

# Psychiatric Illness in the Paediatric Population Presenting to a Psychiatry Clinic in a Tertiary Care Centre

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## ABSTRACT

### Background

A variety of psychiatric manifestations can be seen in children below the age of 18 years. Such cases rarely present directly to psychiatric care.

### Methods

Retrospective study in Tertiary care hospital . The study population included all the patients of paediatric age group presenting to Psychiatry Outpatient Department of Dhulikhel Hospital directly or referred by a paediatrician or other specialists from October 2008 to October 2010.

### Results

Among the paediatric population evaluated in the psychiatry clinic for two years from October 2008 to October 2010 (N=168), 66.7% were in the age group 15-18 years {mean = 14.77 ( $\pm$ 2.99)}, 71.4% were female and 42.3% belonged to Brahmin cast. The highest number of (15%) patients was seen during the month of August 2010. Six months analysis of the psychiatric illnesses of the patients from April 2010 up to October 2010 (n=80) showed dissociative disorder (15%), and seizure disorder (15%) to be the most common diagnoses, followed by depressive disorder and intentional self harm (ISH) (13.8% each). 15% of patients were found to be treated by magico-religious means, with the majority of patients (66.7%) diagnosed as having dissociative disorder.

### Conclusion

The majority of the paediatric population presenting to a psychiatry clinic were in the age group 15-18 years and of female sex. Dissociative disorder was the most common diagnosis followed by depressive disorders. The majority of patients with dissociative disorder had previously been treated by magico-religious means.

### Key Words

*dissociative disorder, paediatric population, psychiatric profile*

## INTRODUCTION

World Health Organization (WHO) statistics reveal that the prevalence of disabling mental illnesses among children and adolescence attending health care centres range between 20-30% in urban areas and 13-18% in rural areas.<sup>1</sup>

Various studies from developing countries including Nepal and India show that a significant percentage (7-35%) of the paediatric population suffers from mental illness.<sup>2-8</sup>

Psychiatric disorders in the paediatric population may be similar to those affecting adults throughout Nepal. However, there are also other disorders which are invariably diagnosed among children and adolescents such as mental retardation, specific learning disabilities, autistic disorders, hyperkinetic disorders and enuresis.

Studies completed at various centres in Nepal show a great majority of children and adolescents visit other setting of help-seeking before coming to a psychiatric

service for different psychological problems.<sup>4,8</sup>

It has been found that mental and psychiatric services for children lag behind those for adults in developing countries<sup>9</sup>. A study carried out at a tertiary hospital level in Pakistan concluded that there is lack of specialised in-patient child psychiatric units and awareness regarding mental illnesses at community as well as at the level of medical practitioners and other healthcare providers.<sup>10</sup>

There are very few centres in Nepal which provide mental health services to children and adolescents.<sup>2,4</sup> As a result, we have scarcity of child mental health resources and paucity of data related to child psychiatric illnesses.

## METHODS

The study was conducted in the Department of Psychiatry, Dhulikhel Hospital Kathmandu University Hospital situated in Dhulikhel municipality of the Kavre District. The study was initiated after receiving approval from the Institutional Review Committee (IRC), Kathmandu University School of Medical Sciences (KUSMS).

The study population comprised of all the patients of a paediatric age group (18 years and below)<sup>11</sup> who presented to the Psychiatry Outpatient Department (OPD) directly or were referred by paediatricians or other specialists between October 2008 to October 2010. Both the outpatients and inpatients (those undergoing medical management of ICH or other medical/surgical illness) of a paediatric age group in various other departments of the hospital who required psychiatric evaluation and referred to the Department of Psychiatry were included in the study.

A retrospective file review was done to get the demographic detail of the patients. Psychiatric diagnoses of the patients presenting to the OPD from April 2010 to October 2010 (six months) were documented to analyse the psychiatric manifestations and its relation to demographics, illness and treatment related factors. Psychiatric diagnosis was reached after a detailed evaluation by the consultant psychiatrist in the Department of Psychiatry once the patients were clinically stable. The ICD-10 criteria<sup>12</sup> was used to establish the diagnosis.

The sample size was in total 168 patients who presented to the psychiatry OPD from October 2008 to October 2010. There was a total of 80 patients from mid-April 2010 to October 2010 who could be interviewed in detail by the psychiatrist to arrive at the psychiatric diagnosis. Among the total patients studied for two years (N=168), demographic variables like age, sex and cast were analyzed while among the patients evaluated in the last six months (n=80), ICD-10 psychiatric diagnosis<sup>12</sup> was analyzed

in relation to the demographics, referral patterns and treatment related factors.

A statistical analysis was done using SPSS software package (Version 16, SPSS Inc., and Chicago, USA). Descriptive statistics were used to analyse the demographic details of the patients while a Chi-square test was used for the non-parametric analysis of the categorical data to establish the possible association.

## RESULTS

Table 1 shows the distribution of demographic profiles of the subjects evaluated from October 2008 to October 2010 (N=168), 66.7% of the total study population was in the age group of 15-18 years, 71.4% were female and most of them belonged to (42.3%) to the Brahmin cast. The mean age of the total patient sample was 14.77 ( $\pm 2.99$ ).

Figure 1 shows the graphical presentation of the month-wise distribution of the total number of paediatric patients visiting the psychiatry unit. A maximum of 26 patients were seen in the month of August 2010 while the least number of patients (two) were seen in August 2009 and February 2010.

Table 2 reveals the psychiatric diagnosis (according to ICD-10<sup>12</sup>) of the subjects studied over the period of six months (April-October 2010). Dissociative/conversion disorder was the most common diagnosis equalising to seizure disorder (15% each) followed by depressive disorders (depression, dysthymia and adjustment disorder with depressive reaction/mixed anxiety and depression) and ICH (Intentional self-harm) (13.8% each). There was a bulk of patients (13.8%) who could not satisfy ICD-10 criteria to reach a psychiatric diagnosis. They either did not receive a psychiatric diagnosis or did not come for detailed evaluation as suggested.

Table 3 shows the distribution of psychiatric diagnosis in relation to the age group. Depressive disorders were most common (81.8%) among the age group 15-18 years while only 1.25% was in the age group 0-4 years. However no statistically significant association was seen.

Table 4 shows the distribution of psychiatric diagnosis in relation to the sex group. Depressive disorders (30.4%) were common among males while females had dissociative/conversion disorder and seizure disorder as the commonest diagnosis (19.3% each). This association was found statistically significant ( $p < 0.05$ ).

Table 5 reveals the distribution of psychiatric diagnosis in relation to a patient's caste/racial group. There was no significant finding in this area.

Table 6 analyses the distribution of psychiatric diagnosis

in relation to the referral centres. The highest number of referrals (43.75%) was from the paediatrics department, mainly for seizure disorders (25.7%) and dissociative disorders (22.9%). From the medicine department, 26.25% referral was seen, mainly for ISH (23.8%). A total of 17.5% subjects presented directly to psychiatry OPD, maximum (57.1%) of them were having depressive disorders. This relationship was found significant statistically ( $p < 0.001$ ).

Table 7 shows the relationship between the psychiatric diagnosis and presence of other physical illnesses; 50% each had other physical illnesses, the maximum number (30%) of the patients had seizure disorder. This was also statistically significant ( $p < 0.001$ ).

Table 8 tries to analyse the relationship of psychiatric diagnosis with treatment by magico-religious means. Fifteen percent of the total sample was found being treated by these means prior to coming to hospital, and the maximum number (66.7%) of the patients had dissociative disorder.

## DISCUSSION

Children with psychiatric problems are increasing in frequency, though variable in type among the South Asian<sup>1, 2, 7, 10, 13, 14, 15</sup> and Western population.<sup>16, 17</sup>

The studies on psychiatric aspects of paediatric population are limited, particularly in our country.<sup>2, 4, 5, 8</sup>

We tried to look into the psychiatric aspects of paediatric population visiting a tertiary care university hospital for variety of clinical conditions taking into consideration the scarcity of databases particularly in developing countries like Nepal. Our study population included patients below 18 years of age who visited our psychiatry OPD directly or through referral from other departments/hospitals. A total of 168 patients came to our department during the study period of two years. The hospital recently started a psychiatry unit with a daily OPD facility. For this reason, we have limited pool of psychiatric patient samples. A retrospective file review for the two years (October 2008-October 2010) analysing the records of psychiatric patients while the study was conducted would provide a more extensive insight from mid-April 2010 to October 2010 evaluating all the patients in detail and establishing a psychiatric diagnosis based on ICD-10 criteria.<sup>12</sup>

In our study, the maximum number of patients (66.7%) was among the age group 15-18 years and 71.4% of the total paediatric population was female. Similar findings were seen in the study among 100 paediatric patients at BPKIHS, Dharan with the predominant age group being 13-18 years (79%) and the majority being female (53%).<sup>8</sup> Female predominance was also seen in an Indian study<sup>13</sup>

conducted despite male majorities in other studies.<sup>10, 14</sup> A paucity of cases up to four years of age (1.2%) such as in the child guidance clinic based study<sup>14</sup> is not an unusual finding, since the psychiatric structure before the age of four to five years is usually not sufficiently developed to permit internal conflicts of pathological significance and get a symptom complex to establish a valid psychiatric diagnosis.

The maximum diagnosis was dissociative/conversion disorder (15%) equalizing to that of seizure disorders and followed by depressive disorders and ISH (13.8% each), in accordance with the findings in the BPKIHS study.<sup>8</sup> Depression (30.4%) was the most common diagnosis among males while dissociation (19.3%) was the most common among females which was statistically significant ( $p$ -value  $< 0.05$ ). Other clinic-based studies from different countries such as India, Sri Lanka and Pakistan have reported high rates of dissociative disorders in the south Asian population<sup>7, 14, 15</sup> when compared to the studies conducted among western populations.<sup>16, 17</sup>

It has been argued that the cross-cultural variation in rates of the disorder is related to the possibility that Indian culture discourages direct expression of emotional distress, and physical symptoms are a common way of expressing psychological distress.<sup>18, 19</sup>

We did not find specific child psychiatric illnesses such as Specific Learning Disability (SLD), Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders, Mental Retardation as noted in the Pakistan study<sup>10</sup> and other inpatient and Child Guidance Clinic Based studies.<sup>14, 19</sup> The reason may be that our sample pool is from a recently developing psychiatric unit dealing mainly with general psychiatric outpatients only.

The maximum number (43.75%) of referrals was from the paediatrics department, mainly for dissociative disorder (22.9%) which attained statistical significance ( $p < 0.001$ ). Similar findings were seen in various other studies.<sup>14, 19</sup> This can be explained by the fact that most of the paediatric population visits other specialists, mainly paediatricians rather than directly coming to the psychiatric care as reported in the study done at BPKIHS.<sup>8</sup>

On evaluating the presence of other physical illnesses, the maximum number (30%) was seen in seizure disorder, while the lowest number of physical findings were seen in patients with dissociative disorder attaining statistical significance ( $p$ -value  $< 0.001$ ).

Fifteen percent of the paediatric population were found to be treated by magico-religious means before coming to the hospital, and the maximum number of patients

**Table 1.** Demographic Findings Of The Patients Evaluated From Oct'08-Oct'10

S.N.	VARIABLES	NUMBER (%) / N=168 (100%)	
1.	AGE (YEARS)*	0 to 4years	2 (1.2)
		5 to 9 years	9 (5.4)
		10 to 14 years	45 (26.8)
		<b>15 to 18 years</b>	<b>112 (66.7)</b>
2.	SEX	Male	48 (28.6)
		<b>Female</b>	<b>120 (71.4)</b>
3.	CASTE	<b>Brahmin</b>	<b>71 (42.3)</b>
		Chhetri	32 (19.0)
		Newar	28 (16.7)
		Mangolian	23 (13.7)
		Terai / Madhesi sub casts	1 (0.6)
		Dalit / Disadvantaged	13 (7.7)

\*Mean (±S.D.)= 14.77 (±2.99)

**Table 2.** Frequency Of Psychiatric Diagnosis Generated From April'10 To Oct'10

S.N.	PSYCHIATRIC DIAGNOSIS	NUMBER (%) N=80 (100%)
1.	Not Recorded/ Undiagnosed	11 (13.8)
2.	ISH	11 (13.8)
3.	Depression, Dysthymia and Adjustment Disorder	11 (13.8)
4.	<b>Dissociative/Conversion Disorder</b>	<b>12 (15.0)</b>
5.	Anxiety Disorder	5 (6.2)
6.	Evolving Personality Disorder	2 (2.5)
7.	<b>Seizure Disorder</b>	<b>12 (15.0)</b>
8.	Headache Syndromes	7 (8.8)
9.	Others	9 (11.2)

**Table 3.** Distribution Of Psychiatric Diagnosis Among The Different Age Groups Of Patients

S.N.	PSYCHIATRIC DIAGNOSIS	AGE GROUP (YEARS)				STATISTICS $\chi^2 / df / p\text{-value}$
		0-4 N <sub>1</sub> =1 (1.25%)	5-9 N <sub>2</sub> =3 (3.75%)	10-14 N <sub>3</sub> =22 (27.5%)	15-18 N <sub>4</sub> =54 (67.5%)	
1	Not Recorded/ Undiagnosed	0(0.0%)	1 (9.1%)	4(36.4%)	6(54.5%)	17.389 24 0.832
2.	ISH	0(0.0%)	0(0.0%)	4(36.4%)	7(63.6%)	
3.	Depression, Dysthymia and Adjustment Disorder	0(0.0%)	0(0.0%)	2(18.2%)	<b>9(81.8%)</b>	
4.	Dissociative/Conversion Disorder	0(0.0%)	0(0.0%)	4(33.3%)	8(66.7%)	
5.	Anxiety Disorder	0(0.0%)	0(0.0%)	1(20.0%)	4(80.0%)	
6.	Evolving Personality Disorder	0(0.0%)	0(0.0%)	1(50.0%)	1(50.0%)	
7.	Seizure Disorder	0(0.0%)	0(0.0%)	3(25.0%)	9(75.0%)	
8.	Headache Syndromes	0(0.0%)	1(14.3%)	1(14.3%)	5(71.4%)	
9.	Others	1(11.1%)	1(11.1%)	2(22.2%)	5(55.6%)	

**Table 4.** Distribution Of Psychiatric Diagnosis Among Sex Groups Of The Patients

S.N.	PSYCHIATRIC DIAGNOSIS	SEX		STATISTICS $\chi^2 / df / p\text{-value}$
		MALE / N <sub>1</sub> =23 (28.75%)	FEMALE/ N <sub>2</sub> =57 (71.25%)	
1	Not Recorded/ Undiagnosed	4(17.4%)	7(12.3%)	15.638
2.	ISH	1(4.3%)	10(17.5%)	8
3.	Depression, Dysthymia and Adjustment Disorder	<b>7(30.4%)</b>	4(7.0%)	0.048*
4.	Dissociative/Conversion Disorder	1(4.3%)	<b>11(19.3%)</b>	
5.	Anxiety Disorder	2(8.7%)	3(5.3%)	
6.	Evolving Personality Disorder	1(4.3%)	1(1.8%)	
7.	Seizure Disorder	1(4.3%)	<b>11(19.3%)</b>	
8.	Headache Syndromes	2(8.7%)	5(8.8%)	
9.	Others	4(17.4%)	5(8.8%)	

\*p-value<0.05

Table 5. Distribution Of Psychiatric Diagnosis Among Different Caste Groups Of The Patients

S.N.	PSYCHIATRIC DIAGNOSIS	CASTE/RACE					STATISTICS $\chi^2$ df p-value
		Brahmin N <sub>1</sub> =34 (42.5%)	Chhetrii N <sub>2</sub> =11 (13.75%)	Newar N <sub>3</sub> =13 (16.25%)	Mangolian N <sub>4</sub> =13 (16.25%)	Dalit / Disadvantaged N <sub>5</sub> =9 (11.25%)	
1	Not Recorded/ Undiagnosed	3(8.8%)	1(9.1%)	2(15.4%)	3(23.1%)	2(22.2%)	26.746 32 0.730
2.	ISH	3(8.8%)	1(9.1%)	3(23.1%)	3(23.1%)	1 (11.1%)	
3.	Depression, Dysthymia and Adjustment Disorder	4(11.8%)	2(18.2%)	2(15.4%)	2(15.4%)	1 (11.1%)	
4.	Dissociative/Conversion Disorder	6(17.6%)	2(18.2%)	0 (0.0%)	2(15.4%)	2(22.2%)	
5.	Anxiety Disorder	2(5.9%)	2(18.2%)	1 (7.7%)	0 (0.0%)	0 (0.0%)	
6.	Evolving Personality Disorder	1(2.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (11.1%)	
7.	Seizure Disorder	7(20.6%)	1 (9.1%)	2(15.4%)	2(15.4%)	0 (0.0%)	
8.	Headache Syndromes	6(17.6%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (11.1%)	
9.	Others	2 (5.9%)	2(18.2%)	3(23.1%)	1 (7.7%)	1 (11.1%)	

Table 6. Distribution Of Psychiatric Diagnosis In Relation To The Referral Centres

S.N.	PSYCHIATRIC DIAGNOSIS	REFERRAL CENTERS					STATISTICS $\chi^2$ df p-value
		Pediatrics Department N <sub>1</sub> =35 (43.75%)	Internal Medicine N <sub>2</sub> =21 (26.25%)	Emergency Department N <sub>3</sub> =6 (7.5%)	Other Hos- pitals N <sub>4</sub> =4 (5%)	Direct N <sub>5</sub> =14 (17.5%)	
1	Not Recorded/ Undiagnosed	8(22.9%)	3(14.3%)	0 (0.0%)	0 (0.0%)	0(0.0%)	99.294 32 0.000***
2.	ISH	4(11.4%)	<b>5(23.8%)</b>	2 (33.3%)	0 (0.0%)	0(0.0%)	
3.	Depression, Dysthymia and Adjustment Disorder	0 (0.0%)	3(14.3%)	0 (0.0%)	0 (0.0%)	<b>8 (57.1%)</b>	
4.	Dissociative/Conversion Disorder	8(22.9%)	0 (0.0%)	<b>4 (66.7%)</b>	0 (0.0%)	0 (0.0%)	
5.	Anxiety Disorder	0 (0.0%)	3(14.3%)	0 (0.0%)	1 (25%)	1 (7.1%)	
6.	Evolving Personality Disorder	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (14.3%)	
7.	Seizure Disorder	<b>9 (25.7%)</b>	3(14.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	
8.	Headache Syndromes	5 (14.3%)	2 (9.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	
9.	Others	1 (2.9%)	2 (9.5%)	0 (0.0%)	3 (75%)	3 (21.4%)	

\*\*\*p-value&lt;0.001

Table 7. Distribution Of Psychiatric Diagnosis In Relation To The Presence Of Other Physical Illnesses

S.N.	PSYCHIATRIC DIAGNOSIS	PRESENCE OF PHYSICAL ILLNESS		STATISTICS $\chi^2$ df p-value
		YES N <sub>1</sub> =40 (50%)	NO N <sub>2</sub> =40 (50%)	
1	Not Recorded/ Undiagnosed	11(27.5%)	0 (0.0%)	52.638 8 0.000***
2.	ISH	3 (7.5%)	8 (20%)	
3.	Depression, Dysthymia and Adjustment Disorder	2 (5.0%)	9 (22.5%)	
4.	Dissociative/Conversion Disorder	0 (0.0%)	<b>12 (30%)</b>	
5.	Anxiety Disorder	1 (2.5%)	4 (10%)	
6.	Evolving Personality Disorder	0 (0.0%)	2 (5.0%)	
7.	Seizure Disorder	<b>12 (30%)</b>	0 (0.0%)	
8.	Headache Syndromes	7 (7.5%)	0 (0.0%)	
9.	Others	4 (10%)	5 (12.5%)	

\*\*\*p-value&lt;0.001

Table 8. Distribution Of Psychiatric Diagnosis In Relation To Magicoreligious Treatment Done

S.N.	Psychiatric Diagnost	Treatment By Magicoreligious Means		Statistics
		YES N <sub>1</sub> =12 (15%)	NO N <sub>2</sub> =68 (85%)	
1	Not Recorded/ Undiagnosed	2(16.7%)	9 (13.2%)	32.556 8 0.000***
2.	ISH	0 (0.0%)	11 (16.2%)	
3.	Depression, Dysthymia and Adjustment Disorder	0 (0.0%)	11 (16.2%)	
4.	Dissociative/Conversion Disorder	8 (66.7%)	4 (5.9%)	
5.	Anxiety Disorder	0 (0.0%)	5 (7.4%)	
6.	Evolving Personality Disorder	0 (0.0%)	2 (2.9%)	
7.	Seizure Disorder	0 (0.0%)	12 (17.6%)	
8.	Headache Syndromes	1 (8.3%)	6 (8.8%)	
9.	Others	1 (8.3%)	8 (11.8%)	

\*\*\*p-value<0.001

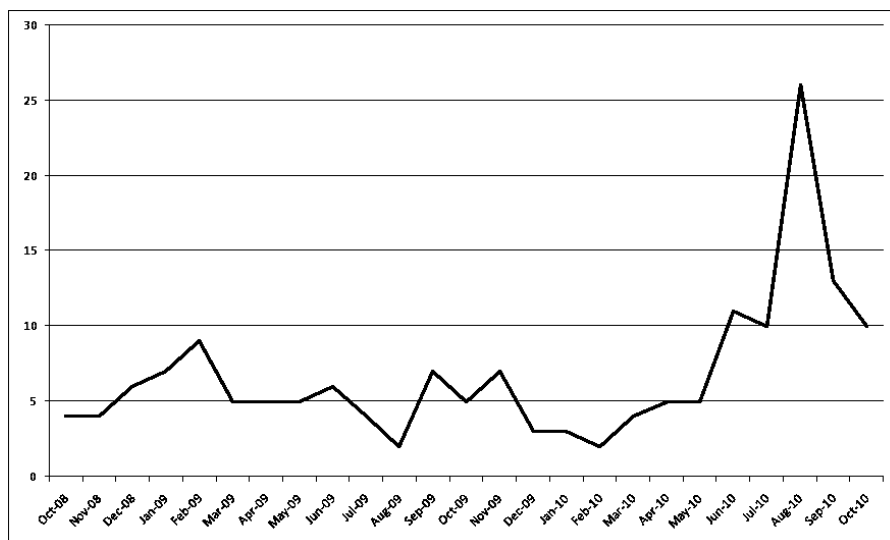


Figure 1. Distribution Of Paediatric Patients Presenting To Psychiatric Clinic From Oct'08 To Oct'10



had dissociative disorder (66.7%), which also showed statistical significance ( $p$ -value $<0.001$ ).

## CONCLUSION

The majority of the paediatric population presenting to a psychiatry clinic were in the age group 15-18 years, of female sex and belonging to Brahmin caste. Dissociative disorder was the most common diagnosis followed by depressive disorders. The maximum number of patients with dissociative disorder were found to be treated by magico-religious means. Future studies need to be using community-based surveys in a larger scale with appropriate sample size to find out the depth of the psychiatric problems in children.

## LIMITATIONS

Our study, being the first of its kind is not without some shortcomings. As this study was compiled with a limited sample pool (168) mainly in an OPD basis of a tertiary care hospital, selection bias might have been a critical issue and the results of this study cannot be generalized. Retrospective analysis of clinical records may have led to less than perfect data gathering. Similarly, a structured data recording format would have helped gain extra information for evaluation.

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