

Prevalence of ICD-10 Psychiatric Disorders in Child Psychiatry Clinic: An Egyptian Study

Bishry Z., and Sayed M.

Abstract

The main objective of this retrospective study was to determine the prevalence of the ICD-10 psychiatric disorders among children attending the out-patient child psychiatry clinic at a university hospital in Cairo, Egypt. In this work, the files of children attending the clinics between January 1992 and June 1995 formed the study material. These files include data about the sociodemographic characteristics, physical evaluation, detailed psychiatric interview using a semi structured clinical interview based on the ICD-10 and psychometric tests when needed. Our results showed that 10% of children attending the clinic had no psychiatric disorders. Boys were more than girls, 58.9% and 41.1% respectively. Different sociodemographic factors and their relation to the psychiatric diagnoses were clarified in our results. Behavioral and emotional disorders with onset occurring in childhood and adolescents were found among 48.9% of children who had psychiatric disorders. The information obtained from this study were used for purpose of improving the child psychiatric services not only in the hospital but also in the rest of the community as well.

Introduction

Epidemiological studies indicate that over the course of one year, some 5-15% of 9-10 year-old children suffer from emotional or behavioral disorders of sufficient severity to handicap them in their everyday life. (Rutter, 1989; Offord and Fleming, 1991). The figures for pre-school children are of the same order, while those of adolescents are somewhat higher, while there are more boys with disorders in the 4-11 year-old age group, girls predominate amongst 12-16 year-olds (Offord et al., 1987).

Cantwell and Rutter (1994) mentioned that psychiatric disorders in childhood are very common, but that their identification depends on the criteria employed, in particular the extent of personal and social impairment.

Classification constitutes a mean of ordering information of grouping phenomena and of providing a language by which to communicate with other people (Rutter and Gould, 1985; Cantwell and Baker, 1991, and Cantwell and Rutter, 1994).

During the last decade, research findings have provided an increasing body of evidence supporting the validity of some of the broad diagnostic distinctions within the field of child and adolescent psychiatric disorders (Cantwell and Rutter, 1994).

Because ICD-10 sought to adopt a comparable approach and because it was appreciated that it was highly desirable for every one to use the same system (or at least to use systems that were translatable one into the other), the criteria for individual child psychiatric diagnostic categories in DSM-IV and ICD-10 are closely similar and often identical (Cantwell and Rutter, 1994).

In the ICD-10, the child psychiatric disorders are included in three categories, first, F70 - F79, mental retardation, second, F80 - F89, disorders of psychological development and third, F90- F98, behavioral and emotional disorders with onset usually occurring in childhood and adolescence.

This retrospective study was conducted to assess the frequency of the ICD10 psychiatric disorders among children attending the child psychiatry out-patient clinic in a university hospital in Cairo, Egypt. The information obtained from this study were useful for purposes of improving the child psychiatric services not only in this hospital, but also in the rest of the community as well.

Subjects and Methods

This study was conducted in the institute of Psychiatry, Ain Shams University Hospitals, Cairo, Egypt. The institute of Psychiatry provides comprehensive in-patient and out-patient psychiatric services.

These psychiatric services are provided by a staff of psychiatrists, psychologists, counselors and social workers. Child psychiatry clinic is one of the specialized out-patient services admitted by a child psychiatry team which consists of Psychiatrists, Psychologists, Social workers and Pediatricians. This clinic provided services two times per week and children who are below age of 12 years are allowed to be registered at this clinic, but one year ago this service was extended to include also adolescent below the age of 18 years.

In this study, the files of children attending the child psychiatry clinics between first of January, 1992 and first of June, 1995 formed the study material. These files include data about socio-demographic characteristics, detailed psychiatric interview, physical evaluation by the pediatrician attending the clinic, psychiatric evaluation using a semi structured clinical interview based on the ICD-10 and designed by Sayed M., 1990, to be used in the clinic, and psychometric tests if needed. The diagnosis was based on ICD-10. Data collected was introduced to a personal computer and chi-square was used to calculate the statistical significance of the results.

Results

The total number of children attending the child psychiatry out-patient clinic was 928. About 10% of children attending the clinic (94 out of 928) did not show any evidence of underlying psychiatric disorders, and they were either normal (50 children out of 94) or a physical illness was found to be the reason of their suffering (44 children out of 94). Boys were more than girls in the child psychiatry clinics (58.9% and 41.1% respectively), the difference was statistically significant $P < 0.05$. It was found that 85.2% of children attending the clinic were led by their mothers while 9% were found accompanied by both parents and 5.8% of them were accompanied by their fathers only. The mean age of these children who had mental illness attending the child psychiatry clinic was 10 ± 2.5 years.

The sociodemographic data showed that 41.1% of children were the first child in their families, 32.0% were the second in order while 25.8% were the youngest child. There was no significant correlation between the order of birth of these children and their clinical diagnosis ($P > 0.05$).

Abnormalities related to pre-natal, natal and post-natal period were found in 7.9% of children and there was a significant correlation between these abnormalities and the diagnosis of mental retardation in these children (54 out of 66) $P < 0.05$. Regarding the type of feeding 62% were breast fed, while others were either mixed or bottle fed. No significant relation was found between the type of feeding and the clinical diagnosis of these children. Neurotic traits in childhood were found in 14.5% of children but no significant relation was found between the presence of neurotic traits in childhood and the type of disorders that children develop later on ($P > 0.05$).

About 63% of children attending the clinic were coming from a middle social class families, with a mean family size 5.4, No

family history of mental illness was found among them., while 1.8% of these children had a history of chronic physical illness affecting one of their parents, but all the above mentioned variables were not significantly related to the type of psychiatric disorders that children had.

On the other hand, parental separation (either transient, divorce or death) was found among 2.8% of the families of these children and there was a significant correlation between this parental separation and the diagnosis of conduct disorder in these children ($P < 0.05$).

The prevalence rate by diagnosis and sex distribution is as shown in table (1). Behavioral and emotional disorders with onset occurring in childhood and adolescence (grouped together) had an overall prevalence rate of 48.9% of patients attending the child psychiatry clinics (408 out of 834). There was a higher prevalence rate of this category of disorders among girls than boys (50.7% VS 47.7%)

The distribution of behavioral and emotional disorders with onset occurring in childhood and adolescence are clarified in table (2). Hyperkinetic disorder was found among 3% of children attending the clinic.

More boys were found to have this disorders than girls (4.6% VS 0.9%). The difference was significant ($P < 0.05$) with mean age of 7.1 years. While conduct disorders was found among 10.7% of children, again more boys were found to have this disorder than girls (13.3% vs 7%) the difference was significant ($P < 0.05$), with a mean age of 8.9 years. On the other hand, non organic enuresis was found among 28.9% of children attending the clinic, It was more prevalent among girls than boys (37.3% vs 23%) the difference was significant ($P < 0.05$, with a mean age of 6.5 years. The rest of these disorders are as

shown in table (2). As shown in table (1), 18.5% of patients attending the child psychiatry clinics had the diagnosis of Mental retardation. Mental retardation was diagnosed according to the child's overall ability and the IQ testing. Based on the IQ testing, 60% of those mentally retarded children were mild while 30% were moderate and 10% were severe. Also more boys were found to be more mentally retarded than girls. (18.9% VS 17.8% , the difference was statistically non significant). The mean age of children having Mental retardation was 8.4 years.

Disorders of Psychological development, as in table (1), were found in 7.3% of children attending the child Psychiatry clinic. Within this category, mixed disorder of scholastic skills was found among 6.3%, while pervasive developmental disorder was found among 1% of children attending the clinic. Again, more boys were found to have this disorder than girls (8.8% VS 5.2% the difference was not significant). The mean age of children having mixed disorder of scholastic skills and pervasive developmental disorder was 8.7 years and 7.8 years respectively.

The prevalence rate of neurotic and stress related and somatoform disorders was 2.9% of children attending the clinic. These disorders were more among girls than boys (3.8% VS 2.2%), with a mean age 10.4 years. The different disorders within this category are clarified in table (3).

Table (1) also shows that the prevalence rate of organic mental disorder was 2.9% of children attending the clinic, Post-encephalitic syndrome was the only organic mental disorder. Boys were more than girls among this disorder (3.5% VS 2% the difference was not significant). The mean age of children having this disorder was 8.2 years. Somnambulism was found to be the only behavior syndrome associated with

physiological disturbances among 1% of children attending the clinic. Boys were two times more than girls in having this disorder (1.2% VS 0.6%), with a mean age of 10 years. Mood disorder, mainly depression, was found among 0.7% of children attending the clinic. It was significantly more among girls than boys (1.5% VS 0.2%) ($P < 0.05$), with a mean age of 11.3 years. Schizophrenia, was found among 0.2%, 2 cases, of children attending the

clinic, both were girls with a mean age 12 years. Psychoactive substance use, mainly volatile solvents (Kolla), was found among 0.2%, 2 cases, of children attending the clinic both were boys, with a mean age 11 years.

Epilepsy was found among 16% of children attending the clinic, It was more prevalent among girls than boys (17% VS 15.4%).

Table (1)

Prevalence rate of mental illness among attending child psychiatry out-patient clinic.

Diagnosis ICD-10.	Boys (n-491)		Girls (n-343)		Total (n-834)		P Value
	N	%	N	%	N	%	
Behaviour and emotional disorders with onset occurring in childhood & adolescence.	234	47.7%	174	50.7%	408	48.9%	$P > 0.05$
Mental retardation	093	18.9%	061	17.8%	154	18.5%	$P > 0.05$
Disorders of psychological development	043	38.8%	018	05.2%	061	07.3%	$P > 0.05$
Neurotic and stress related somatoform disorders.	011	32.2%	013	03.8%	024	02.9%	$P > 0.05$
Organic mental disorders	017	33.5%	007	02.0%	024	02.9%	$P > 0.05$
Behaviour syndroms associated with physiological disturbances.	006	31.2%	002	00.6%	008	001%	$P > 0.05$
Mood disorder	001	30.2%	005	01.5%	006	00.7%	$P > 0.05$
Schizophrenia	000	0000	002	00.6%	002	00.2%	$P > 0.05$
Psychoactive substance use	002	0.4%	000	000%	002	00.2%	$P > 0.05$
Others, epilepsy, sexual abuse, rheumatic chorea	076	15.5%	058	017%	134	016%	$P > 0.05$

Table (2)

The distribution of behavioural and emotional disorders with onset occurring in childhood and adolescence.

Diagnosis ICD-10	Boys (n-491)		Girls (n-343)		Total (n-834)		P Value
	N	%	N	%	N	%	
Hyperkinetic disorder	022	4.6%	03	09%	25	003%	P > 0.05
Conduct disorders	065	13.3%	24	7%	89	10.7%	P > 0.05
Separation anxiety disorder	005	1.0%	01	0.3%	06	0.7%	P > 0.05
Phobic anxiety disorder	002	0.4%	03	0.9%	05	0.6%	P > 0.05
Chronic tics disorder	004	0.8%	05	1.4%	09	001%	P > 0.05
Gille de la Tourette syndrome	003	0.6%	00	0%	03	0.4%	P > 0.05
Stereotype movement disorder	001	0.2%	03	0.9%	04	0.5%	P > 0.05
Non-organic enuresis	113	23%	128	37.3%	241	28.9%	P > 0.05
Non - organic encopresis	003	0.6%	02	0.6%	05	0.6%	P > 0.05
Pica	001	0.2%	01	0.3%	02	0.2%	P > 0.05
Stuttering	015	3%	04	1.1%	19	2.3%	P > 0.05
Total	234	47.7%	174	50.7%	408	48.9%	P > 0.05

Table (3)

The distribution of neurotic and stress related and somatoform disorders.

Diagnosis ICD-10	Boys (n-491)		Girls (n-343)		Total (n-834)		P Value
	N	%	N	%	N	%	
Generalized anxiety disorder	8	1.6	3	0.9	11	1.3	
Obsessive compulsive disorder	2	0.4	1	0.3	3	0.4	
Post traumatic stress disorder	1	0.2	3	0.9	4	0.5	
Conversion disorder	0	0.0	6	1.7	6	0.7	
Total	11	2.2	13	3.8	24	2.9	

Discussion:

The findings in the present study determine the prevalence of the ICD-10 psychiatric disorders among children attending the outpatient child psychiatry clinics. The main objective of this retrospective study was to define the size of psychiatric problems in children and to clarify the magnitude of the different psychiatric disorders in children attending the clinic. Moreover, this is to make use of the information obtained for purposes of improving the mental health services, especially child psychiatric services provided by the hospital.

The data provided from this study will be discussed in order to address the following Three questions:

1. What are the risk factors related to the production of Psychiatric Disorders in children?
2. What is the prevalence rate of the ICD-10 psychiatric disorders among patients attending the child psychiatry clinics?
3. What are the implication of such study on the future child Psychiatric Services?

A - Risk Factors and Psychiatric Disorders.

In all, 928 children aged 10 +/- 2.5 years attended the child psychiatry clinics between January 1, 1992 and June 1, 1995. This low figure could be due to a lack of awareness among parents and teacher, the fear of social stigma of such disorders and parents usually do not like for their children to be assessed in the context of psychiatric hospital. Moreover, socioeconomic factors, poor knowledge of such services and lack of adequate psychiatric training among pediatricians and medical practitioners, all are factors attributed to such low figure during this period of time.

The findings of the present study revealed that about 10% of those children attending the clinics did not show any evidence of underlying psychiatric disorders and their symptoms were proved to be either due to

physical illnesses (4.7%) or they were normal (5.3%) and their family brought them psychiatric advise.

Our results support the concept present in our culture regarding the difference between mothers and fathers in their parenting role. Father in our culture is considered to be the main source of financial support of the whole family, while mother is responsible of the physical and emotional well being of children beside the academic achievement at school. We have found that 85.2% of children attending the clinic were brought by their mothers only. Another factor which can explain this high figure is that the clinics are held during the day time while fathers attending their works and most of mothers attending the clinics are not working.

Our results found that the prevalence of Psychiatric disorders was more in boys than girls, as 58.9% of children attending the clinics were boys while 41.1% were girls, the difference between them was statistically significant.

This can be explained by many factors, first, behavior and emotional disorder with onset specific to childhood and adolescent was the most prevalent diagnosis among our sample and we have found that the 57.4% were boys and 42.6% were girls presented to the clinic suffering from this disorder. In addition, Behavior problems were significantly more in boys than girls, this was supported by studies of Cantwell (1994), Baumagaerte et al.(1995) and Wolraich et al.(1996).

Moreover, boys used to externalize their psychological problems while girls prefer to internalize and to endorse their symptoms, thus boys used to be presented earlier than girls by their families for psychiatric

help, this was supported by Bernstein et al., 1996. Another important factor which can explain the early presentation of boys to psychiatric clinics is that, in our culture, the physical and mental well being of boys is more important than that of girls. So families used to detect minor changes in boys early. Beside that families do not prefer to present their girls to psychiatric clinics, even in the presence of lived abnormality, for fear of social stigma.

In our work abnormalities related to the peri-natal period were found among 7.9% of children attending the clinics. The most common type of these abnormalities was the complicated labour as a result of instrumental labour either by the use of forceps or suction using ventouse, both were found in 6% of children attending the clinic.

Moreover, these natal complication were found to be significantly related to the development of mental retardation later in those children $P < 0.05$. Attention deficit hyperactivity disorder and conduct disorder were found among children who had past history of birth complication but this finding was not statistically significant in our work $P > 0.05$. Our result was supported by that of Elwood and Darragh, 1981; Einfeld, 1984. They found that the proportion of children with severe retardation found to have an organic cause is 55 - 75%. Moreover, a far smaller proportion of children with mild mental retardation is found to have an organic cause, typically 10 - 25%, Lamont and Dennis, 1988). However, Goodman, 1994 mentioned that obstetrics and neonatal complications are common but generally innocuous and even severe perinatal complications are usually harmless.

The relation between the development of child psychiatric disorders and certain risk factors within the child and his family was clarified in this study. The following factors were found to be not related to the

presence of psychiatric disorders among children, the birth order, neurotic traits in childhood, social class of the family, family size, family history of physical or Mental illness.

On the other hand this work highlights the impact of paternal relationship as a risk factor in the development of psychiatric disorders in children. Paternal separation, transient or permanent by death or divorce, was found in 2.8% of children attending the clinic. Moreover, there was a significant correlation between this paternal separation, especially divorce, and the development of conduct disorder in children. Nikapota, 1991 mentioned that paternal separation with a subsequent single parent family may lead to social isolation of the caring parent, commonly the mother, or disruption of an extended family network.

In addition, mothers are often observed to be depressed thus lead to poor level of care for children with single parent family. Earls, 1994 found certain correlates of conduct disorder including family dysfunction, paternal mental illness and low income. Blantz and colleague (1991) stressed the importance of chronic marital discord in the etiology of conduct disorder.

B - The Prevalence Rate of ICD-10 Psychiatric Disorders:

Behavioral and Emotional disorders with onset occurring in childhood and Adolescence was the most prevalent diagnosis among children attending the clinic, it is overall prevalence rate was 48.9% Hyperkinetic disorder was found in 3% of children attending the clinic. Our figure was less than that in other studies. The estimate of this disorder using clinicians based experienced found that is prevalence is 3 - 5 %, while this percent increased using standardized interviews to parents or teacher ranging between 14% and 19% (Taylor, 1994).

The above figures based on the DSM manu-

al (APA, 1987). On the other hand, the ICD-10 definition of hyperkinetic disorder has also been studied and has a lower prevalence 1.7% in a population of primary school boys (Taylor et al, 1991).

In an Egyptian study using DSM manual, the prevalence of this disorder among primary school aged children was 9.8% (Abdul Baqi, et al, 1990).

Cantwell (1996), mentioned that attention deficit disorder (ADD) is one of the most important disorders that child and Adolescent psychiatrists treat. It is important because it is highly prevalent making up as much as 50% of children psychiatry clinic populations.

The possible explanation of our low figure of hyperkinetic disorder is that the prevalence rates vary according to the population that is sampled, the diagnostic criteria, and the diagnostic instrument that are used. As our work is clinically based study using a sample of children attending child psychiatry clinic, moreover, is done using ICD-10 based criteria through application of a semi-structured clinical interview, so our result can not be compared with other studies. Another important factor which can explain this low figure is that in our culture, parents tolerate symptoms more than in the western culture in order to avoid the stigma of visiting psychiatrists for their children.

Conduct disorder was found among 10.7% of children attending the clinic. Most of studies determine the prevalence of conduct disorders in children were conducted in a community sample. The overall prevalence of conduct disorder, 5.5% (Earls, 1994), was similar to the rate reported 25 years earlier in the Isle of wight study (Rutter et al., 1970). The prevalence of conduct disorder among primary school children in an Egyptian study was 7.8% (Abdul Baqi et al., 1990).

Regarding the Gender difference, we have found that boys were significantly more than girls in experiencing both hyperkinetic and conduct disorders ($P < 0.05$). Our result was supported by most of studies (Earls, 1994 and Wolraich et al., 1996 and Contwell, 1996, Abdul Baqi, et al., 1990).

In this work the prevalence rate of emotional disorders including separation anxiety and phobic anxiety disorder was lower than other studies, 0.7% and 0.6% respectively. Several epidemiological studies indicate a high prevalence of anxiety disorders in non-referred children. Anderson et al, 1987 found 3.5% for separation anxiety disorder, 2.9% for overanxious disorder, 2.4% for simple phobia and 1% for social phobia. While Bowen et al, (1990), reported a 3.6% for separation anxiety and 2.4% for overanxious disorder. Moreover, a pediatric primary care revealed a one year prevalence of anxiety disorders was 15.4% (Bernstein et al. 1996). Two Egyptian studies were conducted in primary school age children revealed the rate of anxiety disorders 3.9% and 2.2% respectively (Abdul Baqi et al, 1990, and Sayed et al, 1995).

The discrepancy between the epidemiological studies and the clinically based studies and the low figure of the anxiety disorders in our work can be explained by many factors, first, lack of parental knowledge about the difference between normal and pathological anxiety in children. Second, children used to endorse anxiety symptoms so, pediatrician and general practitioner need to search for such anxiety symptoms. Finally, the family network and family doctors usually act as a filter for these cases and used to treat them on non-psychiatric setting.

Non-organic enuresis was found among 28.9% of children attending the clinic. It was significantly more among girls than boys with a mean age of 6.5 years. Only 5% of these children had secondary enure-

sis, they started to wet after a period of continence. On the other hand, non-organic encopresis was found in 0.6% of children attending the clinics. As regard, gender difference in enuresis, Shaffer, (1994) mentioned that bed wetting is equally common in each sex until age 5 years, then boys predominate, so that by age 11 years they are twice as likely to be wet as girls. Two Egyptian studies determine the prevalence of enuresis among primary school children as 6.9% and 17% respectively (Abdul Baqi et al, 1990, and Sayed et al, 1995). The later study was designed to detect anxiety symptoms among primary school children, so the high figure of enuresis denoted the rate of enuresis in association with high anxiety symptoms among children.

The rest of emotional and behavioral disorders are illustrated in Table (2), the prevalence of stuttering, chronic tics disorders and Gilles de la Tourette syndrome found to be 2.3%, 1% and 0.4% respectively.

Mental Retardation (MR), constitutes 18.5% of children attending the clinic. According to the intellectual level, three different degrees of MR were detected in the clinic and these are mild (60%), moderate (30%) and severe (10%). Scott (1994) mentioned that the proportion of people who have MR in each category is very different, the vast majority typically 80% or so have mild MR, around 12% have moderate MR and 7% severe MR while profound MR is uncommon. So our result is different from that of Scott 1994. We have found a significant correlation between the birth complication and the development of MR in children and this can explain the high presentation of MR in the clinics.

Children who had mental retardation were brought to the child psychiatry clinics by their family because of the following,

learning disability, maladaptive behavior and epilepsy.

The work found that the disorders of psychological development were experienced by 7.3% of children attending the child psychiatry clinics. Mixed disorder of scholastic skills was diagnosed using a clinical interview, among 6.3% of these children, while pervasive developmental disorder, Autistic disorder was diagnosed using Autism Diagnostic Interview-R (Rutter and Lord, 1995), this disorder was among 1% of these children. Those children who were diagnosed as autistic started to join another specialised child psychiatry clinic for autistic children only, in order to be attached to a behavioral program and their families joined a group family education sessions, all are practiced at the institute of psychiatry.

According to ICD-10, blocks F70-F79 (Mental Retardation), F80-F89 (Disorders of the psychological development, and F90-F98 (behavioral and emotional disorders with onset usually occurring in childhood and adolescence), cover only those disorders that are specific to childhood and adolescence. A number of disorders placed in other categories can occur in persons of almost any age and should be used for children and adolescents when required. In our work, we have found that all categories of ICD-10 were represented in the child psychiatry clinics as illustrated in table 1.

Organic mental disorders, mainly post-encephalitic syndrome, was found among 2.9% of children attending the clinic. These children presented to the clinic either with residual behavioral changes after long period following recovery from encephalitis or with epilepsy and learning disabilities.

Mental and behavioral disorders due to psychoactive substance use, mainly due to use of volatile solvents was found only in 0.2%

(2 cases). Both cases were using adhesives, a glue called Kolla, they were working children and their mean age was 11 years. This percent is expected to increase in the near future because, the problem of working children is increasing and these volatile substance are cheap and readily available. Farrel and Taylor (1994), mentioned that the estimates of the misuse of volatile substances range from 3-11% in children at secondary school. Moreover, there were 145 volatile substance abuse-related deaths in UK in 1990. (Pottier et al., 1992).

Schizophrenia was diagnosed only in two cases of children attending the clinic. Both were girls with a mean age 12 years and both had Hebephrenic Schizophrenia.

Werry and Taylor (1994) mentioned that schizophrenia, beginning before age of 13, is usually referred to as prepubertal schizophrenia, because this is misleading, so the term very early onset schizophrenia (VEOS) is more descriptive. The frequency of VEOS is clearly rare, there is a rapid increase in adolescence with a peak incidences reached in male between the ages of 15 and 25 and in females about 25 - 35, after which there is a rapid decline. This low figure of schizophrenia in our study can be explained by the upper age limit of the child psychiatry clinic, at the time of the study, was 12 years, so cases with VEOS are usually seen in the adult psychiatry clinics.

Mood disorders, is one of ICD-10 diagnostic categories, were found among 0.7% of children attending the clinic. Moreover, depression was the only mood disorders detected in these cases. This disorder was significantly more among girls than boys ($P < 0.05$). Population studies of children have reported prevalence rate of depression in children ranging between 0.4% and 2.5% (Anderson McGee, 1994), Lewinsohn et al, (1994). Birmaher and colleague (1996) mentioned that in children depres-

sion occurs at approximately the same rate in girls and boys, this results did not matched with our work. This difference can be explained by the mean age of children who had depression in our work was 11.3, this age is round puberty with its biological and social stressors especially in girls.

Neurotic Stress-related and Somatoform disorders were found among 2.9% of children attending the clinic. There was no significant difference between boys and girls ($P > 0.05$). Generalized anxiety disorder was found among 1.3% of children, it was more in boys than girls, the difference was not significant ($P > 0.05$), this was not supported by most of studies (Bernstein et al, 1996, Sayed et al, 1995, Moussa et al 1990 and Costello et al, 1988).

This can be explained by girls tend to endorse more anxiety symptoms than boys, so girls do not manifest anxiety while boys tend to do so. On the other hand, conversion disorder was found among 0.7% of children attending the clinic, it was exclusively present in girls. The low figure of this disorder in our study can be explained as these children are usually seen by family doctors or pediatricians. Chandra et al (1993), found that 30% of children attending a general pediatric department in South India had a diagnosis of conversion disorder.

Obsessive compulsive disorder (OCD) was detected in three children attending the clinic (0.4%). March and Leonard, (1996) mentioned that OCD often goes unrecognized in children and adolescents. They attributed the reasons of such under diagnosis and under treatment to OCD specific factors (secretiveness and lack of insight), health care provider factors (such as incorrect diagnosis and lack of familiarity) and general factors (such as lack of access to treatment resources).

Post traumatic stress disorder was found among 4 children attending the clinic (0.5%), three were girls and that disorder happened as a result of earthquake and the fourth one was a boy and this occurred as a result of death of his father.

Sleep walking [Somnambulism] was the only disorder within the ICD-10 category of behavioral syndromes associated with physiological disturbances and physical factors, it was found among 1% of children attending the clinic, it was two times more in boys than girls. Anders and Eiben, (1996) mentioned that sleep-walking is one of Parasomnias, it occurs in slightly older children of preschool and school-age years. Chandra et al., (1993) found sleep-walking in 3.3% of children attending Paediatric department. This disorder was found among 4.9% of school age children in an Egyptian study (Abdul Baqi et al., 1990). Other conditions from ICD-10 often associated with Mental and Behavioral disorders, diseases of the nervous system (G00 - G99), Epilepsy G40 was found among 16% of children attending the clinic. All types of epilepsy were detected in the clinic and children came for follow up.

C: The implications of the study on future child psychiatric services:

In this study we have found a low figure of children attending the clinic during this period of time and the most common reasons of such findings are Parental fears of stigma and lack of awareness among parents and other medical practitioner. In order to avoid the first reason, two types of child psychiatry services could be done one within the context of general hospital to be held on the paediatric out patient department.

This service will reduce the fears of parents from bringing their children to Psychiatric hospital, Moreover, this service will detect the psychiatric disorders in children presenting with physical symptoms. In ad-

dition, this will help in detection of psychiatric complication of physical illness in children. The second type of child psychiatric service should be held within the context of psychiatric hospital. This clinic will deal with children who come for psychiatric services by themselves, or who referred by Paediatricians or other medical staff for psychiatric evaluation and treatment.

It has to be mentioned that in both types of child psychiatry services, a multidisciplinary team should carry on the service. On the other hand, this team is central to the concept of Paediatric Liaison work. In paediatric Liaison work the multidisciplinary team usually consists of at least one of each of the following: Paediatricians, Child Psychiatrists, Paediatric Nurse, Social Worker, Psychologist, educational worker and play staff. The main function of this team is to evaluate the child in a wholistic way and to set up the plan of management based on that evaluation and accordingly each one in the team will share in order to offer best services to the child and the family.

In order to increase the awareness and knowledge about child psychiatry among Medical Staff including Primary care personnel and Paediatrician, educational workshops can be done. The aim of such workshops is to train the trainees about the psychiatric and Psychological problems among children and how to detect such problems early, moreover, how to treat the minor psychiatric symptoms within their sitting and when to refer children for psychiatric clinics to be seen by child psychiatrist. Also it is important to provide primary care personnel and paediatrician with simple tools to be used for easy and proper psychiatric diagnosis. Family education is essential and can be done within primary care sitting, school meetings and the media. This will help parents to be familiar with psychiatric symptoms and to detect

any abnormalities among their children. Day-Hospital Service is one of the child psychiatric services. In the institute of psychiatry, we started to offer such service to the Austistic children. In our work we have found that emotional and behavioral disorders constitute 48.9% of children attending the clinic. So, day hospital service should be extended to cover all children presented with behavioral disorders such as Hyperactivity disorder, Conduct disorder and other children who have emotional problems as anxiety and depression. This Day Hospital Services can provide group therapy for children and their families, social skills training, Behavior therapy, Family education, art and play therapy.

In-patient service, if has to be done, it should be within the context of General Hospital, in Paediatric ward and should be restricted to severe cases of severe eating disorders, deliberate self harm and psychosomatic disorders. Severe Cases of psychosis or depression can be admitted in a separate ward for adolescents within psychiatric hospital. One of the implications of such study, which already done, was to extend our child psychiatric services to include treatment of adolescents, so the age limit of the clinic was raised up to 18 years.

Finally, proper child psychiatric services will not only reduce the suffering of children in need but also to help them having normal adult life.

References:

- Abdul Baqi O., Bishry Z., Khalil A. (1990).** Emotional and behavioral disorders in Egyptian urban primary school children. The New Egyptian Journal of Medicine, Vol: 4 no. 1, January.
- American Psychiatric Association (1987).** Diagnostic and Statistical Manual of Mental Disorders (DSM III R). American Psychiatric Association, Washington, DC.
- Ander FT and Eiben AI (1996):** Paediatric sleep disorders: A review of the past 10 years. J. Am. Acad. Child Adolesc Psychiatry, 36:1 January.
- Anderson JC, MC Gee R (1994).** Comorbidity of depression in children and adolescents. In: Handbook of depression in children and adolescents, Johnson HF (eds) New York: Plenum, pp 581 ñ 601
- Bernstein AG, Borchardt MC, Perwein RA (1996):** Anxiety disorders in children and adolescents, A review of the past 10 years. J. Am. Acad. Child and Adolesc. Psychiatry, 35: 9, September.
- Birmaher, B., Rayan N., Brent D., et al., (1996)** Childhood and adolescent depression, A review of past 10 years. J. Am. Acad. Child Adolesc. Psychiatry, 35: 11, November
- Blantz B, Schmidt M, Esser G (1991).** Familial adversities and child psychiatric disorders. Journal of Child Psychology and Psychiatry, 32, 939 - 950
- Bowen RC., Offord DR, Boyle MH (1990).** The prevalence of overanxious disorder and separation anxiety disorder. J Am. Acad. Child Adolesc. Psychiatry, 29: 753-758
- Cantwell PD, (1996).** Attention Deficit Disorder: A review of the past 10 years. J. Am. Acad. Child Adolesc Psychiatry, 35: 8, August.
- Cantwell PD and Rutter M., (1994).** Classification: Conceptual issues and substantive findings. In: Child and Adolescent Psychiatry, Modern approach. Rutter M, Taylor E and Hersov L. (eds). Blackwell science, London, Chapter 1, pp 3 - 21.
- Chandra R., Srinivasan S., Mahadevan S: (1993).** The prevalence of mental disorders in school-age children attending a general paediatric department in South In-

dia. *Acta Psychiatr Scand.* 87: 192 ii 196

Costello Aj., Kalas R., Edelbrock CS. (1988). Psychiatric disorder in paediatric primary care. *Arch Gen. Psychiatry*, 45, 1107-1116.

Earls F., (1994). Oppositional defiant and conduct disorders. In: *Child and Adolescent Psychiatry, Modern Approach.* Rutter M, Taylor E, Hersov L (eds). Blackwell science, London. Chapter 18, pp 308-329.

El Wood JH and Darragh P. M. (1981). Severe mental handicap in northern Ireland. *Journal of Mental Deficiency Research.* 25, 147-155

Einfeld SL (1984). Clinical Assessment of 4500 developmentally delayed individuals. *Journal of Medical Deficiency Research*, 28, 129-142

Farrel M. and Taylor E (1994). Drug and Alcohol use and misuse. In: *Child and Adolescent Psychiatry, Modern approach*, Rutter M., Taylor E., and Hersov L. (eds) Blackwell Science, London Chapter 31, pp 529-519

Goodman M. (1994) Brain disorders in Child and Adolescent psychiatry. *Modern Approach*, Rutter M, Taylor E, Hersovs L (eds) Blackwell Science London, Chapter II page 171

Lamont MA, Dennis NR., (1988): Aetiology of mild mental retardation. *Archives of disease in childhood*, 63, 1032-1038.

Lewinsohn PM, Clarke GN, Seeley JR, et al., (1994): Major depression in community adolescents. *J. Am. Acad. Child Adolesc Psychiatry* 33: 809-818

March S.J. and Leonard LH (1996). Obsessive Compulsive disorder in children and Adolescents: A review of the Past 10 years. *J. Am. Acad. Child Adolesc Psychiatry*, 34:10 October

Moussa F., Shaheen O. and Mobarak A., (1990). Psychosocial profile and

prevalence of psychiatric disorders in primary school age children. *The Medical Journal of Cairo University.*

Offord DR, Boyle M, Links DS, (1987). Ontario child health study II. Six months prevalence disorders. *Archives of General Psychiatry*, 44, 832-836.

Offord DR, Fleming JE (1991). Epidemiology: In: Lewis M (ed) *Child and Adolescent Psychiatry*. pp 1156-1168. Williams and Wilkins, Baltimore.

Pottier A., Taylor J., Norman C et al., (1992). Trends in deaths associated with abuse of volatile substance 1971-1990. *St. Georges Hospital Medical School, London*, report no. 5

Rutter M. (1989): Isle of Wight revisited: Twenty-five years of child psychiatric epidemiology. *J. Am. Acad. Child Adolesc. Psychiatry*, 28, 633-653

Rutter M., and Lerd C. (1995) . *Autism Diagnostic Interview - R.* (Third edition). Institute of Psychiatry, De Crespigny Park. London SE 5.8 AF, England.

Rutter M., Tizard J, Whitmore K., (1970). *Education, health and behavior.* Longmans, London.

Sayed M., Okasha A., Bishry Z., Abdul Hamid M. (1995): The prevalence of Anxiety Symptoms in Childhood and underlying Psychiatric disorder. MD. Thesis, faculty of Medicine, department of Neuropsychiatry, Ain Shams University, Cairo, Egypt.

Scott S., (1994): Mental retardation. In: *Child and Adolescents Psychiatry, Modern approach.* Rutter M., Taylor E., and Hersov L., (eds). Blackwell science, London, Chapter 35, pp 616-646

Shaffer D., (1994): Enuresis. In: *Child and Adolescent Psychiatry, Modern approach.* Rutter M, Taylor E., and Hersov L (eds). Blackwell Science, London, Chapter 29, pp. 505-518

Taylor E. (1994). Syndromes of Atten-

tion deficit and over activity. In: Child and Adolescent Psychiatry, Modern approach. Rutter M., Taylor E, Hersov L. (eds). Blackwell Science, London, Chapter 17, pp 285 - 307

Taylor E., Thorley G; Gilles S. et al., (1991). The epidemiology of childhood hyper- activity. Maudsley Monograph no 33, Oxford University Press. Oxford.

Werry SJ and Taylor E. (1994): Schizophrenia and Allied Disorders. In: Child and Adolescent psychiatry, Modern approach. Rutter M., Taylor E and Hersov L. (eds). Blackwell Science, London, Chapter 34, pp 594 - 615

Wolraich ML, Hannah JN, Pinnock Ty et al., (1996). Comparison of diagnostic criteria for attention deficit disorder in a country wide sample. J Am Acad Child Adolesc Psychiatry, 35: 319 - 324

World Health Organization (1992) The ICD-10 Classification of Mental and Behavioral disorders. World Health Organization Geneva.

Authors:

Bishry Z.
Professor of Psychiatry
Faculty of Medicine
Ain Shams University
Cairo - Egypt.

Sayed M.
Lecturer of Psychiatry
Faculty of Medicine
Ain Shams University
Cairo - Egypt.

Adress of Corresspondance

Sayed M.
Lecturer of Psychiatry
Faculty of Medicine
Ain Shams University
Cairo - Egypt.

دراسة استرجاعية للأمراض النفسية و العقلية فى الاطفال حسب التصنيف العالمى للأمراض النفسية رقم ١٠

الهدف الاساسى من هذه الدراسة الاسترجاعية هو تحديد نوعيات نسب الامراض النفسية فى المرضى من الاطفال الذين يترددون على عيادات الامراض النفسية بمستشفى جامعى - القاهرة- مصر، على اساس التصنيف العالمى العاشر للأمراض النفسية. تم اخذ العينة من ملفات المرضى من الاطفال المترددين على العيادات النفسية فى الفترة من شهر يناير ١٩٩٢ و حتى يونيو ١٩٩٥، و قد ضمت هذه الملفات معلومات عن المواصفات الديموجرافية لهؤلاء المرضى و التقييم العضوى و كذلك وصف كامل للتاريخ المرضى وتقييم للمواصفات المرضية على اساس التصنيف العالمى العاشر للأمراض النفسية. و اظهرت النتائج ان ١٠٪ من الاطفال المترددين على العيادات لا يعانون من اي اضطرابات نفسية او عقلية، و قد كان عدد المترددين من الذكور (٥٨,٩٪) اكثر من الاناث (٤١,١٪). تم توضيح العوامل المختلفة من المواصفات الديموجرافية و تحليل علاقاتها بنوعيات الامراض النفسية. و قد وجد ان (٤٨,٩٪) من المرضى الذين يعانون من امراض نفسية و عقلية كان لديهم اضطرابات سلوكية ووجدانية فى فترة الطفولة و المراهقة. استعملت هذه المعلومات بغرض تحسين الرعاية النفسية المقدمة فى للاطفال ليس فقط فى العيادات النفسية و لكن فى المجتمع ككل.