Original Research Article

Pattern of Psychiatric Morbidity and Associated Familial Factors amongst Children and Adolescents Attending the Psychiatry Outpatient Service

ABSTRACT

Aims: This study aims to find out the demographic and clinical profile of children and adolescent patients attending psychiatry outpatient service of a tertiary-level hospital in Nepal

Study design: Descriptive cross-sectional study.

Place and Duration of Study: The study was carried out in the psychiatry outpatient department from Sep 2017 to Sep 2018.

Methodology: All children and adolescents, aged 6 years to 18 years, visiting the psychiatry outpatient department registered as new cases were included in the study. Epidemiological profiles and associated factors (age, sex, ethnicity, occupation, education geographical areas, familial factors) were noted using a semi-structured questionnaire. Psychiatric diagnosis was made based on ICD-11 criteria. Descriptive statistics were used to analyze the data

Results: The mean age of the patients was 14.07 ± 3.43 years (mean ± SD). Psychiatric disorders were most common in children and adolescents in 16-19 years' age group followed by 11-15 years' age-group. Majorities of the patients were male (52.1%), and Hindu (87.2%). More than 85% of the patients had received some level of education. Most of them resided in rural areas (43.2%) and in nuclear families (54.7%). The most common psychiatric diagnosis was depressive disorder followed by Dissociative disorder (16.15%.), and Panic disorder (10.16%). Among them, 13% of the patient presented with a history of intentional self-harm. 19.5% of patients with psychiatric morbidity had positive family history of mental illness. 18% of the patients reported having emotional difficulties with their parents. There was also a history of alcohol use in the family in 17.2% and family conflicts in 14.1% of cases.

Conclusion: Adolescents of the elder age group constitute the major proportion of patients with psychiatric morbidity. Depression is the most common psychiatric disorder. Family history of mental illness is the most common familial factor associated with psychiatric illness.

Keywords: Psychiatric morbidity, Child and adolescent mental health, Depression, family history

1. INTRODUCTION

Children and adolescents constitute almost a third of the world's population. Almost 90% of them live in low and middle-income countries, where they constitute up to half of the total

population [1]. Studies have shown that mental health problems affect 10–20% of children and adolescents globally [2]. The World Health Organization (WHO) has reported that 20% of children and adolescents suffer from different types of mental disorders worldwide and, suicide is supposed as the major cause of death among adolescents [3]. Studies have also shown that the emergence of early onset emotional/behavioral problems in young children is related to various health and behavior problems in adolescence and about half of all adult mental disorders have their onset in adolescence [4].

There are few studies done in Nepal to look into the epidemiology of mental disorders in the pediatric population. One study from eastern Nepal found the proportion of children accounted for 8% of the total psychiatric outpatients and the majority were suffering from mental retardation followed by neurosis and epilepsy [5]. Another study showed that most children attending the psychiatric OPD suffered from epilepsy [6]. Similarly, another study showed that children with psychiatric morbidity constituted 3.34% of the total mental health outpatient patients and more than half were suffering from mental retardation [7]. These variations in findings are partly due to differences in the operational definition of children and adolescents and also due to differences in methodology in how the studies were carried out.

The risk factors for the development of mental disorders in children have been considered mainly into two perspectives: characteristics of the child and those of the family environment. Child characteristics include gender, age, ethnicity, physical health, cognitive and psychological function, pre- and perinatal exposures to illness, physical stress, alcohol, drugs, nutrition, infections etc. Familial/environmental characteristics include parental education, age, social class, employment, psychiatric and medical history, and family function, and structure [8,9].

Recognizing mental health issues as early as possible could be a critical step to reducing the prevalence of psychiatric problems among older individuals, managing them more effectively, and preventing negative outcomes. A number of important issues need further investigation to aid early diagnosis. Early identification of disorders provide access to evidence based intervention with psychotherapies and medication.

There are limited epidemiological studies on child and adolescent mental health in Nepal. Existing literature have not looked into familial factors associated with psychiatric morbidity in these population. Our study aims to provide baseline data for further studies on psychiatric illness in Children and adolescents and associated familial factors. Information about the prevalence of various type of psychiatric illness and associated factors help to define and identify needs. It would also help to increase awareness about the problem and address their different priorities.

2. MATERIALS AND METHOD

Study Design: Hospital-based cross-sectional study

Study Period: September 2017 - September 2018

Study Setting: Outpatient unit of Department of psychiatry, BPKIHS, Dharan

Study Population: All children and adolescents, aged 6 years to 18 years, visiting psychiatry outpatient department registered as new cases .

Study tools and procedures: Epidemiological profiles and associated factors (age, sex, ethnicity, occupation, education geographical areas, familial factors etc.) were noted using a semi-structured questionnaire. Psychiatric diagnosis was made based upon ICD-11 criteria which was confirmed by Consultant Psychiatrist. Data was collected using MS excel software.

Data Analysis:

The data were analyzed using the Statistical package for the social science version 16 for Windows. Descriptive statistic for all demographic and clinical variables is used.

3. RESULTS AND DISCUSSIONS

A total of 384 children and adolescents visiting the out-patient department of Psychiatry of B. P. Koirala Institute of Health Sciences, Dharan during study period and satisfying the inclusion criteria were included in the study. Among the 384 patients, most (43.8%) were of age group 16 to 18 years, with mean age being 14.07 years. Majorities of the patients were male (52.1%), unmarried (96.1%) and Hindu (87.2%). More than 85% of the patients had received some level of education. Most of them resided in rural areas (43.2%) and in nuclear families (54.7%).

Table 1: Socio-demographic characteristics of the patients (n = 384)

Characteristics	Categories	Frequency	Percentage (%)
Mean age ± SD (in years) = 14.07 ± 3.43			
Age group (in years)	6-10	67	17.4
	11-15	149	38.8
	16-18	168	43.8
Gender	Male	200	52.1
	Female	184	47.9
Marital Status	Married	15	3.9
	Unmarried	369	96.1
Education	Yes	327	85.2
	No	57	14.8
Religion	Hindu	335	87.2
	Kirat	21	5.5
	Muslim	11	2.9
	Buddhist	9	2.3
	Christianity	8	2.1
Socio-economic status	Upper	77	20.1
	Middle	173	45.0
	Lower	134	34.9
Residency	Rural	166	43.2
	Urban	140	36.5
	Semi-urban	78	20.3

Family type	Nuclear	210	54.7
	Joint	151	39.3
	Broken	23	6.0
No. of Children	Single	48	12.5
	More than one	336	87.5

Age distribution

In our study, 67 patients (17.4%) were between 6-10 years, 149 (38.8%) were between 11-15 years and 168 (43.8%) were between 16-18 years. The minimum age of the participants was 6 years and maximum was 18 years. The mean age was 14.07 ± 3.43 years (mean ± SD).

Psychiatric diseases were most common in children and adolescents in 16-19 years' age group followed by 11-15 years age-group. There were fewer patients of younger ages. This finding is similar to the findings of many other studies conducted in Nepal [10,11,12].

Gender

In our study, there were 200 (52.1%) male patients and 184 (47.9%) female patients out of 384 patients. Our study is consistent with the studies done by Tulachan P et al (male= 60%), Nalugya-Sserunjogi J et al(male=59%) and Col SC et al (male=55.9%) However this study is in contrast to the study done by Shakya DR (female=53%), Risal A et al (female=71.4%), Malla DP et al (female=60.1%) and Kurian K et al (female=56.2%) which had more female subjects[10,11,12,13]. Predominance of males might be due to gender based differential help seeking as more importance is given to boys in Nepal. Higher proportion of male registrations could be that boys have higher frequency of externalizing disorders [12]

Geographical Distribution

This study also shows 43.2% were from rural, 36.5% from urban and 20.3% from semi-urban areas. Our hospital is adjacent to two states of India; Bihar and West Bengal. So many patients from these places come to our hospital for health related problems. There were 5.21% of cases from India. The study is consistent with Malla DP et al that most of the participant were from Sunsari [14]. This could be because of our hospital lying in this district.

Marital Status

According to the national data, 0.5% of the male and 1.1 % of the female were married in the age group 10-14 years. And 7.1% and 23.1% of the female were married in the age group 15-19 years [15]. In our study, 3.9% of the participant were married in the age group 15-18 years. None of the participants were married in the age group 10-14 years. Among 15-18 years, 5.88% of the male were married and 8.82% of the female were married.

Religion

According to the National Population and Housing Census of Nepal, 2011, majority of the participants were Hindu (81.3%) followed by Buddhist (9.0%) Islam (4.0%)' Kirat (3.1%) and Christian 1.4% [16]. In our study, 335 (87.2%) patients were Hindu, 21 (5.5%) Kirat, 11 (2.9%) Islam, 9 (2.3%) Buddhist and 8 (2.1%) were Christians. Greater proportion of Kirat religion was found in our study than the national data as Dharan is highly populated with Rai and Limbu (Mongolian Community) who mostly followed Kirat religion. The finding was similar to Shakya DR and Malla DP et al [10,14]. This could be due to the study conducted in the similar setting.

Caste

According to the National Population and Housing Census of Nepal, 2011, Chhetri is the largest caste/ethnic group having 16.6% of the total population followed by Brahman 12.2%,

Magar 7.1%, Tharu 6.6%, Tamang 5.8%, Newar 5.0%, Kami 4.8%, Musalman 4.4%, Yadav 4.0 and Rai 2.3% [16].
In our study population, majority of the population were Brahmin (28.40%) followed by Madhesi (19.54%), Chhetri (11.45%), Limbu (9.38%), Rai (7.55%), Dalit (4.95%), from Musalman and Tamang (2.86%) each, Newar (2.08%), Magar (1.04%), Gurung and Tharu (0.78%) each. Patients from India were kept in "others" category which was (8.33%).The finding was similar to Shakya DR and Malla DP et al [10,14]. This could be due to the study conducted in a similar setting.

Education
According to the National Population and Housing Census of Nepal, 2011, literacy rate of child 6-9 years was 72.3% and child between 10-14 was 91.8% [16]. In this study 85.2% of the participants were going to school and 14.8% have not gone school. In our study literacy rate of child 6-9 years was 79.24% and child between 10 -14 years was 84.25%. Most of the participant of our study were educated (85.2%) which was all most consistent with the study Malla DP et al (95.5%) [14].

Family Type
In our study 54.7% of the participants were from nuclear family followed by 39.3% from the joint family. Six percent of the participants were from broken family. A study done by Malla DP et al shows 84.9% of nuclear family [14].
Among the participants, 12.5% of the participants were single child of their parents and remaining had sibling.

Psychiatric Diagnosis
There were 50 (13.02%) patients who had attempted suicide or self-harm. Poisoning (n = 42) was the most common mode of suicide attempt followed by hanging and cut over the wrist.
Among the subjects enrolled, the most common psychiatric illness was mood disorder (includes Depressive disorder, Manic episode and bipolar disorders, (41.4 %) followed by Dissociative disorder (16.15%.), and Panic disorder (10.16%), Among the mood disorder, Depression was diagnosed in 21.60%, manic episodes in 5.21%, and Bipolar affective disorder in 4.69%. The proportion of other psychiatric disorders diagnosed was as below.

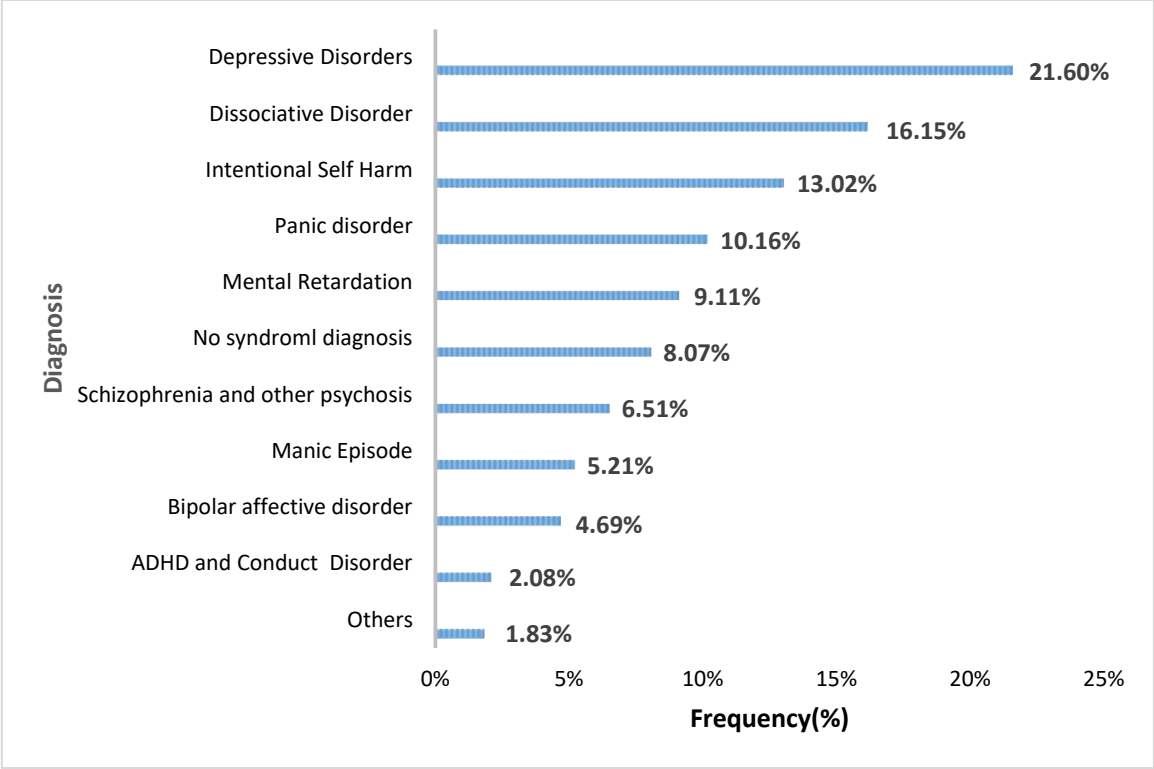

Figure 1: Distribution of patients according to diagnosis (n = 384)

A study conducted by Shakya D.R at Dharan, Nepal in 2010 among the 100 child and adolescent patients attending psychiatry OPD, depression was found to be 20% [10]. The result is similar to our study. This may be due to the reason of conducting the study in a similar place, similar population group and similar diagnostic criteria.

A study conducted by Malla DP et al at Dharan, Nepal in 2010 found depression to be 16.5% [14].

A retrospective study presenting to Psychiatry Out-patient Department of Dhulikhel Hospital showed the prevalence of depression, dysthymia and adjustment disorder of 13.8% [11]. Another retrospective study of the clinical profile of children and adolescent patients attending the Child and Adolescent Guidance Clinic of TUTH, Kathmandu showed a prevalence of 3.1% [12]. A study on prevalence and associated with depression symptoms among school-going adolescents in Central Uganda showed 21% of participant had depression [17]. Another study by Col SC et al in a child guidance clinic showed prevalence of depression as 3.27% included depression and recurrent depressive disorder [18]. Different studies have shown difference prevalence rates of depression among children and adolescents. This might be due to difference in methodological approach among them and different population group of different places.

Familial factors associated with mental disorders in children and adolescents

Table 2: Study of the patients according to familial factors (n = 384)

Familial factors	Frequency	Percentage (%)
Family History of Mental illness	75	19.5
Emotional difficulties	69	18.0
Alcohol use in family	66	17.2
Death of family member	59	15.4

Family conflict	54	14.1
Child Abuse	29	7.5
Sibling Rivalry	8	2.1

Our study shows psychiatric morbidities in children and adolescents are associated with mental illness in the family in 19.5% cases. Less frequently seen associations are emotional difficulties of patients with their parents, alcohol use in the family, death of family members, and family conflicts as depicted in the table above. These findings are consistent with various international studies where the lifetime risk for psychiatric illness in children of depressed patients has been estimated to range 15 to 45% [19,20]. The risk is more in cases where both parents had mood disorder associated with early onset and recurrences [21].

As in our study, other studies have also linked mental illness in children with emotional difficulties with their parents. Studies by O'Schia G et al found child with emotional difficulties with their parents are more depressed [22].

Similarly, It was hypothesized that adolescents who had lost a parent would experience significantly more severe psychosocial problems compared to those having their both parents alive. Parental loss may bring emotional suffering like separation anxiety disorder and depression [23]. Adolescents whose both parents are alive have a better ability to form friendly relationship and had a better social adjustment and are less likely to be mentally ill, compared to those who had their parent died. There is an assumption that bereavement has an adverse effect on a child's life, leaving them at increased risk for significant psychological problems.

In addition, family conflicts, parental divorce, and alcohol use in the family are well-studied in various other places as factors associated with mental illness among the younger population [24, 25]. Our study shows these factors can be among the important risk factors for psychiatric illness in children and adolescents.

4. CONCLUSION

The mean age of the patients was 14.07 ± 3.43 years (mean ± SD). Psychiatric disorders were most common in children and adolescents in 16-19 years' age group followed by 11-15 years age-group. Majorities of the patients were male (52.1%), and Hindu (87.2%). More than 85% of the patients had received some level of education. Most of them resided in rural areas (43.2%) and in nuclear families (54.7%).

The most common psychiatric illness among children and adolescents in general hospital psychiatry outpatient service was depressive disorders followed by Dissociative disorder (16.15%.), and Panic disorder (10.16%). Among them, 13% of the patient presented with a history of intentional self-harm. Poisoning was the most common means of self-harm.

19.5% of patients with psychiatric morbidity had positive family history of mental illness. 18% of the patients reported having emotional difficulties with their parents. There was also a history of alcohol use in the family in 17.2% and family conflicts in 14.1% of cases.

CONSENT

Written informed consent was obtained from the patient (or other approved parties) before data collection.

ETHICAL APPROVAL

Ethical approval was taken from the Institutional Review committee of BP Koirala Institute of Health Science prior to the conduct of the study (IRC No:.IRC/1157/017).

REFERENCES

1. The State of the World's Children. UNICEF's flagship report – the most comprehensive analysis of global trends affecting children. htttp://www. https://www.unicef.org/reports/state-of-worlds-children (accessed Dec 25, 2022).
2. Kieling C, Baker-Henningham H, Belfer M, Conti G, Ertem I, Omigbodun O, et al. Child and adolescent mental health worldwide: evidence for action. Lancet. 2011; 378:1515-25.
3. World Health Organization. Caring for children and adolescents with mental disorders: Setting WHO directions. Available from: https://apps.who.int/iris/bitstream/handle/10665/42679/9241590637.pdf
4. Mood disorders in children and adolescent. In: Sadock BJ, Sadock VA, Ruiz P, editors. Kaplan and Sadock's comprehensive textbook of psychiatry. 9th ed. Philadelphia: Lippincott: Williams & Wilkins; 2009. p. 3652-53
5. Shrestha DM. Neuro psychiatric problems in children attending a general psychiatric Clinic in Nepal. Nepal Pediartic Society Journal 1986; 5; 97-101
6. Nepal MK, Sharma P, Gurung CK. the first child Psychiateic Clinic and: an initial appraisal. NEPAS 1988;7(1):71-5
7. Regmi S.K., Nepal M. K., Khalid A., Sinha U.K., Kkiljunen R, Pokharel A et.al. A study of children and adolescents attending the child guidance clinic of a general hospital. Nepalese Journal of psychiatry 2000; 1 (2): 90-7
8. Earls F. Epidemiology and child psychiatry: future prospects. Compr Psychiatry. 1982; 23:75– 84.
9. Brauner CB., Stephens CB. Estimating the prevalence of early childhood serious emotional/behavioral disorders: challenges and recommendations. Public Health Rep. 2006; 121: 303–310.
10. Shakya DR. Psychiatric morbidity profiles of Child and adolescent Psychiatry out-patients in a tertiary-care hospital. Journal of Nepal Paediatric Society. 2010 Jul 1;30(2):79-84.
11. Risal A, Sharma PP. Psychiatric illness in the paediatric population presenting to a psychiatry clinic in a tertiary care centre. Kathmandu University Medical Journal. 2010;8(4):375-81.
12. Tulachan P, Chapagain M, Kunwar AR, Sharma VD. Psychiatric morbidity pattern in a child and adolescent guidance clinic. Journal of Psychiatrists' Association of Nepal. 2011;1(1):20-3.
13. Demographic and Social Statistics [Internet]. [cited 2022 Aug 20]. Available from http://unstats.un.org/unsd/demographic/products/dyb/dyb2.htm

14. Malla DP, Pandey AK, Kalakheti BK, Deo BK. Clinico demographic profilesof children and adolescents attending psychiatric OPD in BPKIHS and pathways to help seeking . MD Thesis 2010. Unpublished.
15. National Population and Housing Census 2011 [Internet] Kathmandu, Nepal: Government of Nepal, Central Bureau of Statistics: 2012 Nov [Internet]. Cited 2018 Sep 20]. Available from cbs.gov.np/image/data/Population/National%20Report/National%20Report.pdf
16. Population Monograph of Nepal. Ramshah Path, Kathmandu, Nepal: Central Bureau of Statistics, National Planning Commission Secretatriat, Government of Nepal: 2014 Report No.: Volume 2
17. Nalugya-Sserunjogi J, Rukundo GZ, Ovuga E, Kiwuwa SM, Musisi S, Nakimuli-Mpungu E. Prevalence and factors associated with depression symptoms among school-going adolescents in Central Uganda. Child and adolescent psychiatry and mental health. 2016 Dec;10(1):39.
18. Col SC, Col PP, Zacharias R, Col TM, Col RS. Psychiatric morbidity pattern in a child guidance clinic. Medical Journal Armed Forces India. 2007 Apr 1;63(2):144-6.
19. Hammen C, Barge D, Burney E, Adrian C. Longitudinal study of diagnosis in children of women with unipolar depression and bipolar affective disorder. Arch Gen Psychiatry 1990; 47 : 1112-7.
20. Merikangas KR, Weissman MM, Prusoff BA, John K. Assortative mating and affective disorders: Psychopathology in offspring. Psychiatry 1988; 51 : 48-57
21. Weissman MM, Warner V, Wickramaratne P, Prusoff BA. Early onset depression in parents and their children.J Affective Disorder 1988; 15 : 269-77.
22. O'Shea G, Spence SH, Donovan CL. Interpersonal factors associated with depression in adolescents: are these consistent with theories underpinning77 interpersonal psychotherapy? Clinical psychology & psychotherapy. 2014 Nov;21(6):548-58.
23. Raza S, Adil A, Ghayas S. Impact of parental death on adolescents' psychosocial functioning. Journal of Psychosocial Research. 2008;3(1):1-1.
24. Anda RF, Whitfield CL, Felitti VJ, Chapman D, Edwards VJ, Dube SR, Williamson DF. Adverse childhood experiences, alcoholic parents, and later risk of alcoholism and depression. Psychiatric services. 2002 Aug;53(8):1001-9.
25. Dube SR, Anda RF, Felitti VJ, Croft JB, Edwards VJ, Giles WH. Growing up with parental alcohol abuse: exposure to childhood abuse, neglect, and household dysfunction. Child abuse & neglect. 2001 Dec 1;25(12):1627-40.

APPENDIX

SEMI-STRUCTURED PROFORMA

Sample No: Patient I.D No:

Patient I.P:

1. Consultation type- a. Self b. Referral from:
2. Name of the patient (Caste, necessary):
3. Age:
4. Sex: a. Female b. Male c. Other
5. Height:
8. Weight
7. Address (District, necessary):
8. Residential setting- 1. Urban 2. Semi-urban 3. Rural
9, Familial Factors

a. Family Structure: I. Nuclear II. Joint III. Extra Joint IV. Broken.

b. Mental illness in the family

c. Alcohol use in the family

d. Family Conflict

e. Spouse Conflict

f. Emotional Difficulties with Parents

g. Childhood Abuse- Yes/No

I. Physical II. Emotional

III. Sexual IV, Negligent

g. Divorce/ Separation of Parents

h. Death of family member

10. Environmental Factors:

a. No friends/ Less number of friend

b. Loss of friends/ Death of friends

c. Inter-personel Conflict

e. Homeless/ Refugees

f. Bullying/ Humilation.

11. Individual Factors::

a. Age b. Sex c. Substance Use

d. Any physical comorbidity

13.. Religion: a. Hindu b. Buddhist c. Muslim d. Christian

e. Others

14. Caste: a. Brahmin b. Kshatriya c. Newar d. Gurung

e. Rai f. Magar g. Limbu h. Tamang i. Others

15. Attending Informants (Name, relationship)::.

16. Somatic Complains

17. Psychiatric diagnosis (ICD-10, including Substance)::

18. Treatment advised: a. Medication b. Psychoeducation c. Other