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# Child and Adolescent Clinic: Recent Trends in Goa

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## Abstract

**Introduction:** Mental health in child and adolescent (C/A) is an integral component of overall health, and its importance is highly recognized. Goa is a State in India which has a total population of 11 lakhs out of which 40% are in age group of 0-18 years. There is only one tertiary psychiatric unit which runs a C/A clinic for the past 20 years. It was found that the number of outpatient department attendance at the clinic had significantly increased in the recent years. A need was felt to try and evaluate the reasons for this growth. In view of these findings, this study was initiated with the aim of exploring and comparing the various socio-demographic variables and the clinical profile of patients attending the clinic.

**Materials and Methods:** A prospective study was conducted in the C/A clinic at the Institute of Psychiatry and Human Behavior, Bambolim, Goa. Cases attending the clinic for the first time from January 2004 to December 2005 (i.e. 2-year period and meeting the International Classification of Diseases-10 [ICD-10] criteria WHO, 1992) formed the study sample. The data were collected on a structured proforma designed for the study. A comparison was done with a retrospective case notes survey, (January 1994-December 1995), to confirm the same. Data from case note survey were collected on the above-mentioned structured proforma, and the diagnoses were based on ICD-10.

**Result:** It shows there is a trend for an increase in a number of patients with various psychiatric disorders attending C/A clinic in recent years (January 2004-December 2005) as compared to an earlier period (January 1994-December 1995).

**Conclusion:** There is a significant rise in the number of C/As attending the clinic. Mental retardation is the most frequent diagnosis in our setting. The majority of the subjects were in school going age group. This study highlighted an urgent need for screening of primary and secondary schools in Goa to detect various C/A psychopathology.

**Key Words:** Child and adolescent clinic, Child psychiatric disorders, Mental retardation, Socio-demographic co-relates

## INTRODUCTION

Mental health is an important component of overall health. The due importance is given to the physical health of children and adolescent (C/A); however, developmental, behavioral, and emotional aspect is not getting enough attention. This could be due to the various reasons such as lack of knowledge of child developmental psychology and various psychopathologies, limited number of professional, poor financial assistance, stigma, and cultural traditions.

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The importance of mental health in C/A currently is being recognized globally. India is a country of C/A and young adults. C/A constitute nearly 60% of the population. Though psychiatric morbidity accounts for 5-10 leading causes of disability for those aged 5 years and above, yet there are not enough psychiatric services for them in developing countries.[1,2] Overall development of any country depends on the positive mental development of its children. Various factors, such as changing family structure, modernization, and industrializations, have negatively influenced child mental health. There is enormous influence of environment on child mental health process. The immediate environment includes parents, teacher, siblings, and companions. Many behavior problems in children are due to the direct effect of the environment. The conflict which a child experiences during his development to maturity is due to the environment in which he grows. Of all the environment, family is the most important. The faulty development

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of the personality is responsible for various behavior problems. Family dynamics plays a vital role in mental health and illness. Children from broken homes presents with various psychopathologies. Child rearing practices can retard or accelerate development of child health. The offspring's of the maladjusted parents are likely to become problem children. Lack of adequate supervision and control on the part of parents also leads to behavior problems of the children. Hence, simple environmental manipulation can cure a problem. A child guidance clinic (CGC) is one of the medico-social amenities and may be best defined as a center for the organized and scientific study and treatment of maladjustment in children. The treatment of the child is carried out not by one person but by a team of workers. The team of staff members is constituted of a psychiatrist, a pediatrician, special educator and language pathologist, a psychiatric health nurse, and educational psychiatric social worker, and playroom workers. The child is treated as a whole, and the personality has many aspects, *viz*., physical, intellectual, educational, emotional, social, and economic, etc., each of these aspects is studied by the respective staff member who has specialized in that particular field. Whenever a child is referred to the clinic, he usually always comes with other associated problems also.

School mental health has been a major mental health movement which covers up the large population of C/A but has been effectively implemented only in metros and not in smaller towns and urban areas in the last four decades. Earlier research shows mental retardation formed bulk of population attending CGC during that period. While emotional and behavioral disturbances were less identified and referred. The trend has changed. All spectrums of diagnostic categories are now referred and treated at various teaching hospitals, psychiatry departments, pediatric departments, various colleges of social work, and large number run by non-governmental organizations (NGOs).[3]

Goa is a westernized state with 82% literacy rate and a population of about 14 lakhs of which about 40% is between 0 and 18 years.[4] The Institute of Psychiatry and Human Behavior (IPHB) is a tertiary care psychiatry hospital at Bambolim in Goa and has a C/A clinic since the past 20 years. Earlier data show that few people were availing the services offered by this clinic. In recent years, the C/A population visiting this clinic has increased substantially. WHO reported 20% of C/As suffer from different types of mental illness worldwide.[5] The US Department of Health and Human Services have also reported 20% of C/As to have some mental problem during this phase of life, and at least 10% have a serious psychological disturbance at some point in their life.[6]

Studies[7-10] show that risk factors for mental illness in children are divided into two types:

1. Child characteristics such as age, sex, cultural background, physical health, antenatal, and peri-natal factors, external agents such as food, infections, toxins, and stress
2. Parent/family characteristics: These would be parent's age, education, and socio-economic status, physical and psychological ailments.

Hence, this study was conducted to explore and compare the various socio-demographic characteristics and clinical profile of patients attending the C/A clinic.

## MATERIALS AND METHODS

### Study Design

A prospective study was conducted in the C/A clinic at the IPHB, Goa. Cases attending the clinic for the first time from January 2004 to December 2005 (i.e. 2-year period) and meeting the International Classification of Diseases-10 (ICD-10) criteria (WHO, 1992) formed the study sample. The data were collected on a structured performa designed for the study.

### Study Setting

IPHB, Bambolim, is a tertiary care teaching hospital with inpatient and outpatient facilities, in North District of State of Goa. The C/A guidance clinic is conducted once a week and children up to 18 years of age are evaluated. Information for the clinical history is collected from parents, teachers, patients and NGO's, and other referral sources.

All the children registered with the hospital C/A clinic are initially interviewed by a Junior Resident (post-graduate trainee doctor) who records basic demographic data such as patient's age, gender, education, and place of stay (rural-urban); the head of the family's age, occupation, income, religion and relationship with the patient; and the source of referral. Detailed psychiatric and medical history, mental state examination, etc., are recorded on a case file. The child is then assessed by a qualified general psychiatrist (Senior Resident), who discusses the case with a consultant psychiatrist with special interest in child psychiatry. Child is then referred to a clinical psychologist for assessment of intelligence, learning disabilities, etc. All psychiatric diagnoses are based on ICD-10 descriptions. The management is carried out under the supervision of the consultant, with inputs from psychologists, and other team members as required.

The case file is reviewed at a follow-up by the consultant after 2-4 weeks of the initial detailed assessment, and a

final diagnosis is ascribed to the case based on follow-up information, investigation reports, and treatment response.

### Ethical Approval

The protocol was approved by the Local Ethics Committee. Consent was taken from the parents and assent from the children before entering the study.

Data thus generated was presented as a mean standard deviation. The differences in the various co-related variables were analyzed using the Chi-square test. A $P < 0.05$ was considered to be statistically significant.

## RESULTS

The socio-demographic characteristics of the study sample and the case note survey are summarized in Table 1. Some of the interesting trends that were observed are:

The number of cases registered at the C/A clinic was 4-5 times increased in the study sample ($n$ = 768) as compared to the case note survey ($n$ = 162). The majority of the subjects, i.e. 39.1% ($n$ = 300) in the study sample and 38.3% ($n$ = 62) in the case note survey belonged to the 8-11 years age group. The mean age was 8.6 years with a standard deviation of 7.7 years. Birth order revealed that the eldest and the youngest siblings in both the study sample, i.e. 37.5% ($n$ = 288) and 39.7% ($n$ = 267) and case note survey, i.e. 21.9% ($n$ = 35) and 44.4% ($n$ = 72), respectively, formed the majority. It was seen that there was a preponderance of males in all the age groups in both the study sample and the case not survey. The male:female ratio being approximately 2:1 in the study sample and 1.6:1 in case note survey. Educational status showed that the majority of the parents in both the study sample, i.e. 87.8% ($n$ = 674) and case note survey 53.1% ($n$ = 86) were literate. About 68.6% ($n$ = 527) subjects from study sample and 55.6% ($n$ = 90) from case note survey, hailed from rural areas and the rest from urban areas. Most of the patients from the sample study belonged to the low and middle socio-economic status group.

**Table 1: Comparison of socio-demographic characteristics between study sample (January 2004-December 2005) and case note survey (January 1994-December 95)**

| Patient variables | Sample study $n1$=768 (%) | Case note survey $n2$=162 (%) | Significance $\chi^2$ |
|---|---|---|---|
| Age group (years) | | | |
| 0-3 | 23 (3.0) | 4 (2.5) | 114.2 |
| 4-7 | 185 (24.0) | 58 (35.8) | df=3 |
| 8-11 | 300 (39.1) | 62 (38.3) | $P$<0.001 |
| 12-18 | 260 (33.9) | 38 (23.4) | |
| Sex | | | |
| Males | 503 (65.5) | 99 (61.1) | 6.3 |
| Female | 265 (34.5) | 63 (38.9) | df=1 |
| | | | $P$=0.02 |
| Birth order | | | |
| Only child | 161 (21.0) | 26 (15.8) | 81.05 |
| Eldest | 288 (37.5) | 35 (21.9) | df=3 |
| Middle | 52 (6.8) | 29 (17.9) | $P$<0.01 |
| Youngest | 267 (34.7) | 72 (44.4) | |
| Literacy in parents | | | |
| Illiterates | 94 (12.2) | 76 (46.9) | 372.7 |
| Literates | 674 (87.8) | 86 (53.1) | df=1 |
| | | | $P$<0.001 |
| Religion | | | |
| Hindu | 488 (63.5) | 62 (38.3) | 216.7 |
| Christian | 218 (28.4) | 86 (53.1) | df=2 |
| Muslim | 62 (8.1) | 14 (8.6) | $P$<0.001 |
| Residence | | | |
| Urban | 488 (63.5) | 72 (44.4) | 68.2 |
| Rural | 527 (68.6) | 90 (55.6) | df=1 |
| | | | $P$<0.001 |
| Socio-economic status | | | |
| Low | 443 (57.6) | 57 (35.2) | 191.7 |
| Middle | 301 (39.2) | 54 (51.9) | df=2 |
| High | 24 (3.2) | 21 (12.9) | $P$<0.001 |

Chi-square test, significant value of Pearsons $P$<0.05, $P$<0.001

Table 2 shows the comparison of the psychiatric diagnostic breakup between the study sample and the case survey. The most common major diagnoses group was mental retardation in both the study sample and the case note survey. It comprised the greater bulk of the total psychiatric disorders forming 59% ($n$ = 453) and 46.4% ($n$ = 75) of the study sample and the case note survey, respectively. The other major groups were the specific developmental disorders 12.1% ($n$ = 93), hyperkinetic disorders 7.8% ($n$ = 60), epilepsy 6.1% ($n$ = 47), and conduct disorder 4.2% ($n$ = 32) in the study sample, while in the case note survey epilepsy 17.3% ($n$ = 28), hyperkinetic disorder 8.4% ($n$ = 14), and transient dissociative disorder 6.2% ($n$ = 10) formed the other major group.

There was a significant increase in the specific developmental disorder group in the study sample 12.1% ($n$ = 93) as compared to case note survey 1.9% ($n$ = 3). Furthermore, it was observed that the patients with epilepsy and transient dissociative disorder were few, i.e. 6.1% ($n$ = 47) and 1.6% ($n$ = 12) in the sample study.

## DISCUSSION

The socio-demographic characteristics of the study sample and the case note survey are summarized in Table 1. Some of the interesting trends that were observed are:

In this study, the increase in the attendance of C/A clinic in the study sample can be explained on the basis of probable increase in the public awareness following the training imparted to the Anganwadi workers who had conducted a survey of mentally retarded in 1995, the regular school

**Table 2: Comparison of psychiatric diagnostic breakup between study sample (January 2004-December 2005) and case note survey (January 1994-December 1995)**

| Diagnoses | Study sample *n*=768 (%) | Case note survey *n*=162 (%) | Comparison for significance $\chi^2$ |
|---|---|---|---|
| Mental retardation | 453 (59) | 75 (46.4) | 26.4, df=1, *P*<0.01 |
| Epilepsy | 47 (6.1) | 28 (17.3) | 55.6, df=1, *P*<0.001 |
| Hyperkinetic disorder | 60 (7.8) | 14 (8.4) | 0.4, df=1, *P*=0.50 |
| Conduct disorder | 32 (4.2) | 6 (3.7) | 0.5, df=1, *P*=0.50 |
| Specific developmental disorder | 93 (12.1) | 3 (1.9) | 405.6, df=1, *P*<0.001 |
| Pervasive developmental disorder | 26 (3.4) | 6 (3.7) | 0.1, df=1, *P*=0.7 |
| Other behavioral/emotional disorder | 20 (2.6) | 8 (4.9) | 8.5, df=1, *P*=0.001 |
| Oppositional defiant disorder | 15 (2.0) | 7 (4.3) | 9.8, df=1, *P*=0.001 |
| Transient dissociative disorder | 12 (1.6) | 10 (6.2) | 27.0, df=1, *P*<0.001 |
| Miscellaneous | 10 (1.2) | 5 (3.2) | 9.0, df=1, *P*=0.001 |

mental health programs conducted by the IPHB and the workshops held by the NGO's for the teachers and the public.

Various Social Welfare Schemes have been introduced by the Government of Goa since 2003 under the Dayanand Niradhar Yojana. Furthermore, there has been a steady increase in the number of schools in this state. This could have led to the sensitization of the parents of mentally challenged children, thus increasing their attendance at the C/A clinic.

The majority of the subjects were in the 8-11 years age group seen in the study sample as well as in the case note survey. This is in keeping with the study of Malhotra *et al*.[11] which says that most common psychiatric disorders in children are diagnosed in the school going age group.

It was seen that there was a preponderance of males in all the age groups in both the study sample and the case note survey. The male:female ratio being approximately 2:1 in the study sample and 1.6:1 in case note survey. Chakrabarti and Arya, 2003[12] have found that 70% patient with mental retardation are first born. D'Souza and D'Souza, 1987, Belmont *et al*.[13,14] have explained similar finding in their studies by referring to the youngest child as being the favored one in the family.

Educational status showed that the majority of the parents in both the study sample, i.e. 674 (87.8%) and case note survey 86 (53.1%) were literate. These figures can be explained by the simple fact that Goa has a high literacy rate, i.e. 82% as per the statistical handbook of Goa 2001.[4]

Socio-economic status revealed that maximum number of subjects in the study sample belonged to middle and lower income families, whereas in the case note survey they were from middle-class families. This is in keeping with the study by Srinath *et al*.[15]

Table 2 shows the comparison of the diagnostic breakup between the study sample and the case survey. The most common major diagnoses group was mental retardation in both the study sample and the case note survey. It comprised the greater bulk of the total psychiatric disorders forming 453 (59%) and 75 (46.4%) of the study sample and the case note survey, respectively. A study by Sidana *et al*.,[16] Chadda and Saurabh (1994),[17] and Hagberg *et al*.,[18] also show that the most common major diagnoses group was mental retardation as seen in both the study sample and the case note survey. The other major groups were the specific developmental disorders, 93 (12.1%); hyperkinetic disorders, 60 (7.8%); epilepsy, 47 (6.1%); and conduct disorder, 32 (4.2%) in the study sample, while in the case note survey epilepsy, 28 (17.3%); hyperkinetic disorder, 14 (8.4%); and transient dissociative disorder, 10 (6.2%) formed the other major group. These figures were much higher than those reported by Sidana *et al*.[16]

There was a significant increase in the specific developmental disorder group in the study sample, 93 (12.1%) as compared to case note survey, 3 (1.9%). The reasons could be greater sensitivity and specificity in the diagnosis of developmental disorders in recent years. Furthermore, it could have been prompted by the various scholastic benefits offered by this state for such children.

Furthermore, it was observed that the patients with epilepsy and transient dissociative disorder were few, i.e. 47 (6.1%) in sample survey and 12 (1.6%) in case note survey. Number of subjects reporting with epilepsy and transient dissociative disorder showed a decline in the study sample. This could be because these subjects are availing the services of the neurologists appointed at the general tertiary care Government Hospital.

## Limitations

The findings of our study cannot be generalized to the community as it was hospital-based study and the sample

was purposive in nature. Further community-based studies are needed to substantiate the findings of this study.

## CONCLUSION

This study highlighted an urgent need for screening of primary and secondary schools in Goa to detect the various C/A psychopathologies, especially learning disability, specific developmental disorders as well as behavioral and emotional disorders.

A need was felt to upgrade the services offered presently by the C/A clinics at IPHB by having a separate play therapy unit, specific counseling services, behavior treatment units, speech therapy units, and support groups for parents of affected children.

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