
A survey of a child psychiatry clinic in a teaching hospital in Saudi Arabia - Clinical profile and cross-cultural comparison

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Abstract. This is an epidemiologic study of 199 children and adolescents who were referred for evaluation to a child psychiatry clinic in a teaching hospital in Riyadh, Saudi Arabia during a 6 year period.

Objectives: (1) to clarify who utilizes the services of a child psychiatry clinic. (2) what are the psychological problems that triggers the referral, and (3) compare our results with western literature on similar clinical populations of children and adolescents.

Methods: All children referred to the child psychiatry clinic were assessed using a semi-structured interview according to the +AP DSM-III system and a modified global assessment of functioning scale provided for the fourth axis of the DSM III.

Results: Significant findings which differ from literature reports include: a low representation of conduct disorder (5%), high representations of attention deficit hyperactivity disorder (12.6%), mental retardation (20%), conversion disorder (8%) and obsessional disorder (4%). First referred to traditional healers were 46% and there was a low rate (0.6%) of referral from pediatricians compared to 22% in western societies.

Discussion: The results are discussed with emphasis on socio-cultural perspectives.

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Epidemiological studies among the child population have consistently reported high levels of psychological problems with prevalence rates ranging from 6%-25%. Consequently, referrals to child psychiatry services have increased over the years with subsequent proliferation of these services, particularly in the developed countries. In developing countries, however, child psychiatry remains a neglected area in spite of available evidence suggesting that rates of emotional and behavioral disorders are similar to those in developed ones.²

Saudi Arabia has gone through a tremendous cultural change during the last few decades.³ However, the effect of this fast pace of development on the psychological health of the Saudi population has not been systematically studied.

Child psychiatry services are poorly developed in Saudi Arabia. During the time of the study, there was only one child psychiatry clinic in Riyadh City

in which this study was done. The population of Riyadh is around 1.5 million, 45% of whom are under 15 years of age (675,000).³ In addition to the apparent ignorance of childrens' psychological disturbances and poor awareness, there is a complete separation between the educational and health system.³ Traditional medical practices serve a large number of the psychiatric population^{4,5} and children are not an exception. These factors together probably reflect the clinical observation of poor referral rate to the child psychiatry clinic.

Appropriate management of psychiatric disorders in children needs team work and cooperation between various medical, social and educational workers. Promotion of child psychiatric services is overdue and it cannot be accomplished without increasing the awareness of the public and education of pediatric and medical colleagues regarding detection of psychiatric illnesses in young people.

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Our literature search in indexed journals failed to reveal any child psychiatry study in the Gulf area. In Saudi Arabia there are no recognized separate child psychiatric clinics or inpatient units. This is in contrast to the rapidly expanding psychiatric services for the adult population.

The purpose of this paper is simply to clarify the question of who utilizes the services of a child psychiatric clinic? And what are the psychological problems which are likely to bring children to the attention of a child psychiatrist in Saudi Arabia? Our findings are compared with the western literature on similar clinical populations of children and adolescents and an attempt is made to explain the differences.

Materials and methods In 1985, we started to run a separate child and adolescent psychiatry clinic which operates on a weekly basis at King Khalid University Hospital in Riyadh, Saudi Arabia. All referred children and adolescents below the age of 15 years were accepted for evaluation and therefore included in this prospective ongoing survey. The study period covered years 1988-1993 inclusive.

For every patient seen, the first author completed a simple structured questionnaire which covered the following parameters: demographic data, source of referral, schooling, previous consultation of psychiatrists and traditional healers, size of sibship, parents' background including

Table 1 - Demographic and Clinical Data (N = 199)

DATA	MALES N (%)	FEMALES N (%)	TOTAL N (%)	TOTAL N (%)
Age (yrs):				
0-5	4 (8)	8 (4.2)	17 (8.5)	
6-11	56 (50)	45 (51.7)	101 (50.8)	
12-15	47 (42)	34 (39.1)	81 (40.7)	NS
Status of parents:				
Both alive	105 (43.7)	79 (90.8)	184 (92.5)	
Both dead	1 (0.9)	0 (0)	1 (0.5)	
Father dead	2 (1.8)	4 (4.6)	6 (3)	
Mother dead	2 (1.8)	3 (3.5)	5 (2.5)	
Illegitimate	2 (1.8)	1 (1.1)	3 (1.5)	NS
Education:				
None	25 (22.3)	16 (18.4)	41 (20.6)	
Nursery	5 (4.5)	5 (5.7)	10 (5.3)	
Primary	59 (52.7)	46 (52.4)	105 (52.8)	
Intermediate	22 (19.6)	18 (20.7)	40 (20.1)	
Secondary	1 (0.9)	2 (2.3)	3 (1.5)	NS
Area of residence:				
Urban	48 (87.5)	79 (90.8)	177 (89)	
Suburban	13 (11.6)	5 (5.7)	18 (9)	
Rural	1 (10.9)	3 (3.5)	4 (2)	NS
Source of referral:				
Emergency room	7 (6.3)	10 (11.5)	17 (8.5)	
Primary care clinic	66 (58.9)	14 (39.1)	100 (50.3)	
Wards	7 (6.3)	11 (12.6)	18 (9)	
Family	21 (18.7)	18 (20.7)	39 (19.6)	
Other	11 (9.8)	14 (16.1)	25 (12.6)	0.04
Consulting a psychiatrist:				
No	79 (70.5)	67 (77)	146 (73.4)	
Yes	33 (24.5)	20 (23)	53 (26.6)	NS
Consulting a traditional healer:				
No	63 (65.3)	45 (51.7)	108 (54.3)	
Yes	49 (34.7)	42 (48.3)	89 (45.7)	NS
Referred to:				
None	73 (65.2)	67 (77)	140 (70.4)	
Educational service	23 (20.6)	17 (19.5)	40 (20)	
Residential service	8 (7.1)	2 (2.3)	10 (5)	
Other	8 (7.1)	1 (1.2)	9 (4.6)	0.03

demographic data, level of education, socioeconomic status based on income, parents intactness (died, separated, divorced, polygamous marriage) and family history of psychiatric morbidity. All children were assessed and diagnosed by the first author using:

1. a semi-structured interview of the child and parents or parent figures, according to the DSM III criteria.⁶
2. the global assessment of functioning provided for the fourth axis of the DSM III for children, with some modifications that reflect local situations.

Most of the findings we expressed in percentages. The chi-square test was used to assess differences between original data, and P values less than 0.05 were considered statistically significant.

Results A total of 199 cases were assessed at the clinic during the 6-year period of the survey. Demographic and clinical data are shown in Table 1. Age grouping was made to correspond with pre-school, primary, intermediate and secondary school age ranges. The overall sex ratio was 1.3 males to 1 female and the rate of referral for both sexes did not significantly vary with the age groupings. The mean referral rate was 33 cases per year (an exception being 1990 which was 19 cases only). The referral rate was 0.05 per 1000 population per year.

The majority (82%) of the group were Saudi nationals. Fifty percent of our referrals came from primary care physicians followed by families who referred about 20%. No referrals were received from the educational or justice systems. Eighty-nine percent of children live in the city of Riyadh, while the rest came from suburban or rural areas and 92.5% were living with their parents. More than one half of the children were in primary school, while 21% did not have any form of education either because of their age or their psychiatric illness. Sixty-five percent were enrolled in government schools while 14% were in private schools. Twenty-seven percent were previously assessed by a psychiatrist, 11% of whom required admission. A large proportion (46%) of children were previously treated by traditional healers for the index problem and more than half of them for more than once. Separation, divorce or death of a

parent was present in 5%, 7.5% and 6% of children respectively and 10% of the fathers had more than one wife. Three children were illegitimate and lived in an orphanage. The mean age of fathers was 45 years (range 23-80), whereas the mean age of mothers was 36 years (range 19-58). More mothers than fathers were illiterate (86 vs 48) whereas more fathers than mothers (48 vs 19) had a university education ($p=0.000$).

Family size varied from 1 to 15 and 46% of the families had more than 4 children. The family income was low in 30%, average in 60% and high in 8% of cases as judged by the interviewer. History of psychiatric illness, mainly depressive disorder, was present in 9% of the fathers and 20% of the mothers. A similar or other psychiatric illness was present in the siblings of 26% of the children.

A past or present physical illness, having a bearing on the clinical presentation, was recorded in 28% of the cases and the most common of these

Table 2 - Demographic and clinical data (N = 199)

Diagnostic category	N	%
Anxiety disorders	31	(15.6)
Conversion disorder	16	(8.0)
Depressive disorder	6	(3.0)
Obsessive compulsive disorder	8	(4.0)
Simple phobia	3	(1.5)
Conduct disorder	10	(5.0)
Attention deficit disorder	25	(12.6)
Adjustment disorder	4	(2.0)
Stuttering	7	(3.5)
Sleep terror disorder	4	(2.0)
Functional enuresis	23	(11.6)
Functional encopresis	7	(3.5)
Schizophrenia	8	(4.0)
Total	152	(76.3)

Includes: 21 separation anxiety, 9 overanxious and 3 avoidance disorders

was epilepsy (8%).

Eighty-five children (43%) were judged to experience a variety of current psycho-social stresses associated with clinical presentation and ranging from mild to moderate in the majority of cases and catastrophic in only two cases.

Although admission was not possible for lack of hospital provision, this was recommended for further evaluation or management in 61 cases (31%). Furthermore, 40 children (20%) were thought to require special education and 10 (5%) long term residential care.

Table 2 lists the DSM III diagnoses. Seventy-six percent of all cases were given an axis one primary psychiatric diagnosis. Emotional disorders accounted for 32% of cases, of which the commonest diagnosis was separation anxiety presenting with school refusal. Twenty percent of the children were given another axis one diagnosis, functional enuresis accounting for the majority of these secondary diagnoses. Twenty-nine percent of all cases received an axis two diagnosis. The most common axis two diagnosis was mental retardation (20.6%), followed by pervasive developmental disorder (5.5%) and specific developmental disorder (3%).

Discussion Our clinic accepts referrals only once a week which may explain its low utilization. Ignorance about child psychiatric disorders on the side of the public is a likely explanation. In addition, use of traditional medicine could be another contributing factor. In fact, the proportion of traditional medicine users in this study is similar to figures reported among the adult population in Riyadh, Saudi Arabia.^{4,5} Women were found to use more traditional healing than men⁶ and such a tendency may extend to their children. Lack of referrals from the educational or justice systems contrast sharply to 12% rate from western studies.⁷ This could be another reason for low referral rate to our clinic and can be explained by the poor awareness of teachers with regard to children's disturbances and a low prevalence of conduct disorders in the community.

Epidemiological studies in developed countries have consistently found that, overall, boys were referred twice as frequently as girls to child psychiatric services.^{8,9} Our results confirm this gender effect but falls short of the reported 2:1 ratio. A possible explanation for this lower ratio is the different representation of diagnostic categories in our group of children compared to western studies. A striking example of this is conduct disorder which is known to be more prevalent in boys than girls but accounted for only 55 of our cases. Furthermore, our diagnostic groups were diluted by emotional disorders which accounted for

32% of cases. The Isle of White Survey¹⁰ has indicated that just over half the children referred for psychiatric assessment were diagnosed as either conduct disorder or having mixed disorders of conduct and emotion. Similarly, in a survey of over 1000 children referred to a child psychiatric clinic in south-east London, conduct disorders made up one-third of the sample and emotional disorders, another third.¹¹ Our results with regard to conduct disorder were in contrast to the above literature findings. One possible explanation for the surprisingly low representation of conduct disorder in our group is that in this culture these misdemeanors may not be perceived to be within the domain of psychiatry and parents enforce their own corrective and disciplinary measures. Another obvious explanation is a possible actual low incidence and prevalence of conduct disorders in children of Saudi culture. The extended family environment and its wide support system, the relatively lower level of exposure to daily violent, physical aggression and disorderly scenes on television could all be societal rules.

In relation to other diagnostic categories, it would be noted that 20.6% (41 cases) of the group were diagnosed clinically as mentally retarded, the majority mildly so (75.5%). This can be explained by the paucity of separate services for evaluation and special education for the mentally retarded children in Saudi Arabia.

The literature on hysteria in children is sparse and most studies of clinical populations indicate that hysteria is quite an uncommon disorder occurring only in some 1%-2% of referrals.¹²

Conversion disorders accounted for 8% of referrals to our clinic. This finding supports the notion that hysteria is more prevalent in developing countries compared to developed ones.^{3,13}

Clinical studies show that frank obsessional disorders are relatively uncommon in childhood, occurring in 0.2%-1.2% of the clinical population of children and adolescents.¹⁴ The finding that 4% of our cases were diagnosed as obsessional disorder supports the clinical impression prevailing amongst local psychiatrists that obsessional disorders are not as uncommon in this culture as in western ones. American clinics report that 22%-40% of children referred are diagnosed as hyperactive,¹⁵ while at an English teaching hospital, by contrast, only 1.2% of children received this diagnosis.¹⁶ The 12.6% rate in our case perhaps reflects the broader DSM-III concept of attention-deficit hyperactivity disorder.

Over criticism, limited privacy, and the attribution of great importance to appearance are characteristic of the Saudi culture.³ The over-representation of hyperactivity and elimination disorders in our group of children probably reflects the magnitude of distress that these disorders cause in Saudi families. This is supported by the higher referral rate by the parents of these two disorders. Other highly represented disorders in our study involve mostly internal suffering that may not be apparent to others and therefore are not as disturbing to the family. On the other hand, there was a clear tendency for the primary care physicians to refer children with emotional disorders and mental retardation, and children with conversion disorders were mostly referred from the accident and emergency.

It is worth remarking that in 28% of cases there was a past or present physical illness considered to have a role in the clinical presentation. This finding emphasizes the need for taking a thorough medical history and the likely productivity of a physical examination when a child presents with 'psychiatric' symptoms. One fifth of our referrals came from families having had no physical examination prior to presentation to the psychiatric clinic. Close liaison between primary care, pediatric and psychiatric specialists seems mandatory.

It, therefore, follows that training programs and campaigns on awareness and recognition of mental illness in children need to be developed to target this group of professionals. This will diminish the misconceptions concerning mental illness. It may also prevent unnecessary delays in early treatment which may lead to unusual clinical presentations.¹⁷

The discrepancy in the age and educational background between fathers and mothers perhaps reflects the social norms in Saudi Arabia. Low maternal educational levels and the large family size probably reduce the ability to recognize or even notice children's disturbances.

Our results indicate a two-fold history of depressive illness in mothers compared to fathers of the subjects studied. This is not surprising since the incidence of depressive illness in adult literature is reported to be twice as much in females.¹⁸ Furthermore, maternal depression is known to be highly associated with child psychiatric disorders.¹⁹

Though the pediatric primary care physicians were the major source of referral in our study (100

cases), the rate of referral from this source represented only 0.6% of the pediatric primary care case load (16,900) of new patients seen over the 6 year period. This very low rate contrasts sharply with the 22% referral rate reported by a North American study conducted in a pediatric primary care setting.²⁰ The low rate of referral by our pediatricians may reflect an actual low incidence, a social stigma regarding referral to a psychiatrist and/or inability to detect a "hidden psychiatric morbidity." The psychiatry teaching at the College of Medicine offers only one lecture regarding child psychiatry and no clinical first-hand experience for medical students. This low emphasis on child psychiatry results in decreased awareness and poor clinical skills in diagnosis and management.

The failure to recognize a disturbed child may be a result of cultural variation in the mode of expressing distress and psychopathology. Most physicians in the Middle East, whether trained locally or abroad, are significantly influenced by western curricula and classifications. The literal applications of these or the superficial attempt at its modifications to fit another culture is inherently laden with bias. Systemic studies of psychopathologies specific to the Saudi culture is a prerequisite to drawing final conclusions.

In view of the different nature and presentation of psychiatric illnesses in children compared to adults, we believe that there is a great need for separate child and adolescent psychiatric services in the Kingdom. This will provide both service and educational opportunities.

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ملخص:

هذه دراسة استعراضية لمائة وتسعة وتسعين طفلاً ومراهقاً تمت إحالتهم للعيادة النفسية للأطفال في مستشفى تعليمي في المملكة العربية السعودية خلال خمسة أعوام.

الأهداف:

١ - تحديد المستفيدين من خدمات العيادة النفسية للأطفال.

٢ - تحديد المشكلات النفسية التي تدعو إلى الإحالة لهذه العيادة.

٣ - مقارنة النتائج بمثيلاتها في الدراسات الغربية.

الطريقة: كل الأطفال المحولين إلى عيادة الأطفال النفسية تم تقييمهم بواسطة مقابلة نفسية حسب النظام الأمريكي لتقسيم الأمراض النفسية الثالث ومقياس معدل للأداء الشامل للمحور الرابع للنظام الأمريكي لتقسيم الأمراض النفسية الثالث.

النتائج: مقارنة بالدراسات الأخرى كان هناك:

- انخفاض نسبة اضطراب السلوك (٥٪) وارتفاع نسبة اضطراب الانتباه مع زيادة الحركة (١٢,٦٪)، والتخلف العقلي (٢٠٪)، والاضطراب التحولي (٨٪) واضطراب الوسواس (٤٪).

- ومن النتائج أن ٤٦٪ من العينة ذهبوا أولاً إلى معالين شعبيين، وكانت نسبة الإحالة من أطباء الأطفال منخفضة (٠,٦٪) مقارنة بما في المجتمعات الغربية (٢٢٪).

المناقشة: تمت مناقشة هذه النتائج في ضوء المعطيات الاجتماعية للبيئة السعودية.

مفتاح الكلمات: علم نفس الطفل، المملكة العربية السعودية.