Original Article

Children's Mental Health: Pattern of referral, distribution of disorders and service use in child psychiatry outpatient setting

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ABSTRACT

Objective: To determine the pattern of referrals, socio-demographic factors, frequency of psychiatric diagnosis, and help offered to children presenting in Child Psychiatry Department outpatient clinic of a tertiary care hospital in Lahore.

Methodology: A cross sectional study of children attending child psychiatry outdoor in a tertiary care hospital in Lahore was conducted. Following informed consent from the parent/ legal guardian, 1000 consecutive new referral to the department were assessed by interviewing the parent and the child. A Structured proforma was used for data collection. ICD-10 criteria were used for the diagnosis of psychiatric illness. Record was made of the interventions offered to the child & family.

Results: Total sample size was 1000 children with predominant male gender (65%) and mean age of 8.46 (S.D 4.51).More than half (54.5%) of the children in our sample were not enrolled in school and 19% had family history of psychiatric illness. Among the various sources of referral, self-referral was the highest (84.7%) followed by referral from Pediatrics (8.4%). Psychiatric diagnosis observed were Speech Related Difficulties {including speech delay, articulation problems and specific developmental delays of speech & language} (46.5%) , Learning Disability (43.3%), Behavior Problems (26.3), Epilepsy (12.6%), Dissociative Disorders (10.1%), Attention Deficit Hyperactivity Disorder (4.5%), Autism (3.2%), Depression(2.4%), Anxiety(1.7%), Psychosis (1%) and Tics (1%). Co-morbidities were found in 44.7 percent of the children. The various interventions offered included medications, referral to psychologist (for family therapy and individual work), play therapist and speech therapist.

Conclusion: Majority of children presenting to the child psychiatry clinic have multiple and complex needs due to high frequency of learning disabilities and co morbidities. The findings illustrate the importance of multidisciplinary approach and to assess the different dimensions of psychopathology in children for future service planning.

KEY WORDS: Child psychiatry; Pattern of referrals; Pakistan; Psychiatric problems; Children mental health.

Pak J Med Sci January - March 2012 Vol. 28 No. 1 22-26

How to cite this article:

Imran N, Bhatti MR, Anwar A, Najmi F, Haider II. Children's Mental Health: Pattern of referral, distribution of disorders and service use in child psychiatry outpatient setting. Pak J Med Sci 2012;28(1):22-26

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* Received for Publication: August 11, 2011
* Revision Received: January 9, 2012
* Revision Accepted: January 12, 2012

INTRODUCTION

The developed nations of the world have acknowledged the importance of child health which not only includes the physical health but also the psychiatric health of the child.[1] For this purpose extensive research has been carried out in these countries to outline the various child psychiatric

disorders and their causes/risk factors so that a proper health care system could be defined to tackle the various child health disorders.

In America epidemiological research has shown that between 3% and 18% of children have psychiatric disorders. Costello and colleagues have proposed a median prevalence estimate of 12%.[2] Waddell and colleagues propose a prevalence rate for all mental disorders in children of 14.2%.[3] Even in America the demand for child and adolescent psychiatry services continues to far outstrip the supply especially in rural and poor urban areas where access is significantly reduced.[4,5] Only 20% of emotionally disturbed children and adolescents received any mental health treatment.

Limited research related to child mental health in developing countries suggests that the prevalence of various child psychiatric disorders in developing countries is similar to that of Western Countries.[6-9] A study from Bangladesh reported an estimated prevalence of about 15% for any ICD-10 Psychiatric diagnosis in children.[10] Prevalence rate of 12.5% among children aged 0-16 years was found in a study from neighboring country India.[11] Various types of child psychiatric disorders seen were also comparable to west like Emotional Disorders(anxiety, depression and phobias), Behavioral Disorders, Attention deficit hyperactivity disorder, Learning Disabilities, Psychosomatic Disorders, Neurological Disorders like epilepsy and its related psychological squeal.

The current situation in Pakistan is that it is one of the countries that has no national child mental health policy. Very few studies have been conducted in child mental health. In a study done in Karachi which included children attending community schools, prevalence of child mental health problems was higher than reported in studies from other countries.[12] Another limited study carried out in Lahore aimed to establish the prevalence of emotional and behavioral problems in school children using the Rutter rating scales. The study found a prevalence of 9.3% for emotional and behavioral problems among school going children.[13]

Lack of child mental health services directly correlates with the lack of epidemiological studies in Pakistan. Inadequate information about the magnitude of the needs that should be met and the prevalence of various types of child mental disorders are important hindrances in service planning and delivery. One of the ways forward is to try to gather information about the relevant socio-demographic factors & type of problems and difficulties for which the children gets referred to the child Psychiatry Departments in the country.

The present study reports on the pattern of referrals, the frequency of various child psychiatric diagnosis, and associated socio- demographic factors of children presenting to the child & family Psychiatry outpatients at a tertiary care hospital in Lahore.

METHODOLOGY

Ethical review Board of King Edward Medical University approved the study. This descriptive cross sectional study was carried out in the outpatient of Department of Child & Family Psychiatry at Mayo Hospital, Lahore, Pakistan over a period of about one year (March 2010 - February 2011). Mayo Hospital is an 1199 bedded tertiary care hospital and has a separate established Child Psychiatry Department with multidisciplinary health provision. Departmental staff includes Consultant Child Psychiatrist& other medical team members, psychologists, speech therapist and play therapist.

Following informed consent from the parent/ guardian, one thousand consecutive new referrals to the department outdoor (aged between 0-16 years, both genders) were recruited in the study during the data collection period. A structured questionnaire was used for data collection and filled by a team member under supervision of a senior child psychiatrist by interviewing the caregiver as well as the child (where possible) and observation. Questionnaire included demographic and family information, source of referral, history of the child illness, co-morbidities & relevant developmental history. A record was made of the provisional diagnosis according to ICD-10 diagnostic criteria. Medication was prescribed where needed. Patient was then referred to the other team members for further evaluation and treatment according to the

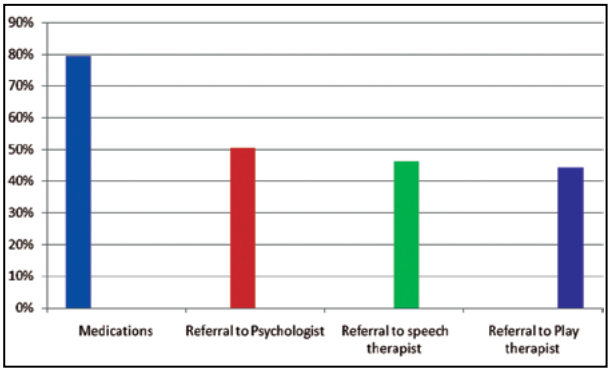

Figure 1: Interventions needed by the sample.

Table-I: Socio-demographic variables and associated factors. (n=1000)

Factors	N(%)
Age(Mean; S.D)	8.46 (4.51)
Under 3 years	12(1.2)
3-5 years	303(30.3)
6-10 years	345(34.5)
11-16 years.	340(34)
Gender	
Male	649(64.9)
Female	351(35.1)
Schooling	
Yes	455(45.5)
No	
545(54.5)	
Family Structure	
Joint	752(75.2)
Nuclear	248(24.8)
Mode of referrals	
Self-referrals	847(84.7)
Pediatrics	84(8.4)
Others	57(5.7)
Neurology	8(.8)
Emergency	
4(.4)	
Associated Factors	
Developmental delays	497(49.7)
Educational difficulties	297(29.7)
Family History of Psychiatric Illness	213(21.3)
Medical problems	192(19.2)
Neonatal complications	85(8.5)
Family History of Epilepsy	63(6.3)
Past Psychiatric history	54(5.4)

diagnosis. After getting the inputs from the team members a joint review discussion was done about the diagnosis and follow up was advised. All the data was entered and analyzed with windows SPSS version 17.0. Descriptive statistics were employed and data presented in the form of frequencies and percentages.

RESULTS

One thousand children with predominant male gender (65%) and mean age of 8.46 (S.D 4.51) were recruited in the study. Table-I shows the various socio-demographic variables of the sample. More than half (54.5%) of the children in our sample were not getting formal education in schools. Among the various sources of referral, self-referral was the highest (84.7%). Table-I also highlights various other associated relevant factors for child psychiatric illness.

Regarding the frequency of Psychiatric diagnosis in the sample, speech related difficulties (including speech delay) were the highest (46.5%) followed by learning disability (43.3%), behavior problems (26.3) and epilepsy (12.6%) Table-II. Co-morbidities were found in 44.7 percent of the children.

Table-II: Diagnostic categories in sample.

Diagnosis	*Total n(%)*	*Male n(%)*	*Female n(%)*
Speech related Difficulties(including speech delay & specific developmental disorders of speech & language)	465(46.5)	320	145
Learning Disabilities	433(43.3)	281	152
Behavior Problems (include ODD & Conduct Problems)	263(26.3)	172	91
Epilepsy	126(12.6)	85	41
Dissociative Disorders*	101(10.1)	53	48
Others(e.g. feeding problems, minor behavior issues, adjustment difficulties)	45(4.5)	26	19
ADHD	45(4.5)	11	4
Autism Spectrum Disorders	32(3.2)	21	11
Depression	24(2.4)	12	12
Anxiety	17(1.7)	10	7
Psychosis	11(1.1)	9	2
Tics	10(1.0)	7	3
Comorbidity	447(44.7)	288	159

Fig.1 shows the various treatment interventions advised to the children. The various modalities included medications, referral to psychologist, play therapist and speech therapist. Majority of the children were prescribed medication (79.6%) mostly neurotropics (drugs, which improves brain microcirculation, promotes the metabolism and modulate neurotransmission) & multivitamins (Table-III). Around half of the children were also referred to a psychologist for family therapy and individual work while many of the children also needed play therapy (44.1%) and speech therapy (46.2%).

DISCUSSION

We found a high preponderance of boys (65%) in our sample which is similar to majority of other studies carried out both in Pakistan and Internationally,[14-16] except a study conducted in Alain which shows female predominance.[17]The strength of our study is the large sample size

Table-III: Various medications prescribed to children with Psychiatric illness.

Neurotropics	43%
Antipsychotics	27%
Benzodiazpines	13%
Antiepileptics	13%
Antideppessents	4%

(n=1000) and the provision of services in a multidisciplinary setup. It is also one of the very few studies to be carried out in a dedicated child psychiatry setup in Pakistan

A finding of concern was the fact that majority of the children in our sample were not enrolled in any school. Even if we exclude children who are not in school going age, this percentage is still very high. Pakistan already has a very poor literacy rate and only about a third of Pakistani children aged between five and nine are enrolled in primary education.[18] We can only hypothesize the cause/ factors behind poor enrolment of children in school in our sample. One of the reasons might be high prevalence of learning disability and normal schools not having the resources and necessary expertize to cater for special needs of these children leading to high dropout. Limited number of government schools for special children especially in remote village areas, the hesitation of the parents not to send these children to school due to financial constraints and stigma of a child being labeled as special child among many other factors may play a part for this high rate of children not attending schools. There is an urgent need at the government level to explore these causes. Results may help in policy making and establishing institutions at the government level to make these children into productive members of the society.

Another area highlighted by our study was the poor referral rate from other departments within the hospital as well as directly from schools. Few children were referred from the pediatric department, neurology and emergency. In a study conducted in London the referrals from within the hospital were 35 percent specifically pediatric department.[19] Development of active liaison between the various departments of the hospital in general and the pediatric department in particular as well as steps to promote awareness of psychological factors in the management of children and high psychiatric co-morbidity with physical illnesses are needed .Same approach has been suggested in other studies from the country.[16] Furthermore perhaps schools rarely refer the children directly for assessment in Pakistan, rather ask parents to get child assessed in case of any difficulties. It may be that most of the children are also not being referred because of lack of teachers training in screening for child mental health difficulties.

It was noted that majority of the children were referred because of speech related difficulties (which encompasses speech delay, stammering and articulation problems as well as specific developmental delays related to speech & language) followed by learning disabilities, epilepsy and behavioral difficulties. Children with learning difficulties also have very high rates of Psychiatric morbidity and multiple needs and in order to address the needs of these children we require the presence of multidisciplinary team, speech therapist being one important member. In the absence of separate services for learning disability in Pakistan at the moment, majority of these children are seen, assessed and managed by Adult Psychiatry Departments which in the absence of relevant staff like speech, play and occupational therapist are mostly unable to cater for the special needs of this vulnerable group of children.

Similar to other studies worldwide, a high proportion of children presented with behavioral problems (Oppositional Defiant Disorder and Conduct Disorder).[19] Two national studies, one conducted in Karachi and the other in Lahore also has shown the high prevalence of behavioral disorders.[13,16] A study from Alain UAE has reported male predominance of behavioral problems, a trend reflected in our results as well.[17]In a study conducted in London frequency of conduct disorders in the presenting referrals were found to be 44 percent.[19]

Our study also showed that co-morbidities were very common, a finding which correlates with another study carried out in New York, USA which also showed a high level of co-morbidity among children suffering from attention deficit disorders, conduct/oppositional disorders, depression and anxiety disorders.[20] This further highlights the need for a multidisciplinary assessment approach and use of multi-axial classification in management of children with psychiatric problems to ensure a comprehensive treatment strategy.

Family history of psychiatric illness was noted in 19.2 percent of the children. This may be under reported as we only included those cases which had an established diagnosis. Significant association between parental mental illness and child psychiatric problems has been reported in literature however we did not assess the psychiatric health of the care giver/parent due to resource/ time constraints. While managing these children, it is essential to look after the caregivers and address any relevant family stressors which are thought to play a role in the causation of the difficulties. Without involving and taking care of caregivers, it is difficult to bring any improvement in the quality of life of the families which are in dire need.

Majority of the children included in our study were prescribed medication mostly neurotropic. Although pharmacotherapy has an important role in psychiatric disorders,[21] but their judicious use in children is essential. High prescription rates of medicines may be related to the fact that majority of parents believe that medicines are necessary part of the treatment and insists on it in Pakistani setup. Quite often neurotropic are prescribed for children with learning disability along with referral for other more important services like family therapy & neuro-developmental groups. Antipsychotics are also prescribed to the children with behavioral problems, autism with challenging behaviors, tics and psychosis as reported in literature.[22-24]

More than half of the children presenting in the department were also referred to the play therapist, speech therapist and psychologist emphasizing the multiple needs of this group of children .Many studies have emphasized on the role of play therapy[25,26] and psychotherapy in children.[27,28] Speech therapy also has a significant role in the patient with speech difficulties.[29,30] It is suggested that where ever a child psychiatric setup/department is established for the care and treatment of these children, it should have a multidisciplinary team.

The results of the study have to be seen in context of various limitations. It was based in a hospital setting and data is from one hospital only thus results cannot not generalized. Furthermore this data was collected on the first visit and included the most probable diagnosis after team assessment. In some case diagnosis may have been reviewed when further information from multiple sources became available.

Our study highlights the importance of collecting data on a structured basis in order to identify the need & planning of the services. Future studies should include hospitals in multiple sites across the country encompassing both urban and rural settings as well as community based epidemiological studies would be very helpful.

REFERENCES

1. Degotardi VA. Current models of child and adolescent mental health service delivery. Med J Aust 2008;189(9):507-508.
2. Costello EJ, Egger H, Angold A. 10-year research update review: the epidemiology of child and adolescent psychiatric disorders: I. Methods and public health burden. J Am Acad Child Adolesc Psychiatry 2005;44(10):972-986.
3. Waddell C, Offord DR, Shepherd CA, Hua JM, McEwan K. Child psychiatric epidemiology and Canadian public policy-making: the state of the science and the art of the possible. Can J Psychiatry 2002;47(9):825-832.
4. Thomas CR, Holzer CE, 3rd. The continuing shortage of child and adolescent psychiatrists. J Am Acad Child Adolesc Psychiatry 2006;45(9):1023-1031.
5. Kim WJ. Child and adolescent psychiatry workforce: A critical shortage & national challenge. Acad Psychiatry 2003;27(4):277-282.
6. Fayyad JA, Jahshan CS, Karam EG. Systems development of child mental health services in developing countries. Child Adolesc Psychiatr Clin N Am 2001;10(4):745-762, ix.
7. Omigbodun O. Developing child mental health services in resource-poor countries. Int Rev Psychiatry 2008;20(3):225-235.
8. Rahman A, Hussain N. Social dimensions of child mental health in developing countries. J Pak Med Assoc 2001;51(6):226-228.
9. Rahman A, Mubbashar M, Harrington R, Gater R. Developing child mental health services in developing countries. J Child Psychol Psychiatry 2000;41(5):539-546.
10. Mullick MS, Goodman R. The prevalence of psychiatric disorders among 5-10 year olds in rural, urban and slum areas in Bangladesh: an exploratory study. Soc Psychiatry Psychiatr Epidemiol 2005;40(8):663-671.
11. Srinath S, Kandasamy P, Golhar TS. Epidemiology of child and adolescent mental health disorders in Asia. Curr Opin Psychiatry 2010;23(4):330-336.
12. Syed EU, Hussein SA, Mahmud S. Screening for emotional and behavioural problems amongst 5-11-year-old school children in Karachi, Pakistan. Soc Psychiatry Psychiatr Epidemiol 2007;42(5):421-427.
13. Javed MA, Kundi MZ, Khan PA. Emotional and behavioural problems among school children in Pakistan. J Pak Med Assoc 1992;42(8):181-183.
14. Cohen P, Hesselbart CS. Demographic factors in the use of children's mental health services. Am J Public Health 1993;83(1):49-52.
15. Khan F, Shehzad RK, HR C. Child and adolescent mental health services in Pakistan: current situation, future directions and possible solutions. International Psychiatry 2008;5(4):86-88.
16. Sarwat A, Ali SMI, Ejaz MS. Mental health morbidity in children: A hospital based study in child psychiatry clinic. Pak J Med Sci 2009;25:982-985.
17. Eapen V, Swadi H, Sabri S, Abou-Saleir M. Childhood behavioural disturbance in a community sample in Al-Ain, United Arab Emirates. East Mediterr Health J 2001;7(3):428-434.
18. UNICEF. Pakistan-The big picture. unicef.org; 2009 [updated 24 June 2009]; Available from: http://www.unicef.org/infobycountry/pakistan_pakistan_background.html.
19. Stern G, Cottrell D, Holmes J. Patterns of attendance of child psychiatry out-patients with special reference to Asian families. Br J Psychiatry 1990;156:384-387.
20. Bird HR, Gould MS, Staghezza BM. Patterns of Diagnostic Comorbidity in a Community Sample of Children Aged 9 through 16 Years. J Am Academy of Child Adolescent Psychiatry 1993;32(2):361-368.
21. Reebye PN, Elbe D. The role of pharmacotherapy in the management of self-regulation difficulties in young children. J Can Acad Child Adolesc Psychiatry 2009;18(2):150-159.
22. Kratochvil CJ, Greenhill LL, March JS, Burke WJ, Vaughan BS. The role of stimulants in the treatment of preschool children with attention-deficit hyperactivity disorder. CNS Drugs 2004;18(14):957-966.
23. Wolraich ML. Annotation: The use of psychotropic medications in children: an American view. J Child Psychol Psychiatry 2003;44(2):159-168.
24. Zito JM, Safer DJ, dosReis S, Gardner JF, Boles M, Lynch F. Trends in the prescribing of psychotropic medications to preschoolers. JAMA 2000;283(8):1025-1030.
25. Bratton SC, Ray D, Rhine T, Jones L. The Efficacy of Play Therapy With Children: A Meta-Analytic Review of Treatment Outcomes. Professional Psychology: Research and Practice 2005;36(4):376.
26. Ray D. Evidence-based play therapy. Contemporary play therapy: Theory, research, and practice. 2006: 136–157.
27. Kazdin AE. Psychotherapy for children and adolescents. Annual Review of Psychology 2003;54(1):253-276.
28. Weisz JR, Weiss B, Alicke MD, Klotz M. Effectiveness of psychotherapy with children and adolescents: A meta-analysis for clinicians. J Consulting Clinical Psychology 1987;55(4):542.
29. Enderby P, Emerson J. Speech and language therapy: does it work? BMJ 1996;312(7047):1655.
30. Giddan JJ, Trautman RC, Hurst JB. The role of the speech and language clinician on a multidisciplinary team. Child Psychiatry and Human Development 1989;19(3):180-185.

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