

# An observational study towards a newer classification in child psychiatry

## Abstract

**Background:** The first manifestations of majority of mental disorders are seen in childhood and adolescence. They result in burden in this age group as well. **Materials and methods:** A different way of classifying psychiatric disorders in children and adolescents categorise them into emotional, disruptive, and developmental disorders. We carried out an observational study to validate such an approach towards diagnosis. **Results:** Sample was almost equally divided in the two age groups as well as between the sexes. The distribution of emotional, disruptive, and developmental disorders in the younger and older age groups were 4:3:2 and 5:0:1 respectively. The same for boys and girls were 4:2:1 and 4:1:2 respectively. Comorbidity was same within group and across groups. **Conclusion:** A simplified diagnostic approach in child psychiatry has the potential of bridging the gap among the different 'gatekeepers' toward psychiatric service utilisation.

**Keywords:** Emotional Disorders. Disruptive Disorders. Developmental Disorders.

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## Introduction

John Lennon "imagined" of having no countries and no religion too; thus, there will be nothing to kill and die for![1] Bono of U2 wanted to be there "where the streets will have no name"! [2] Likewise, we too dream of a land for child and adolescent psychiatry where if we cannot live without names then let us at least have a few and simple ones to name the psychiatric disorders in this population. Such a proposition will give rise to many questions: What, why, when, whom, how? And we need to address them.

## Background

The fact that majority of the mental illnesses have their first manifestation before one reaches adulthood is becoming increasingly clear. Thus, importance of further work in the area is felt considering this early expression. As in childhood and adolescence itself mental illness results in burden, the extent of the problem needs assessment. This can lead to appropriate plan for their prevention and treatment. But, data on which such approach is to be built is sparse.[3]

Study estimating the prevalence in the lifetime and distributions according to age of onset of the fourth edition

of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)[4] disorders showed "half of all lifetime cases start by age 14 years and three fourths by age 24 years." Almost half of all DSM-IV disorders can be manifested in the Americans during their lifetime with their first manifestation in childhood or adolescence.[5]

## "The heart of the matter"[6]

Epidemiology is no more about simply counting the numbers. At times, the numbers may be even misleading. It can represent several biases, such as referral services or socioeconomic status. It is more so in child and adolescent psychiatry. The reason being that this population comes across various 'gatekeepers' in their way to proper management in the forms of parents, teachers, and paediatricians.[3]

By talking about diagnoses, psychiatrists may draw criticism and ask for trouble because of allegation of 'medicalising' a child's problems. Parents, teachers, and paediatricians may like to call the same problems of the child by different names that can be broadly brought under the rubric of 'emotional and behavioural difficulties'. [3]

## “The times they are a-changing”[7,8]

A new and simple way of classifying childhood and adolescent psychiatric disorders is to categorise them into three groups, namely developmental disorders, disruptive disorders, and emotional disorders. Developmental disorders include intellectual disability, the autistic spectrum, language and reading delays, and enuresis and encopresis. Disruptive disorders include conduct disorder and hyperactivity. Emotional disorders include anxiety, depression, phobias, somatisation, and obsessive-compulsive disorder. It is common to observe comorbidity within each grouping. Across groups, the comorbidity is less.[3,9]

## Aims and objectives

We aim to see the feasibility of such a classificatory system in our setup through an observational study and objectives of thus establishing its validity and reliability in the geo-cultural context.

## Materials and methods

The Department of Psychiatry of the Gauhati Medical College Hospital, Guwahati, a tertiary care teaching institute started a 12-bedded child psychiatry unit. This study was carried out in the initial three months from its inception among the admitted patients, i.e., October to December 2015. Diagnoses were made according to the tenth revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) ‘clinical descriptions and diagnostic guidelines.’[10]

In view of our earlier finding,[11] we kept the possibility of a fourth category of diagnosis consisting of schizophrenia spectrum disorders as well as the affective and non-affective psychotic disorders.

Being an observational study without interventions, it was exempt from ethical clearance; the same is applicable for informed consent since the data was collected through chart review. Descriptive statistics was used.

## Results

Total sample size was 32. Mean age was 15.19 years (standard deviation [SD] 2.02, 95% confidence interval [CI] 14.46-15.92, minimum 8, maximum 18). Considering the fact that the minimum age of our sample was 8 years and maximum 18, as well as our earlier similar works[11,12] where the three age groups were 1-5, 6-10, and 11-15, and 8-10, 11-14, and 15-17, the present sample was divided into two groups of 8-15 and 16-18 years. Fifteen belonged to the age group of 8-15 years (46.88%) and 17 in 16-18 (53.12%). Fifteen were boys (46.88%) and 17 were girls (53.12%). The boy: girl in the age groups of 8-15 and 16-18 years 6:9 and 9:8 respectively. Figure 1 shows age and sex distribution of children and adolescents with psychiatric disorders.

We found eight children and adolescents with emotional disorders (anxiety, depression, phobia, acute stress reaction, and dissociative [five]; a 17-year-old girl had comorbidity of anxiety and acute stress reaction), three with disruptive disorders (hyperkinetic disorder and impulsive disorders

[two]), and three with developmental disorders (all mental retardation).

We have included impulsive disorders under disruptive disorders. A 13-year-old boy had comorbidity of impulsive disorder and phobia. A 16-year-old girl received the diagnosis of ‘behavioural and emotional disorder’; it could not be incorporated among the existing ICD-10 disorders, hence excluded from analysis.

Eleven adolescents had schizophrenia, three had acute and transient psychotic disorders, and one was diagnosed as unspecified nonorganic psychosis. Manic episode and bipolar affective disorder was found in two adolescents. A 12-year-old boy had schizoaffective disorder.

In the age group of 8-15 years, the number of children and adolescents with emotional, disruptive, and developmental disorders was 4:3:2 (phobia and dissociative [three]; hyperkinetic disorder and impulsive disorders [two]; and mental retardation [two]; respectively; a 13-year-old boy had comorbidity of impulsive disorder and phobia). In the age group of 16-18 years, the number of adolescents with emotional, disruptive, and developmental disorders was 5:0:1 (anxiety, depression, acute stress reaction, and dissociative [two]; nil; mental retardation; respectively; a 17-year-old girl had comorbidity of anxiety and acute stress reaction). Figure 2 shows these childhood and adolescent psychiatric disorders in relation to age.

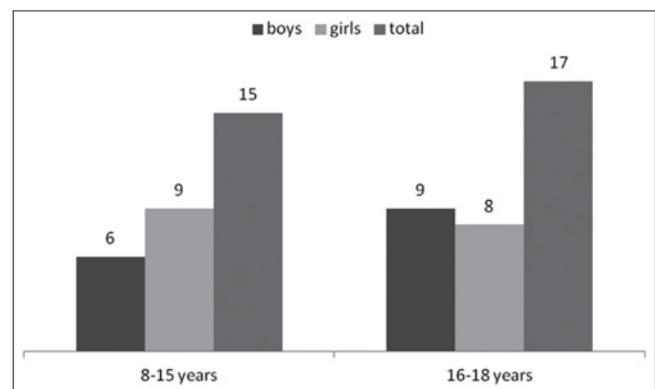


Figure 1: Age and sex distribution of children and adolescents with psychiatric disorders

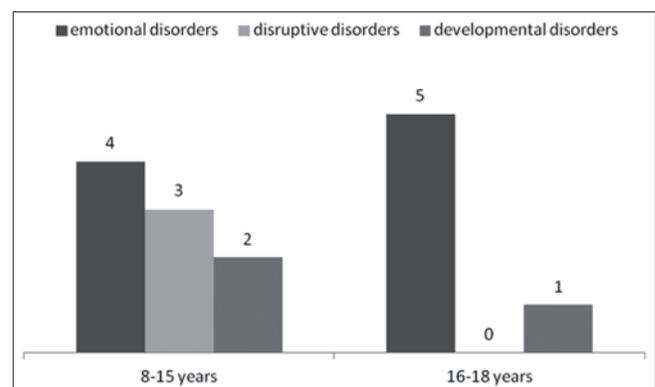


Figure 2: Childhood and adolescent psychiatric disorders in relation to age

Among boys, diagnosis of emotional disorders was made in four adolescents (depression, phobia, and dissociative [two]), disruptive disorders in two (hyperkinetic disorder and impulsive disorder), and developmental disorders in one (mental retardation); one adolescent had comorbid impulsive disorder and phobia. Among girls, diagnosis of emotional disorders was made in four child and adolescents (anxiety, depression, acute stress reaction, and dissociative [three]; a 17-year-old girl had comorbid anxiety and acute stress reaction), disruptive disorder in one (impulsive disorder), and developmental disorders in two (mental retardation [two]). Figure 3 shows these childhood and adolescent psychiatric disorders in relation to sex.

Comorbidity in our study was equal in both within each grouping and across groups. Within each grouping, comorbidity was found in one adolescent and another adolescent had across groups' comorbidity (Table 1).

The adolescent having comorbidity within each grouping was a girl of 17 years. The adolescent having comorbidity across grouping was a boy of 13 years.

## Discussion

### “Past, passing, and to come”[13]

The pilot project on the subject was carried out in a different institute.[12] Twenty six children and adolescents attending psychiatry outpatient department were studied. Age range was up to 15 years and of them 16 were boys. Emotional, disruptive, and developmental disorders were found in nine, five, and ten children and adolescents respectively. As far as comorbidity was concerned, the number was same in both within each grouping and across groups.

Similar work was conducted in the same institute as that of the current study among indoor patients.[11] Among the

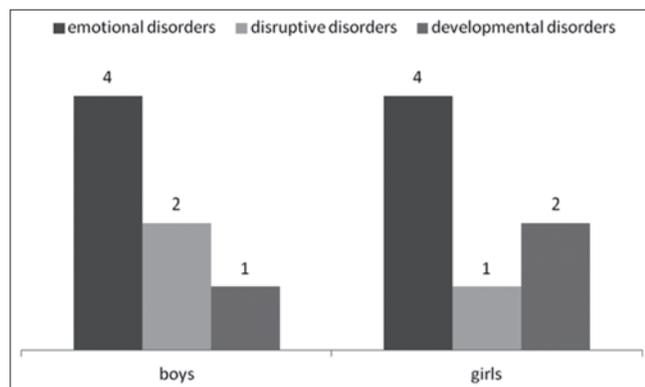


Figure 3: Childhood and adolescent psychiatric disorders in relation to sex

Table 1: Comorbidity within each grouping and across groups

Within each grouping
Emotional disorder (anxiety) - Emotional disorder (acute stress reaction)
Across grouping
Emotional disorder (phobia) - Disruptive disorder (impulsive disorder)

total sample of 94 children and adolescents, majority (48) had emotional disorders. Age range was from 8 to 17 years and 62 were girls. Comorbidity was again equal in both within each grouping and across groups.

The present work is the third of its kind by us. And it was done in a child psychiatry unit of a tertiary care teaching hospital.

Epidemiological data like age and sex constituted typical validating criteria in the field of child psychiatry that were derived mainly from developmental psychopathology. Initially, 'childhood psychosis' was a unitary concept; when evidence started gathering regarding age, then autism and schizophrenia was validated as distinct identities. In addition, sex differentiates disruptive disorders and emotional disorders in the sense that the first occur four times more commonly in boys and the later commoner in girls.[3]

Majority of adolescents with emotional disorders were older, while the children and adolescents with disruptive and developmental disorders were younger in the present study. Emotional disorders were equal among boys and girls in our sample; moreover, boys had more disruptive disorders and in girls more developmental disorders were observed.

The current classificatory systems, e.g. ICD and DSM do have categories for childhood and adolescence psychiatric disorders. But, they constitute few emotional disorders that are mostly anxiety-related. The same criterion that is applied for adults is used for those mood disorders occurring in children and adolescents. As a result, epidemiological studies find prevalence amounting to nil or minimal. Though, there are suffering and impairment in this population resulting from problems in the mood. Data collected empirically has to be good; based on which to determine how best to extrapolate adult criteria upon children, or should it be applied at all.[3]

ICD and DSM are time-tested and based on wide field trials with which any new classification system could not compete. Though there is a tremendous potential of reaching out to the needy in terms of psychiatric service utilisation with the new classification system. This is feasible through the apparent 'at home' feeling the stakeholders would have in this simplified way of classifying the various 'emotional and behavioural disorders' of childhood and adolescence. Even the existing bridge between psychiatry and rest of the medical sciences, in particular paediatrics in this case could be narrowed. That would ultimately help in prevention and treatment of these disorders in this population. This is a big advantage in the context of the stigma associated with mental illness, particular so in childhood and adolescence. But one needs to be aware of the potential risk of 'scientific knowledge versus popular media' clash! There are many psychiatric terms in vogue with completely different meanings. The simple terms used in the newer classification system has the potential of being misinterpreted by the unscientific community. Use of terms without the knowledge of the scientific basis can at time have dangerous consequences. For example, the biggest barrier in psychiatric treatment is not stigma (in fact its position is fourth only!),[14] but 'self-sufficiency', i.e. "wanting to handle the problem on one's own and simply feeling that one doesn't need treatment for the issue".[15]

It is very common to have comorbidity within each grouping; while that across groups is seen in minority. The reasons for high comorbidity may be artefactual like that of Berkson's bias[16] seen in clinical samples. Here not all the cases get referral; at times, the likelihood of each condition's referral gets combined. Then there are the possibilities of overlapping criteria as well as subdivision of syndromes. Even then comorbidity is marked for psychiatric disorders in this population. The odds ratio for anxiety with either attention-deficit/hyperactivity disorder (ADHD) or conduct disorder is three, for anxiety and depression eight, and ADHD and conduct disorder ten.[17] In clinical samples, rates are even higher.[3]

We have also found comorbidity of emotional disorder, i.e. phobia with disruptive disorder, i.e. impulsive disorder. At the same time comorbidity among emotional disorders, i.e. anxiety and acute stress reaction was also observed.

There are several mechanisms through which comorbidity in real sense arises.[18] These include shared risk factors, overlap between risk factors, one disorder creating an increased risk for the other, and comorbid pattern constituting meaningful syndrome.

Emotional disorders occurred as comorbidity both within group and across group with disruptive disorder. While it was an adolescent girl of 17 years who had the emotional disorder-emotional disorder comorbidity, a boy of 13 years had emotional disorder-disruptive disorder comorbidity. In our earlier works, we found comorbidities of emotional disorder-emotional disorder,[12] developmental disorder-developmental disorder,[11,12] emotional disorder-developmental disorder, disruptive disorder-developmental disorder, disruptive disorder-developmental disorder,[12] and emotional disorder-disruptive disorder-developmental disorder.[11]

The United Kingdom has carried out a national prevalence study.[19,20] The UK study found that almost one child in ten (9.5%) aged five to 15 had a psychiatric disorder based on the ICD-10 classification system. Prevalence was higher in adolescents (11.2% at 11 to 15) than in children (8.2% at five to ten), and in boys (11.4% than girls 7.6 per cent). Conduct disorders were the most common (5.3%), followed by anxiety disorders (3.8%). Depression was rare in both sexes and all age groups (0.9% overall), as were hyperkinetic disorders (1.4%). Seven per cent of previously unaffected children developed a psychiatric disorder in the three years between the interviews. Four per cent developed a new emotional disorder (anxiety and/or depression), and five per cent a behavioural and/or hyperkinetic disorder. More girls developed emotional disorders, and more boys developed behavioural disorders. Persistence, measured as the presence of the same diagnosis the years apart, was higher for behavioural disorders (43%) than for emotional disorders (about one in four).

A study of youth age seven to 14 in south-eastern Brazil found an overall prevalence of 12.7%. Behavioural disorders were the most common (seven per cent), followed by anxiety disorders (5.2%) and ADHD (1.8%). Depression was rare (one per cent).[21]

Other studies from around the world[22] usually generate prevalence rates of around 20%. A meta-analysis of 26 studies of child and adolescent depression[23] estimated the prevalence of adolescent depression (5.6%) as twice that of childhood depression (2.9%), and that of adolescent girls (5.9%) as significantly higher than that of adolescent boys (4.6%).

Traditional division of prevention in epidemiology is into three categories. This depends on level of risk in concerned population. When a child develops psychiatric disorder that is clinically definable, the focus at present is on clinical treatment. It is rare as far as tertiary prevention is concerned. But, considering the early onset of most psychiatric disorders, this is clearly a vitally important area for future work.[21]

### “The fourth pillar”?[24]

56.25% of children and adolescents had received diagnoses that are not incorporated in the current scheme of things. This category of disorders included schizophrenia, acute and transient psychotic disorders, unspecified nonorganic psychosis, manic episode, bipolar affective disorder, and schizoaffective disorder. Now to include these disorders do we need a separate category- the fourth one! Or can we think of making room for them in the existing three categories? If yes, then how? These are the issues we will need to address in future works.

Moreover, few additional points need to be attended. What about the psychiatric disorders related to medical problems or adverse effects of medication such as chemotherapy or corticosteroids? Would they be classified under the previous categories like for example emotional disorders? Or do we need perhaps a psychosomatic group?

In an earlier study of ours,[11] we found 40.43% of the sample size to consist of these diagnoses. The possibility of these disorders, i.e. schizophrenia spectrum disorders, affective and non-affective psychotic disorders presenting in similar fashion in both adulthood and during childhood and adolescence should be considered. Thus, this will rule out the need to have this “fourth pillar”![24]

### Limitation

Use of ICD-10 for diagnosis may miss many in this population with subthreshold syndromes who do need treatment.

### Implications

Such a simplified diagnostic approach does help bridging the gap not only among parents, teachers, and service providers but also among the different specialties of medical science, e.g. psychiatrists and paediatricians.

### Future directions

Use of culture sensitive tools incorporating inputs from different stakeholders like parents, family members, teachers, and general practitioners can encompass all those who deserve service utilisation.

## Conclusion

At the possibility of being criticised for a 'reductionist' view, we reiterate that this is for diagnostic approach only. As far as management is concerned, we do believe in 'personalised' or 'individualised' medicine as the 'about the cover' titled "Eyes that guide" of the January-June 2016, volume 7 issue 1 of the Open Journal of Psychiatry & Allied Sciences has to say![25]

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