

Psychiatric Morbidity in Adolescents Brought to Psychiatry OPD in a Tertiary Centre in Mangalore

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ABSTRACT

Background: Adolescence is a crucial period of life where, major changes in physical, psychological, emotional and personality dimensions occur which can lead to stress and in turn may cause behavioral and emotional problems. Prevalence of psychiatric disorders among adolescents across the globe from population based studies is nearly 20%. Poor mental health in adolescents is strongly related to declining social, educational and occupational functioning and poor quality of life.

Aim: To evaluate the frequency of different psychiatric disorders, the nature of symptoms and disorders and the relationship between sociodemographic profile and the psychiatric morbidity in the adolescents brought to the psychiatry outpatient clinic in FMMCH, Mangalore.

Methodology: 60 adolescents on consecutive sampling brought to the psychiatry OPD were evaluated based on history and mental status examination and were assessed using pediatric and adolescent symptom checklist (PSC-17) for the presence of psychopathology. The diagnosis of psychiatric disorder was made using the ICD 10 Diagnostic Criteria. Details of Socio-demographic status were collected using Kuppaswamy Socio-Economic Status Scale. Statistical Analysis was done using frequency, percentage, Chi-square tests.

Results: In our study, 53.3% scored positive on the PSC-17 questionnaire, but 86.7% had a psychiatric morbidity of which mood disorders were the commonest followed by adjustment disorder and mental retardation with significant behavioral abnormality.

Conclusion: There is a rise in the frequency of psychiatric morbidity in the adolescent age group which requires optimum attention at the

earliest for a better socio-occupational functioning and quality of life.

Keywords: Adolescents, psychiatric disorder, behavioral problems

INTRODUCTION

WHO defines Adolescence as a period in the human growth and development that occurs after childhood and before adulthood, from ages 10 to 19. [1] India has a total of about 253.2 million adolescents as per 2011 census which accounts for 36 % of world's adolescents and 19.6 % of total Indian population. [2,4] Adolescence is a crucial period of life during which, major changes in physical, psychological, emotional and personality dimensions occur which may in some individuals lead to behavioral and emotional problems. Mental health disorders contribute greatly to the global burden of disease and disability in the 21st century more so in the adolescents as they comprise the largest proportion of population in India.

Prevalence of psychiatric disorders among adolescents across the globe is 20%. [3] As per the first meta-analysis done by Savita Et al with 16 community based studies in India, the prevalence rate was found to be 6.46% and 23.33% in the community and in the school respectively. [5,12] According to a study done in Bangalore by Srinath S et al. [6] prevalence of psychiatric disorders was 12.0 % with Enuresis, specific phobia, hyperkinetic disorders, stuttering and oppositional defiant disorder being the most frequent diagnoses.

As per The National Comorbidity Survey-Adolescent Supplement NCS-A, Anxiety disorder was the most common disorder (31.9%), followed by behavior disorders (19.1%), mood disorders (14.3%), and substance use disorders (11.4%).^[7] Overall prevalence of disorders with severe impairment and/or distress was 22.2%; (11.2% with mood disorders; 8.3% with anxiety disorders; 9.6% behavior disorders). 36.7% of participants had at least 1 psychiatric disorder.^[8] Prevalence rate for psychiatric disorder in 14-15 year-old adolescents is 21.0% and commonest disorders were emotional disorder 18.6%, Mixed disorder 34.9%, Conduct disorder 26.8% as per Rutter et al.^[10,11]

Various studies from developing countries including Nepal and India show that a significant percentage (7 - 35%) of the pediatric or adolescent population suffers from mental illness.^[10-20] The common psychiatric disorders affecting in this age group include mood (affective), neurotic and stress related and somatoform disorders including anxiety and dissociative (conversion) disorders. Results indicated that 10.1% of adolescents had total difficulty levels in the abnormal range, with 9% at risk for emotional symptoms, 13% for conduct problems, 12.6% for hyperactivity/inattention and 9.4% for peer problems.^[13,15]

Most of these mental disorders when left untreated have a deteriorating course of illness and a poor prognosis.^[7,18] Poor mental health in adolescents is associated with a declining social, educational and occupational functioning and would ultimately lead to a poor quality of life. Hence it is very essential to identify the psychopathology, diagnose and treat these disorders adequately and at the earliest for a better prognosis and a better quality of life in the largest generation next which is the need for my study.

There are not many studies done in the tertiary hospitals in India on the nature of mental illnesses that occurs in adolescence. This study aims at determining

the frequency of different psychiatric disorders and the nature of symptoms in adolescents brought to the OPD.

MATERIALS AND METHODS

This study was conducted in the out-patient department of Psychiatry in Father Muller medical college hospital, Kankanady, Mangalore which is a multi-specialty hospital for a period of 3 months between September 2016 and November 2016. Ethical clearance was obtained from the Father Muller institutional ethics committee before the commencement of the study.

A consecutive sample of 60 adolescents, either male or female, between the ages of 10 to 19 years, who were willing to give consent for the study were included in the study. A written informed consent was taken for participation from all the subjects and their parents or guardians after explaining the purpose and design of the study.

Socio-demographic and clinical data were recorded in a specific structured proforma prepared for the study. Kuppaswamy Socio-Economic Status Scale^[21] was used to assess the socio demographic status. The Adolescents were initially screened using the pediatric symptom checklist -17 and further both the parents and the subjects were interviewed and assessed. The diagnosis was made according to International Classification of Mental and Behavioral Disorders 10th revision (ICD-10 WHO 1992).

Statistical methods:

Statistical analysis was done using percentage, frequency and Pearson Chi – Square tests. A p value of less than 0.05 was taken to be statistically significant.

RESULTS

Majority (63.3%) of the study population belonged to age group of 16 to 19 years, with majority being males, high school going students and belonging to rural nuclear families. 43.3 % of these adolescents were brought by the parents

while 21.7 % of these were referred by other medical professionals. Most of these were from socioeconomic class III as per Kuppaswamy Socio-Economic Status Scale. Statistical significance was found in the age above 13 years. No statistically significance was found in the other socio- demographic variables when correlated with Psychiatric diagnosis. Details are described in Table 1.

As per data in Table 2, Family history of psychiatric disorders were positive in 43% of the adolescents, of which most common were mood disorders which accounted for 48.3% followed by substance disorders accounting for 27.5% shown in figure 2. Table 2 shows that 32 adolescent's i.e 53.3% of the sample screened positive for the presence of psychopathology by using the screening tool Pediatric screening checklist, of which all of the were diagnosed with a psychiatric disorder as per ICD 10 diagnostic criteria, whereas 28 (46.7 %) of them screened negative, but 24 of these adolescents also had a psychopathology, which showed a p value of 0.027 which is of high clinical significance. Overall 93.3% of the sample, i.e 56 adolescents had a

Psychiatric disorder as per ICD 10 diagnostic criteria.

The most common disorders with which children were referred from other medical practitioners to psychiatry OPD were hyperkinetic disorders, adjustment disorders, but counsellors or psychologists referred children with mental retardation and conduct disorder. Most common disorders seen in age group 10 -12 years was below average intelligence, 13 -15 years was bipolar affective disorder followed by hyperkinetic disorder and was found to increase with age and 16 -19 years was conduct disorders, personality traits and substance use disorders. Conduct disorder, personality traits/disorders, mental retardation and substance use disorders were the more common among males, whereas adjustment disorder, dissociative disorder was more common among females. Substance related disorders and conduct disorder were more common in urban areas and mental retardation was more common in rural setup. Details are given in table 4.

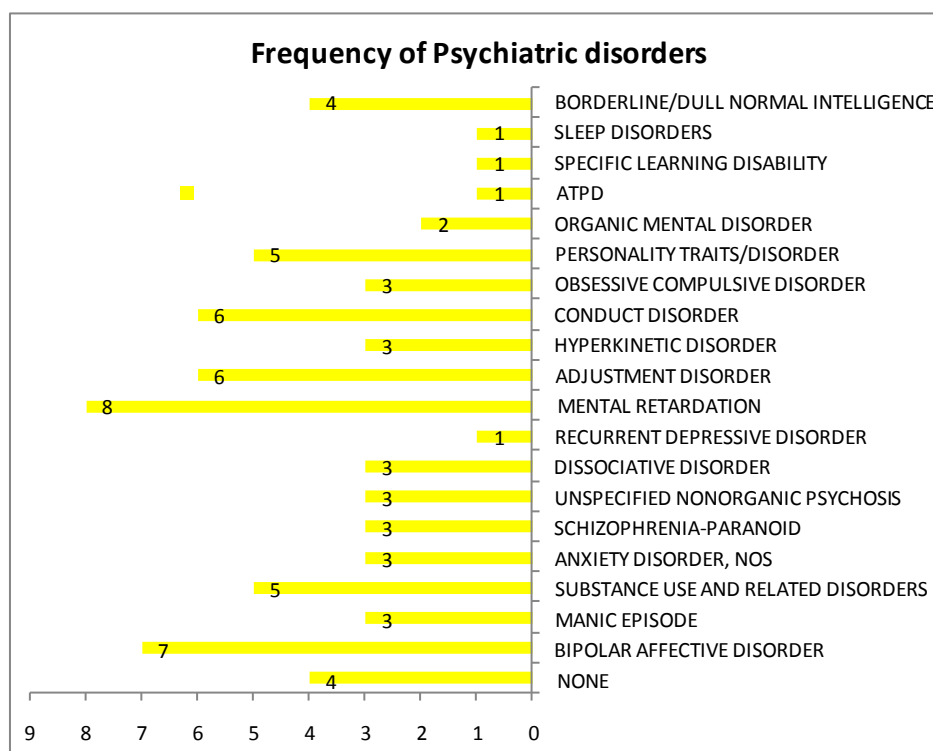


FIG 1: FREQUENCY GRAPH OF THE PSYCHIATRIC DIAGNOSIS:

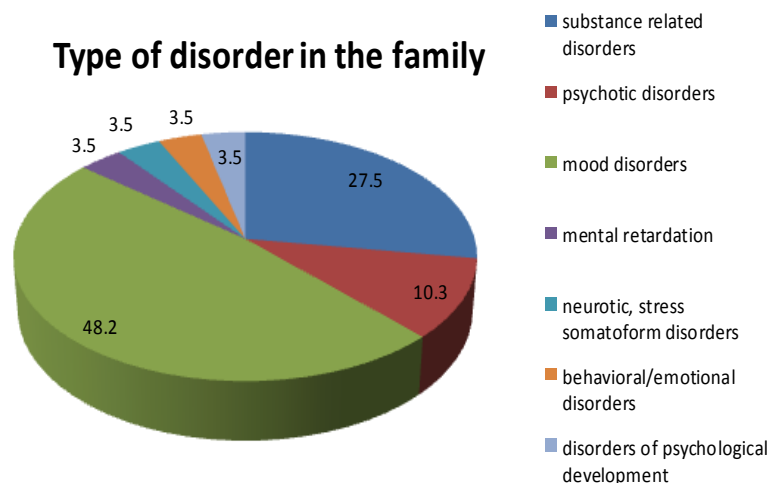


FIG 2: TYPE OF DISORDER IN THE FAMILY

Table 1: COMPARISON OF THE DEMOGRAPHICS AND DIAGNOSIS

FACTOR	VARIABLE	NUMBER (%)	ICD-10 PRESENT/ABSENT				Chi square	P value
			ABSENT		PRESENT			
			No	%	No	%		
Age	10-12	8 (13.3 %)	2	50.0%	6	8.12%	7.546	0.023
	13-15	14 (23.3 %)	1	25.0%	18	24.32%		
	16-19	38 (63.3 %)	1	25.0%	50	67.56%		
Gender	Male	38 (63.3 %)	3	50.0%	47	63.52%	0.218	0.641
	Female	22 (36.7%)	1	50.0%	27	36.48%		
Religion	Hindu	33 (55.0 %)	3	75.0%	38	51.35%	1.23	0.541
	Christian	17 (28.3%)	1	25.0%	21	28.38%		
	Muslim	10 (16.7%)	0	0.0%	15	20.27%		
	Others	0 (0.0 %)	0	0.0%	0	0.00%		
Education	Profession or Honors	0 (0.0%)	0	0.0%	0	0.00%	9.771	0.135
	Graduate/Postgraduate	6 (10.0 %)	0	0.0%	8	10.81%		
	Intermediate/PostHigh school diploma	18 (30.0%)	1	25.0%	24	32.43%		
	High school	25 (41.7 %)	1	25.0%	33	44.59%		
	Middle School	9 (15.0%)	1	25.0%	8	10.82%		
	Primary school certificate	2 (3.3 %)	1	25.0%	1	1.35%		
Occupation	Illiterate	0 (0.0 %)	0	0.0%	0	0.00%	1.088	0.993
	Profession	0 (0.0 %)	0	0.0%	0	0.00%		
	semi profession	0 (0.0 %)	0	0.0%	0	0.00%		
	clerical, farmer	0 (0.0 %)	0	0.0%	0	0.00%		
	skilled worker	0 (0.0%)	0	0.0%	0	0.00%		
	semi-skilled worker	2 (3.3%)	0	0.0%	2	2.71%		
	unskilled worker	1 (1.7 %)	0	0.0%	1	1.36%		
	Unemployed	8 (13.3 %)	0	0.0%	13	17.56%		
	Student	49 (81.7 %)	4	100%	58	78.37%		
Family type	Nuclear	50 (83.3 %)	3	75.0%	62	83.78%	2.741	0.602
	extended nuclear	5 (8.3 %)	1	25.0%	4	5.41%		
	Joint	3 (5.0 %)	0	0.0%	5	6.75%		
	single parent/broken family	2 (3.3 %)	0	0.0%	3	4.06%		
	Others	0 (0.0 %)	0	0.0%	0	0.00%		
Residence	Urban	22(36.7 %)	1	25.0%	32	43.24%	5.216	0.074
	Rural	35 (58.3 %)	2	50.0%	40	54.06%		
	Others	3 (5.0 %)	1	25.0%	2	2.70%		

Figure 1 shows the frequency of the psychiatric diagnosis in the study group, where most common diagnoses were mental retardation (11%) followed by bipolar affective disorder (9.6%) which was followed by conduct disorder (8.3%) and adjustment disorder(8.3%) and table 3 shows the frequency of different diagnostic categories with Neurotic, stress related and somatoform disorders being the commonest followed by mood disorders. 25 % of the sample had a medical comorbidity of which seizure disorder was the most common. 43.3 % of the sample had a positive family history of which mood disorders were the most common followed by substance use disorders.

Table2: CLINICAL VARIABLES AND THEIR RELATION TO PSYCHIATRIC DISORDER

FACTOR	VARIABLE	COUNT (%)	ICD 10 DIAGNOSIS		Chi square value	P value	Significant
			Absent	Present			
			4(6.7%)	56(93.3%)			
Family history	Present	26 (43.3%)					
	Absent	34 (56.7%)					
Y-PSC result	Positive	32(53.3%)	0 (0.0 %)	32 (100 %)	4.89	0.027	Yes
	Negative	28 (46.7%)	4 (21.4%)	24 (78.6%)			
Comorbidities	Present	15 (25.0%)	2(4.4%)	13(20.6%)	1.429	0.232	No
	Absent	45 (75.0%)	2 (4.4 %)	43(70.6%)			

Table 3 : ICD 10 - DIAGNOSTIC CATEGORY	Number	Percentage
NONE	4	5.13%
No group	5	6.41%
a) Organic mental disorders	2	2.56%
b) Substance related disorders	5	6.41%
c) Psychotic disorders	8	10.26%
d) Mood disorders	12	15.38%
e) Neurotic, stress, somatoform disorders	16	20.51%
f) behavioral disorders a/w physiology	2	2.56%
g) Personality disorders	6	2.41%
h)Mental retardation	8	7.70%
i) disorders of psychological development	1	1.28%
j) behavioral and emotional disorders with onset in childhood/adolescence	9	11.54%

TABLE 4	GENDER		AGE			RESIDENCE	
	MALE	FEMALE	10-12'	13-15	16-19	Urban	Rural
NONE	3 6.0%	1 3.6%	2 25.0%	1 5.3%	1 2.0%	1 3.0%	2 4.8%
BIPOLAR AFFECTIVE DISORDER	4 8.0%	3 10.7%	0 0.0%	4 21.1%	3 5.9%	3 9.1%	4 9.5%
MANIC EPISODE	1 2.0%	2 7.1%	1 12.5%	0 0.0%	2 3.9%	0 0.0%	2 4.8%
SUBSTANCE USE AND RELATED DISORDERS	5 10.0%	0 0.0%	0 0.0%	0 0.0%	5 9.8%	4 12.1%	1 2.4%
ANXIETY DISORDER, NOS	2 4.0%	1 3.6%	0 0.0%	0 0.0%	3 5.9%	0 0.0%	3 7.1%
SCHIZOPHRENIA-PARANOID	2 4.0%	1 3.6%	0 0.0%	0 0.0%	3 5.9%	2 6.1%	1 2.4%
UNSPECIFIED NONORGANIC PSYCHOSIS	2 4.0%	2 7.1%	0 0.0%	0 0.0%	4 7.8%	0 0.0%	4 9.5%
DISSOCIATIVE DISORDER	0 0.0%	3 10.7%	0 0.0%	1 5.3%	2 3.9%	0 0.0%	2 4.8%
RECURRENT DEPRESSIVE DISORDER	0 0.0%	1 3.6%	0 0.0%	0 0.0%	1 2.0%	0 0.0%	1 2.4%
MENTAL RETARDATION	6 12.0%	2 7.1%	1 12.5%	2 10.5%	5 9.8%	2 6.1%	6 14.3%
ADJUSTMENT DISORDER	2 4.0%	4 14.3%	0 0.0%	2 10.5%	4 7.8%	2 6.1%	4 9.5%
HYPERKINETIC DISORDER	2 4.0%	1 3.6%	0 0.0%	3 15.8%	0 0.0%	2 6.1%	1 2.4%
CONDUCT DISORDER	6 12.0%	0 0.0%	1 12.5%	1 5.3%	4 7.8%	4 12.1%	2 4.8%
OBSESSIVE COMPULSIVE DISORDER	2 4.0%	1 3.6%	1 12.5%	0 0.0%	2 3.9%	2 6.1%	1 2.4%
PERSONALITY TRAITS/DISORDER	6 12.0%	1 3.6%	0 0.0%	0 0.0%	7 13.7%	3 9.1%	4 9.5%
ORGANIC MENTAL DISORDER	1 2.0%	1 3.6%	0 0.0%	0 0.0%	2 3.9%	1 3.0%	1 2.4%
ATPD	1 2.0%	0 0.0%	0 0.0%	0 0.0%	1 2.0%	1 3.0%	0 0.0%
SPECIFIC LEARNING DISABILITY	0 0.0%	1 3.6%	0 0.0%	1 5.3%	0 0.0%	1 3.0%	0 0.0%
SLEEP DISORDERS	1 2.0%	1 3.6%	0 0.0%	2 10.5%	0 0.0%	1 3.0%	1 2.4%
BORDERLINE/DULL NORMAL INTELLIGENCE	4 8.0%	2 7.1%	2 25.0%	2 10.5%	2 3.9%	4 12.1%	2 4.8%
CHI-SQUARE VALUE (P VALUE)	22.28 (0.27) NS		54.401 (0.041) SIGNIFICANT			42.003 (0.302) NS	

DISCUSSION

The current epidemiological trends show that there is an alarming rise of the mental disorders in the adolescents, reflecting the utmost importance for the need to identify these disorders and to treat them in order to prevent a detrimental course of life of the adolescents who make the future of the country.

The current study is an observational, cross-sectional, descriptive clinical study. The socio-demographic profile of the patients revealed a male preponderance accounting for 63% which is similar to previous studies [7,9] but in contrast to the other studies. [12,19, 20] The most common age group affected was between 16 to 19 years with the least being between 10 to 12 years which is similar to a few studies, [12,19,20] but not in concordance with some studies. [7] 82 % of these subjects were students of which 42% were studying in high school. Majority of these belonged to nuclear families, Hindu religion, and rural areas higher than those from urban areas, concordant with studies. [11,12,19,20] Majority 43% were brought by parents themselves followed by 22% being referred by other medical professionals which shows the importance of multidisciplinary alliance for management which is in line with other studies. [11,12] Subjects belonging to middle socio-economic class iii were highest followed by class ii and iv similar to previous studies. [7,19,20] Demographic data on religion and caste cannot be commented upon and compared to studies done elsewhere as the results are confounded based on study conducted in that particular region. There was statistical significance for the correlation between age group 10 to 12 years and the psychiatric morbidity. There was no statistical significance found amongst the rest socio-demographic variables.

As per the clinical data, in about 43 % of these subjects there was a positive family history of psychiatric disorders of which mood disorders accounted for the highest followed by substance related

disorders. [8,9,12,19] Pediatric symptoms checklist which was used for screening showed that 53 % of the subjected screened positive for presence of psychopathology and 46% screened as negative for psychopathology but of them, 78% satisfied ICD 10 diagnostic criteria, which showed a high statistical significance. Conduct disorder, personality traits/ disorders, mental retardation and substance use disorders were the more common among males above age of 13 years, adjustment and dissociative disorders were more common among girls which is in concordance with previous studies. [8, 9,19]

As for the main objective of the study, Frequency of psychiatric morbidity in the adolescents in our study was 93% which is very high in comparison to results of meta-analysis done by Savita et al [5] and other studies [6-9] as our study was conducted in a tertiary psychiatry center where majority of them were directed to our center by friends and family as a last resort or by other medical professionals.

Among the psychiatric disorders, mental retardation was the most common accounting for 11% followed by Bipolar affective disorder (10%) followed by conduct disorder and adjustment disorders (8%) which are concordant with previous studies. [7,8,12,19,20] Mood disorders showed an increasing frequency with age as per previous studies. [8] But on the whole, neurotic and stress disorders accounted for the most common category of psychiatric disorders followed by mood disorders which is concordant with previous studies. There is a wide variation in the prevalence rates of disorders in different parts of the world due to various reasons such as variation of diagnostic approach, type of center where study was conducted, diagnostic tools used etc.

25 % of these subjects had a comorbid medical disorder associated with them of which seizure disorder was the commonest comorbidity, and the finding that 22% of the sample were referred by other medical professionals which was

almost in concordance with previous studies [11,12] but it was not statistically significant, Thus signifies the importance of a multidisciplinary integrated approach in the management of these patients.

Merits of my study were that there were no dropouts following screening, it was one of the few studies done in a tertiary care center with the objectives as mentioned above.

Limitations of the study were that the sample size was small and non-representative of the community and hence results cannot be generalized to the entire community, since the study was done in the Tertiary Centre where majority cases are referred, results will be varied from the general population.

CONCLUSION

The majority of patients were in the age group 16-19 years, students, male sex, Hindu and from lower middle socio-economic status and rural background. The commonest psychiatric diagnoses were mental retardation (11%), BPAD (9.6%), adjustment disorder and conduct disorder (8.3%).

This study shows that there is an absolute and indispensable need for careful evaluation of the adolescents brought to any medical professionals or even to non-medical professionals with behavioral and emotional problems, in order to detect any prodromal or pre-syndromal symptoms or psychiatric disorders.

This study if can be done on a larger sample in multiple centers with necessary modifications, will help achieve our objectives and in turn upgrade the health status of our young generation and make India better and superior in all realm.

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