level of intellectual functioning, ten study participants with ADHD had comorbid disruptive behavior disorder (DBD), one study participant had major depressive disorder (MDD), one study participant with MDD had comorbid anxiety disorder, and three study participants with borderline intellectual functioning (BIF) had comorbid ADHD. (Table 2)

Table 2: Distribution of study participants on the basis of psychiatric morbidity (N = 300).

Clinical profile of psychiatric morbidity	Number of cases
Attention-deficit/hyperactivity disorder	98 (32.6%)
Mental retardation	85 (28.3%)
Pervasive developmental disorder	34 (11.3%)
Borderline Intellectual Functioning	17 (5.6%)
Major depressive disorder	16 (5.3%)
Anxiety disorders	15 (5%)
Disruptive behavior disorders	10 (3.3%)
Bipolar affective disorder	05 (1.6%)
Schizophrenia	02 (0.6%)

DISCUSSION

In the present study, a total of 300 study participants were enrolled from the outpatient department on the basis of DSM-IV TR criteria for diagnosis. Most the study participants belonged to the age group of 7–16 years (72%) and 28% were in the age group of 1-6 years. Out of the total 70% were boys and 30% were females. Most of the study participants were from rural background (64%) and 61% of the study participants were from nuclear families. On the basis of vocational status 69% of study participants were students. Similar study conducted by Chadda R et al reported similar result compared to present study [8]. Similar study conducted among children for assessing psychiatric disorders by Costello E et al reported that boys outnumbered girls same as compared to present study [9]. A study conducted by Sidana A to find out psychiatric morbidity among children found that boys were more vulnerable for psychiatric morbidity than girls [10]. Haub C et al reported in their published research that this high male children prevalence for psychiatric morbidity may be due to gender bases biased health seeking behavior of general population in which male children given more importance versus female children [11]. A metanalysis and critical review conducted by Gaub M et al reported that the gender based difference in psychiatric morbidity is due to higher rates of comparatively externalization of behavior among boys hence symptoms are more easily recognized in them due to their disruptiveness [12].

A study conducted by Rahim D et al found that majority of patients belong to rural back ground [13]. Contrary to present study a study conducted by Maan et al found that the majority of study participants were from urban background [14]. In the present study, on the basis of clinical profile of psychiatric morbidity among study participants it was found that attention-deficit hyperactivity disorder (ADHD) was the most common diagnosis in present study reported in 32.6% of the study participants, this was followed by mental retardation which reported in 28.3% of the study participants. 11.3% of the study participants had pervasive developmental disorder (PDD) and 5.6% of the study participants had borderline intellectual functioning. A study conducted by Jayaprakash R reported that the most common psychiatric disorder

was developmental disorders (35%), which followed by externalizing disorders (34%), and internalizing disorders (16%), somatoform disorders (13%) **(15)**.

A study conducted by Nawarathna S et al reported similar results to the present study and found that male gender affected more than female gender and pervasive and specific developmental disorders seen abundantly **(16)**. A study conducted by Ayesha S et al also reported that male gender affected more than female gender along with most common disorders found were oppositional defiant disorders and ADHD, followed by elimination disorders and anxiety disorders **(17)**. Another study conducted by Chaudhury S et al found that the most common diagnosis was mental retardation present in 31%, followed by behavioral and emotional disorders found in 23% patients and neurotic and stress related and somatoform disorders found in 16% patients **(18)**.

In the present study, comorbid psychiatric disorders were found in 53 (17.66%) of the study participants. Nine study participants with MR had comorbid ADHD, twenty-five study participants with PDD had comorbid MR, four study participants had borderline level of intellectual functioning, ten study participants with ADHD had comorbid disruptive behavior disorder (DBD), one study participant had major depressive disorder (MDD), one study participant with MDD had comorbid anxiety disorder, and three study participants with borderline intellectual functioning (BIF) had comorbid ADHD. A similar study conducted by Staller JA also reported comorbidities in his study and found that comorbidity was prevalent in approximate fifty percent of all patients, irrespective of age. Substance abuse was very rare to reported as a comorbidity. Externalizing and internalizing disorders were frequently co-existed **(19)**.

CONCLUSION

We concluded from the present study that the psychiatric morbidity was found higher in ≥7 years of age group with male gender predominance. Most of the study participants were from a rural background living in nuclear families. ADHD and MR were the most common psychiatric disorders reported. There is need to formulate guidelines of treatment and care with the help of doctors, teachers and welfare agencies to proper and effective utilization of resources and services. More elaborative studies needed to generate proper scenario of disease burden in the general community. Since present study is hospital based, hence the results cannot be generalized to the general population.

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