

## Prevalence of Depression in a Sample of Egyptian Secondary School Female Students

Abdel-Aziz MF<sup>1</sup>; Abdel Hady N<sup>2</sup>; El-Missiry A<sup>1</sup>; Sultan M<sup>1</sup>; El Rasheed A<sup>1</sup> and Sabry W<sup>1</sup>

<sup>1</sup> Institute of Psychiatry

<sup>2</sup> Pediatric Department

Faculty of Medicine, Ain Shams University Hospital, Cairo, Egypt.

Date received:

Date accepted:

**Background:** Depression is the most prevalent psychiatric disorders in the adolescence period; however, concerned studies are still scarce. Data on prevalence rates, socio-demographic and clinical correlates, and putative risk factors in Egyptian population is needed to inform future research and service development.

**Objectives:** to estimate the pinpoint prevalence of depression and its socio-demographic correlates and putative risk factors in secondary school adolescent females in greater Cairo.

**Subjects and Method:** six hundreds and two students participated in our study, they were recruited from three public and, three private secondary schools in eastern Cairo. Children depression Inventory (CDI) was used as a screening method and Structured Clinical Interview for DSM-IV axis-I was used to diagnose cases with axis-I depressive disorders.

**Results:** 15.3% obtained high depression scores on CDI, while 13.3% were diagnosed of depression. Major depression was by far the frequent diagnostic category (5.2%), followed by adjustment disorder with depressed mood (5%), then dysthymia (3.1%). A considerable percentage had sub-syndromal symptoms (8.7%). A number of factors were found to be significantly correlated with depression, such as academic under achievements, quarrelsome, family atmosphere, negative life events, past medical history and family history of psychiatric disorders.

**Conclusion:** There is a need for depression related health education programs to target those at a high risk to develop depression, also its mandatory to increase the awareness of school teachers to recognize early students with depression for early intervention.

**Keywords:** Adolescent depression, School Girls, Prevalence, Risk Factors

### Abbreviations

AD: Adjustment disorder ; CDI: Children Depression Inventory; DALYs: Disability Adjusted for Life Years; SCID-I: Structured Clinical Interview for DSM-IV Axis I Disorders

*Egypt. J. Psychiatry, ... - ...*

## INTRODUCTION

Adolescence is a transition from childhood to adulthood, typically characterized by increased demands for coping with multiple social, biological, and psychological changes, as well as the emergence of the cognitive precursors of adulthood. In some instances, the changes and demands of adolescence may render a teenager feeling helpless, confused, and pessimistic about the future. Such adolescents are likely to become more depressed (Powers, et al. 2004).

Depression is one of the most common and disabling mental disorders. It is considered to be the single leading neuropsychiatric cause of disease burden especially in developing countries (Patel, 2007), and is estimated to rank the second disabling disease worldwide by the year 2020

(Murray and Lopez, 1996; Khan, et al. 2002). Adolescent depression in particular is believed to be a substantial contributing factor to the cumulative burden of this disorder (Lynch and Clarke, 2006).

A plethora of research found increased prevalence of depression among younger age groups (Murphy, 2000). It is considered to be the most frequent mental disorder among adolescents with a prevalence rate ranging up to 20% between those aged 14-19 years, where around 20%-25% of the adolescents reported a lifetime history of at least one episode of major depression (Allen, et al. 2007; Birmaher; et al. 1996; Lewinsohn, et al. 1993). This range commensurate with the prevalence rates reported for the adult population;

suggesting that depression in adults often starts in adolescence (Kessler, et al. 1994). However, the symptoms often present differently to those in adults and may go unrecognized by families and physicians (Torros, et al. 2004).

Several studies suggested temporal trend changes in the rates of major depression with a pronounced increase in the late teenaged and early adult years (Klerman and Weissman, 1989). The point prevalence of depression ranges from 4% to 22% in early compared to late adolescents, denoting that advancing in age is a risk factor for depression in youth (Donnelly, 1995; Oldehinkel, et al. 1999; Curatolo, 2000; Bahls, 2002; Torros, et al. 2004). Findings also suggest a progressive increase in rates of depression in successive birth cohorts and even a creeping earlier age of onset (Klerman, et al 1985).

Epidemiological studies consistently showed a persistent gender effect with two to three times higher risk among women compared to men across all adult ages, with prevalence rates of around 14.1% compared to 8.6% respectively (Klerman and Weissman, 1989; Coopeland, et al. 1999). This skew tends to normalize or even shift towards boys in early childhood; however, with the onset of puberty, the gender proportion of depression dramatically shifts back to a two girls to one boy ratio (Born, et al. 2002). Several epidemiological, community and clinical studies have also shown that girls typically display higher levels of depressive symptoms than boys (Compas, et al. 1997; Bennett, et al. 2005). This may be attributed to a multitude of factors including; genetics, increased prevalence of anxiety disorders in females, biological changes associated with puberty, cognitive predisposition and socio-cultural factors (Breslau et al. 1998). Hence, it is not unexpected that the disease burden, measured as Disability Adjusted for Life Years (DALYs), for females is estimated to be higher than that for males. It ranks the fourth leading cause of disease burden in females while it is the seventh for males (Khan et al. 2002).

Depression often permeates an adolescent's social life, family relation and academic performance (Fergusson and Woodward, 2002). It increases morbidity, mortality, and affects negatively the quality of life of young individuals and their families (Lynch and Clarke, 2006). Affected adolescents are at greater risk for recurrent depression into adulthood, increased hospitalization rates, substance abuse, antisocial behaviours, impaired psychosocial functioning, adverse developmental and psychological consequences, as well as an increased rates of suicide (Puig-Antich, et al, 1985; Rohde, et al. 1994; Bardone, et al. 1996; Setala et al. 2002). Moreover, the progression of depression into adulthood, especially in child bearing females,

can contribute to unfavourable effects on the mother-child interactions and children's future behaviour and development (Minkovitz, et al. 2005).

Despite the serious consequences of depression, there is evidence that depressive disorders often remain undiagnosed and under treated in young people (Davis. 2005; Mergl, et al. 2007; Bramesfeld, et al. 2007). However, treatment of depression is available; many studies report that only around one fourth to one third of adolescents with depression receive treatment (Zuckerbrot, et al. 2007).

Hence, it can be argued that early intervention with proper identification of adolescent depression, its correlates and risk factors, coupled with optimal treatment can represent a potentially significant and cost-effective preventive strategy. Consequently, scientific research should focus in the first instance on providing policy makers and mental health authorities with the necessary culturally sensitive information to direct health resources toward better recognition and treatment of depression among adolescents. Especially with respect to female adolescents who are at greater risk of developing the illness and suffering its adverse consequence; besides this target group are expected to be future mothers who are going to carry out a major part of the responsibility of raising the new generations.

## STUDY OBJECTIVES

We conducted this study to determine the point prevalence of depressive disorder in a sample of Egyptian female secondary school students in the Eastern district of Greater Cairo. Also to determine some of depression correlates and possible risk factors among this important target group.

## SUBJECTS AND METHODS

Ethical approval for the study was granted from Ain Shams University Ethical Committee, as well as permission from the Ministry of Education and school authorities. Prior to collecting data or visiting schools a number of administrative clearances were obtained. All students and their guardians were informed about the aim and procedures of study prior to participation in the research. Consent was obtained from all participants.

**The study design:** The study was a school based cross-sectional, survey.

**Sampling technique and sample size:** The plan was worked out to draw a sample of the population from female secondary school students in Greater Cairo. The total population of girls aged 14-17 in greater Cairo was found to be 630660 according to

the **Central Agency for Public Mobilization and statistics (2007)**, so the sample effect-size was determined to be not less than 500 candidates.

A multi-staged random sampling was performed randomly at five different levels:

1. Cairo city has 5 major geographical areas from which one was picked (Eastern Cairo).
2. Educational system in Eastern Cairo were divided into principal major categories (Private and Public) based on socioeconomic profile from each category three schools were randomly chosen
3. Schools were randomly selected from two educational districts (*Heliopolis and El-Zayton*), one represents higher socioeconomic status (private schools) and the other less affluent status (public schools).
4. From each school, 3 classes (one class represents each secondary grade) were selected and all consenting students in each class were included. Selection of classes was determined by the school authorities.

The identified potential participants were 617 girls. 11 guardians refused participation and 4 students were on long term sickness. The total study group consisted of six hundred and two (602) female secondary school students with a mean age  $15.66 \pm 0.9$  years. 292 (48.5%) students were recruited from private schools and 310(51.5%) from public schools.

## TOOLS AND PROCEDURES

In the first step, all students completed the Arabic version of the:

- a) **Children Depression Inventory (CDI) (Kovacs, 1981)** (Translated by Gharib Abdel Fatah, 1995)

The scale covers wide a range of depressive symptomatology such as sad mood, hopelessness, guilty feeling, suicidal thoughts, social isolation, scholastic deterioration and social problems. The scale is a reliable and valid self rating scale (Kovacs 1992; Timbremant, et al. 2004) suitable for children and adolescents from seven to seventeen years old.

The scale is consisted of 27 items in the form of groups of statements; every group consists of three statements represents his feeling at the last two weeks. Each item on the scale is scored from 0-2 according to the symptom severity. The total score ranges between 0-54. There is a wide variability in the cut-off scores used ranging from 12-25, which depends on case characteristics. The raw score is plotted on a scoring grid and converted to a T. score. A raw score greater than 20 is clinically significant in western countries; however, we used 24 as a cut-off point as recommended by previous national studies on

Egyptian high school students in Alexandria (Afifi, 2004).

- b) **Fahmy and El Sherbiny Social Classification scale 1988:** the scale covers personal, socio economic data, level of education, occupation of the parents, family size, sanitation in the house, etc
- c) **Designed Questionnaire:** We have devised a set of questionnaires in the form of yes/no, multiple choice, or closed ended format based on Ain Shams Psychiatric Institute sheet to assess the following domains: (age, place of residence, number of siblings, medical problems, life events, scholastic achievement, puberty, family background and other personal data).
- d) **Medical Examination:** High scorers on (CDI), who scored  $\geq 24$ , were medically examined by a paediatrician to exclude those who have depression secondary to medical illness.
- e) **Psychiatric interview:** High scorers on (CDI) were interviewed using the Structured Clinical Interview for DSM-IV axis I diagnosis: Research version (First et al, 1995). We use the Arabic adapted rendition (El Missiry, et al. 2000; 2004).

## Data processing and statistical analysis:

Data were transferred to a personal computer. Analysis was done using Statistical Package for Social Sciences (26) Version-10 (SPSS-10). Pearson Chi-Square Test ( $\chi^2$ ) was used for comparison between qualitative variables. Linear regression was done for independent variables to depression. P value was used to indicate the level of significance ( $P \leq 0.05$  is considered significant,  $P \leq 0.01$  is highly significant,  $P \leq 0.001$  is very highly significant).

## RESULTS

### Screening for Depressive Symptoms

Screening for depressive symptoms among secondary school female students revealed that 15.3% (92) out of 602 students had depressive symptoms. 47 students (7.8%) from private school and 45 students (7.4%) from public schools (figure; 1). The data presented in table (1) shows insignificant statistical difference ( $p=0.290$ ) between private and public school as regards depressive symptoms measured by CDI score.

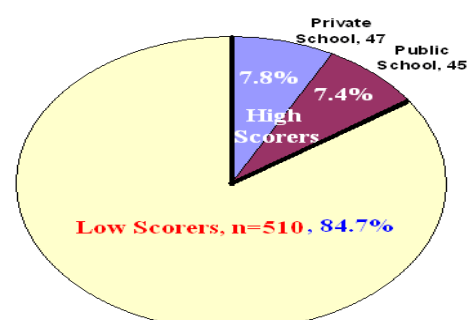


Figure 1: High and low scorers on CDI

**Table (1):** Distribution of high and low scorers on CDI among secondary school female students: (private versus public schools)

School Scorers	Private School (n=292)		Public School (n=310)		P value
	N	%	N	%	
High Scorers $\geq 24$	47	16	45	14.5	0.590 (NS)
Low Scorers $< 24$	245	84	265	85.5	

Chi-Square Test, df = 1,  $\chi^2 = 0.290$

Second grade students showed the highest prevalence rate of depressive symptoms followed by 1<sup>st</sup> grade, then 3<sup>rd</sup> grade students (12%, 22% and 10% respectively). The differences between these rates were statistically significant (P=0.002) (Table 2)

**Table (2):** Distribution of high and low scorers on CDI among female students in different school grades

Grade Scorer	1 <sup>st</sup> grade students no.= 229		2 <sup>nd</sup> grade students no.= 230		3 <sup>rd</sup> grade students no.= 143		P value
	N	%	N	%	N	%	
Low Scorers $< 24$	201	88	180	78	129	90	

Test used: Chi-Square Test, df =2,  $\chi^2 = 12.389$

### Clinical Diagnosis of Depressive Disorders

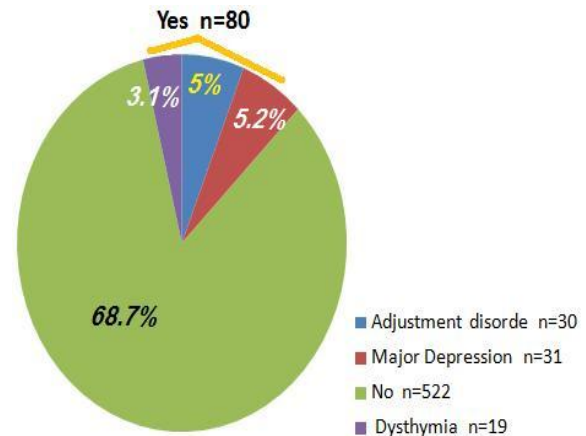
The High scorers on CDI (92 students) were interviewed further using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-1). Only 80 out of 92 students (86%) labelled the diagnosis of depression. Four (4.3%) students were excluded because they had depression secondary to medical illness (Rheumatoid arthritis, bronchial asthma, diabetes type I)

The rest 8 students (8.7%) had depressive symptoms not mounting to the diagnosis of major depression or dysthymia or adjustment disorder with depressed mood, so they considered being as sub-threshold cases.

The most common diagnostic category was major depression in (5.2%) followed by adjustment disorder with depressed mood in (5%) then dysthymia in (3.1%).

We also estimated the type of depression in different types of school and in different school grades (table 3 and 4) clarify that there is no statistical significant difference as regard rates and type of depression in private versus public schools, however there is

significant higher rates of depressive among 2<sup>nd</sup> year versus 3<sup>rd</sup> and first year candidates.



**Figure 2:** Prevalence of depressive disorders (as estimated by SCID-1) among the whole female students population (n=602)

**Table (3):** Type of depression (private versus public schools students)

Type of Depressive Disorder	Private School depressed students N=39		Public School depressed students N=41		P value
	N	%	N	%	
Adjustment disorder with depressed mood	13	36	17	41	0.67 (NS)
Major Depression	18	46	13	32	
Dysthymia	8	18	11	27	

Test used: Chi-Square Test, df =2,  $\chi^2 = 0.18$

**Table (4):** Type of depression among students in different grades

Type of Depressive Disorder	1 <sup>st</sup> grade N (24)		2 <sup>nd</sup> grade N (42)		3 <sup>rd</sup> grade N (14)		P value
	N	%	N	%	N	%	
Adjustment disorder	10	41.7	12	28.6	8	57	P 0.018 (Sig)
Major depression	10	41.7	16	38.1	5	36	
Dysthymia	4	16.6	14	33.3	1	7	

Test used: Chi-Square Test, df =2,  $\chi^2 = 6.83$

### Predictive Factors for Depressive Symptoms among Adolescent Females:

We examined different variables thought to be risk factors in developing depression among low and high CDI scorers. We performed linear regression analysis statistical test. We used the CDI high score of depressive symptoms as dependent factor and the following variables as independent risk factors, e.g.: age, age at menarche, school grade, socio-economic status, deteriorated academic achievement, disturbed home environment, family history of psychiatric illness, negative life events, termination of romantic relation, past history of general medical condition and outdoor activities.

Data presented in table (5) reveals that academic under achievement, quarrelsome home environment, and socioeconomic status has high predictive risk factors for developing depression. This is followed by medical conditions, negative life event and family history of

psychiatric disorders. The rest of variables are not significantly considered as risk factors in this study.

**Table (5):** Predictive factors for depressive symptoms among secondary school female students

	Beta coefficient	P value	Significance
Academic achievement	-0.112	0.000	VHS
Termination of romantic relation	-2.622	0.000	VHS
Quarrelsome home environment	-1.946	0.000	VHS
Socio-economic status	0.683	0.006	VHS
Medical condition	-3.260	0.012	HS
Negative life events	-2.619	0.013	HS
Family history of psychiatric illness	-2.40	0.052	Sig
Age	-0.0223	0.470	NS
Age of menarche	-.070	0.723	NS
School grade	0.283	0.437	NS
Outdoor activities	0.497	0.220	NS

**Test used:** Linear regression analysis

## DISCUSSION

Depressive disorders constitute a serious mental health problem in adolescence all over the world. Adolescent onset depression signals a protracted course of illness and predicts significant morbidity and potential mortality from suicide (Kutcher, et al. 2004). Gender differences also emerge during adolescence, resulting in twice as many females as males with diagnosable depression (Georgiades et al. 2006).

Thus, the main focus of our study is to provide factual answers to questions pertaining to the prevalence of depressive disorders among adolescent females, and the predictive risk factors. We used Children Depression Inventory (CDI) as a screener for depressive symptoms; data revealed that 15.3% of secondary school females had depressive symptoms, however, depressive disorders were estimated to be only 13.3% using the Structured Clinical interview (SCID I) for DSM-IV.

In comparison with previous Egyptian studies, our finding mirrored earlier reports indicating that depressive symptoms were present in 12.8% among adolescent female students in Alexandria (Affi, 2004) and 10.25% in preparatory school adolescents (Abou Nazel et al. 1991). However, our reported prevalence rates were significantly less than an earlier study by Okasha, et al. (1977) which reported a prevalence rate of 24% in Egyptian university young females. This can be understood in the context that the stress of joining university may increase the expression of depressive symptoms (Fergusson, 2005).

On the other hand, our results were higher than a previous study on Egyptian students in El Sharquia Governorate which found a prevalence of 7.6% using self-reported questioners (Said, et al. 1989). This may be due to the difference in study design

and sampling; but can be possibly attributed to the clinical finding that depression is encountered more frequent in larger urbanized governorates as Cairo and Alexandria as compared to rural cities; possibly due to more stressful life style and societal demands. Harpham, (1994) argued that *"urbanization in developing countries involve changes in social support and life events which have been shown to affect mental health; mainly depression and anxiety, particularly among low income women"*. Moreover, urban population may be more expressive and familiar with mental disorders as compared to rural individuals who tend to somatize (Sethi and Sharma, 1985). Somatizers are less introspective and are less likely to attribute symptoms to psychological causes with a tendency to endorse normalizing causes, which can reflect as decreased distress with symptoms on self-reported depression scales as compared to diagnostic interviews (Kirmayer and Robbins, 1996; Becker, 2004). However, further comparative studies should endeavour to analyse the possible urban and rural differences in prevalence rates, and examine the effect of rising trend of urbanization and urban migration in the Egyptian society.

In Arab countries, several studies indicated a high prevalence of female adolescent depression. Affi et al. (2004) reported increased depressive symptoms among school adolescents in Oman. Daradkeh and his colleagues (2002) also found similarly significant high rates of depression among adolescent high school students (10.3%) in EL Ain city of United Arab Emirates. Whereas Swadi and Issa, (1995) reported 15.6% prevalence rates of depressive symptoms among adolescent females in United Arab Emirates. In Sudan, Shaaban and Baashar, (2003) reported a prevalence of 11% among adolescent females.

In other mainly Islamic cultures, the rates appear to be higher. Higher rates of depressive symptoms (39.6%) were reported in female high school students in Turkey (Unsal and Ayranci, 2008). Similar high rates were estimated using Beck's self administered questionnaire in Iran by Modabber and his colleagues. They found that 39% of female students had depressive symptoms (Modabber, 2007).

In other countries, the estimates of adolescents' depressive symptoms as assessed by rating scales have ranged from 5% to 50%, while community surveys indicated that the prevalence of depressive disorder in adolescents is between 8% and 15% (Adewuya, et al. 2007; Ekundayo et al, 2007;Bhatia, et al. 2007). In an American study (Doerfler et al. 1988) found the rate was 10%, while it is 20% in Germany (Oldehinkel, 1999), and 20.8% in Ireland (Donnelly, 1995). In a relatively more recent American study reported 28.7% of

depressive symptoms among adolescents from both gender (Akiskal, 2000).

This variability in results between different studies all over the world may be attributed to variability in cultural factors, methodology and instrument used, sampling process, sample size, variability in age group and whether the sample included both sexes or females only or whether the target population is a true community sample or a school-based sample (Yurdukuru et al. 1989, Reinherz et al. 1990, Abou Nazel et al. 1991 and Chairman, 1994).

### Clinical Diagnosis

5.2% of our studied population met the criteria for major depressive disorder. Shaffer et al, (1999) found that 5% of those 9 to 17 years of age had major depressive symptoms. Adewuya et al. (2007) could identify 8.9% prevalence rate of major depression in Nigerian female adolescents. This variability in results may be explained by differences in the sampling process and tools used for assessment as some studies used DSM-III criteria for major depression and other studies used DSM-IV criteria for depression (Stewart, 2002 and David et al. 2005).

There is a paucity of research data in respect to Adjustment disorder in adolescents (Pelkonen, et al. 2007); however studies suggest that adjustment disorder is prevalent in all settings, and carries significant morbidity and poor outcome in children and adolescents (Newcorn and Strain, 1992). It is considered to be a major precursor and predictor of depression and other mental disorders, personality problems, behavioural and conduct problems, delinquency, substance misuse and suicide (Andreasen, and Wasek, 1980; Andreasen and Hoenk, 1982; Marttunen, et al. 1993; Ge and Conger, 1999; Portzky, et al. 2005 a,b; Yen and Chong, 2006; Elonheimo, et al. 2007).

In our study, Adjustment disorder (AD) with depressed mood was the second most common depressive mood disorder, where most of the clinical symptoms typically started within three months of an identifiable stressor (e.g. relationship, social, or school problems). Pelkonen, et al. (2007) also found AD to be the second most common (31%) clinical entity among a sample of Finish adolescent outpatients, while in in-patient settings Faulstich, et al (1986) found a prevalence of (12.5%) and Møller, et al (2007) reported (10.6%). Al-Haidar, (2003) also reported high rates of adjustment disorders referrals to an inpatient child and adolescent unit in Saudi Arabia. Little is known about gender difference in prevalence rates of AD in the Arab world; however, Al ansari and Matar (1993) report preponderance of the female gender among out-patient Bahraini adolescents with AD. Hence; further Arabic studies needs to focus on

AD, its gender characteristics, risk factors, and its trajectory.

In our study, the rate of dysthymia was found to be 3.1%. This is consistent with many western studies where the rate of dysthymia ranged between 3% and 3.5% (Goodman et al. 2000). Moreover, we found 8.7% of our sample to have sub-threshold depressive symptoms. These results are slightly higher than a previously reported rate of (7.3%) by David, et al. (2005), and substantially higher as compared to Stewart et al. (2002) report of only (2.2%.) sub-threshold depressive symptoms in a sample of adolescents in US and Hong Kong. The variation in results may be attributable to differences in the operational definition of sub-threshold depression used by different studies as some have included dysthymic disorder in the continuum of sub-threshold depression (David et al, 2005, Ekundayo et al. 2007).

Our data revealed that a high significant percentage of depressive symptoms were recorded in the second grade followed by the first grade students. This could be attributed to the new educational system in Egypt in which graduation from secondary school depend on academic achievement in 2<sup>nd</sup> and 3<sup>rd</sup> years with increasing school demands. These data was in contrary to that reported by Modabber et al. (2007), in Iran in which there was no significant correlation between rates of depression and school grade.

Our study failed to confirm that depression is more prevalent among older adolescents than younger adolescents as found in western culture (Klerman and Weissman, 1989). This may be due to the narrow age range in our study.

### Risk Factors

In our study we found several biomedical and psychosocial variables that were statistically associated with symptoms of depression; these factors include:

#### Academic under achievement

Depressive negatively impacts school performance (zuckerbrot et al, 2007 and Bhatia et al. 2007). The deteriorated academic achievement was found to be an important risk factor for adolescent depression in our study. Deteriorated scholastic achievement is usually associated with maladjustment, humiliation at school, low self esteem with poor self image, and is an important risk factor for adolescents' depression (Toros et al. 2004).

Abou Nazl et al. (1991), in an in an Egyptian sample, found that poor academic performance is a marker for adolescents at high risk for depression; however, other studies argued that the deterioration in academic achievement may be

only a constitutional part of the cognitive disturbance found in depression (Lewinsohn et al. 2003).

### **Family circumstances**

In our study one of the most important factors related to depression among adolescent females was the problems with parents and quarrelsome home atmosphere. Contemporary research indicates that disrupted family functioning and abnormally expressed emotions may be an important risk factor for mental health problems (Friedmann et al., 1997; Bachmann et al., 2002).

The traditional collectivistic nature of the Egyptian culture with its extended families and male-dominant patriarchal hierarchy has its unique influence on family functioning and relationships (El-Shafie, et al, 2008). Generally father plays a dominant role within the family, determines the rules governing the family structure, considering their main role towards their offspring is the financial support and has a limited relationship with his offspring. They may consider getting closer to their children may weaken their control and power within the family; whilst mothers are generally much closer to their children, and they are more openly affectionate, sympathetic and tolerant towards problems concerning their children. However, Egyptian parents tend to make strong restricted rules especially around girls where their behaviour is often under continuous scrutiny and criticism, for either social or religious reasons (Okasha et al 1994). This ultraconservative upbringing and the skew towards favouring males (Abukhalil, 1997; Douki et al 2003) may create discord between the parents and their offspring and may lead to psychological problems especially during the teenage years.

Dwairy and Menshar (2006) reported that authoritative style is more predominant in the parenting of Egyptian female adolescents. This model places strong emphasis on obedience rather than persuasion, and on harsh punishment rather than guidance. This type of relation may lead to helplessness, despair and depression and was found to be strongly related to mental health problems in Egyptian adolescent females (Dwairy and Menshar, 2006). Moreover, it is suggested that the recent inadequate economic circumstances are thought to have resulted in more stressful home environment and family discord (El-Shafie, et al, 2008).

Our finding, in concordance with other previous studies, suggested that adverse family process, increase adolescent vulnerability to depression (Kutcher, et al. 2004; Afifi, 2004). However, others argued that this family relation may be the result of depression rather than being a causal factor (Sheeber, et al. 2000; Trangkasombat, 2006).

Our results have found that positive family history of psychiatric illness is a risk factor for depression among adolescent females. This finding is similar to some studies who found that positive family history of psychiatric illness leads to genetic anticipation resulting in earlier and more severe form of depression in the offspring (Duffy, 2000; Filed, et al. 2001).

### **Socioeconomic Factors**

Our study indicates that depressive symptoms seem to have a significant association with low socioeconomic state as reported by previous researchers (Blazer, 2000; Modabber, et al. 2007).

Although, in general, the rate of depression seems to be higher in those with low socioeconomic status; however, some argue that the association may be just an epiphenomenon (Pozanski and Mokros, 1994; Rushtan, et al. 2002). Moreover, research in this field has used different kinds of socioeconomic classification methods with various criteria, which may preclude arriving at a uniform conclusion. Hence, research should endeavour to implement culturally sensitive socioeconomic classificatory criteria that are reflective of the recent economic situation.

### **Negative Life Events**

Stressful life events have a strong causal association with depression (Hammen, 2005). In this study, history of negative life events, (e.g.: termination of romantic relation, negative life events, etc.) represent strong risk factors for adolescent depression. Nonetheless, a major limitation for stressful life events research in adolescents' depression is that much of researches focused on cross sectional data obtained from self report checklist, making it difficult to establish a causal relationship (Adams and Adams, 1993).

### **Other Factors**

In our study we found that the age of menarche had no effect on depression. Reported data about menarche onset and risk for depression is not conclusive. Some researchers found that menarche marks a transition in the risk for depression in girls (Patton, et al. 1996; Hassmen, et al. 2000), whilst others did not support this finding (Koenig and Gladstone, 1998; Kutcher et al. 2004)

Our study revealed that lacking of outdoor activities and hobbies carries little risk for developing depression among adolescent females. Contrary to previous, researches which indicate that lacking outdoor activities and hobbies have been linked to depressive episodes (Carney, 2007).

Medical disease causes a significant burden on the patients, as well as their families and can predispose to depression and other mental health problems in adolescents. Similar to other results (Cappelli et al. 1989), our study found that past history of general medical condition, represents a strong risk factor for adolescent depression.

## CONCLUSION

Depression is a common, and prevalent in Egyptian female secondary school students. It causes impairments across different areas of functioning, and has been correlated in particular with lower academic achievement and poor family relation. There are different putative factors that can increase the risk of depression in adolescent females. Low academic performance, disturbed home environment, history of negative life events, hormonal changes, and past history of medical illnesses, were among the strong determinants of depression in this target group.

Adolescent depressive disorder is a public health risk that can be associated with adverse psychosocial consequences. Proper identification and early treatment can provide a cost-effective strategy to ameliorate the associated untoward risks and decrease the burden of the disease. Hence, mental health services in Egypt and the Arab countries should invest more in culturally sensitive awareness, prevention, and educational programmes targeting patients, families, teachers, and primary care physicians. There is also an increasing need for service development to meet the needs of this group and provide evidence based management for depressed adolescents. Moreover, early intervention in adolescence depressive disorders should be a crucial research agenda for the future.

## LIMITATION

Several important limitations should be considered in interpreting the results of our study. One of the limitations of is that the study was a cross-sectional, thus precluding inference of casualty among variables. Also, the present study comprised a group of students in Cairo which may limit the generalization of the results to other population.

## Corresponding Authors:

Dr Ahmed El-Missiry, MD MRCPsych and Dr Marwa Sultan, MD, Institute of Psychiatry, WHO Collaborating Centre for Mental Health Training and Research, Faculty of Medicine, Ain Shams University, Abbassia, Cairo, Egypt. PO. Box: 11657 Dair Al-Malak, Website: www.ASUIP.net,

## REFERENCES

- Abou-Nazel, M.W., Fahmy, S.I., Younis, I.A., El-Din, A.G.S., Fatah, M.A., Mokhtar, S. 1991.** A Study of Depression among Alexandria Preparatory School Adolescents. *J Egypt Public Health Assoc*; 66(5-6):649-74.
- Abukhalil A. 1997.** Gender boundaries and sexual categories in the Arab world. *Fem Issues.*; 15(1-2):91-104.
- Adams, J. and Adams, M. 1993.** Effects of a negative life events and negative perceived problem- solving alternatives on depression in adolescents a prospective study, *Journal of Child psychology and psychiatry*; 34: 743-747.
- Adewuya, A.O., Ola, B.A., Aloba, O.O. 2007.** Prevalence of major depressive disorders and a validation of the Beck depression inventory among Nigerian adolescents.
- Afifi, M. 2004.** Adolescent use of health services in Alexandria, Egypt: association with mental health problems. *Eastern Mediterranean health journal*; 10(1-2):64-71.
- Akiskal, H. 2000.** Mood disorders: Introduction and overview. In: Sadock BJ, et al. *Comprehensive Textbook of psychiatry*. 7<sup>th</sup> ed Philadelphia: Williams and Wilkins;:1284-1298
- Al-Ansari, A., & Matar, A. M.(199).** Recent stressful life events among Bahraini adolescents with adjustment disorder. *Adolescence*, 28(110), 339-346.
- Al-Haidar, F. A. 2003.** Inpatient child and adolescent psychiatric referrals in Saudi Arabia: clinical profiles and treatment. *Eastern Mediterranean Health Journal = La Revue De Santé De La Méditerranée Orientale = Al-Majallah Al-Shihhiyah Li-Sharq Al-Mutawassit*; 9(5-6), 996-1002.
- Allen, N. B., Hetrick, S. E., Simmons, J. G., and Hickie, I. B. 2007.** Early Intervention For Depressive Disorders in Young People: the Opportunity and the (Lack of) Evidence. *The Medical Journal of Australia*, 187(7), S15-S17.
- Andreasen NC, Hoenk PR.1982.** The predictive value of adjustment disorders: a follow-up study. *Am J Psychiatry* 139:584-590,.
- Andreasen, N. C., and Wasek, P. 1980.** Adjustment disorders in adolescents and adults. *Archives of General Psychiatry*, 37(10), 1166-1170.
- Bachmann S, Bottmer C, Jacob S et al. 2002. Expressed emotion in relatives of first-episode and chronic schizophrenia patients and major depressive disorder: a comparison. *Psychiatry Res*. 112: 239- 250.
- Bahls, S.C. 2002.** Epidemiology of depressive symptoms in adolescents of a public school in Curitiba, Brazil. *Rev Bras Psiquiatr*; 24(2):63(112):903-11.

- Bardone AM, Moffitt T, Caspi A, Dickson N. 1996.** Adult mental health and social outcomes of adolescent girls with depression and conduct disorder. *Dev Psychopathol*; 8: 811-829.
- Becker, S. M. 2004.** Detection of somatization and depression in primary care in Saudi Arabia. *Social Psychiatry and Psychiatric Epidemiology*, 39(12), 962-966.
- Bennett, D. S., Ambrosini, P. J., Kudes, D., Metz, C., and Rabinovich, H. 2005.** Gender differences in adolescent depression: do symptoms differ for boys and girls? *Journal of Affective Disorders*, 89(1-3), 35-44.
- Bhatia, S.K., Bhatia. S.C. 2007.** Childhood and adolescent depression, *American family phy.* Vol. 75 No.1:73-80
- Birmaher B, Ryan ND, Williamson DE, et al. 1996.** Childhood and adolescent depression: a review of the past 10 years. Part 1. *J Am Acad Child Adolesc Psychiatry*; 35: 1427-1439.
- Blazer, D.G. 2000.** Mood disorders, epidemiology. In: Sadock BJ, et al. *Comprehensive Textbook of psychiatry*. 7<sup>th</sup> ed Philadelphia: Williams and Wilkins;1298-1308
- Born, L., Shea, A., and Steiner, M. 2002.** The roots of depression in adolescent girls: is menarche the key? *Current Psychiatry Reports*, 4(6), 449-460
- Bramsfeld, A., Grobe, T., and Schwartz, F. W. 2007.** Who is treated, and how, for depression? An analysis of statutory health insurance data in Germany. *Social Psychiatry and Psychiatric Epidemiology*, 42(9), 740-746.
- Breslau, N., Peterson, E.L., Schultz, L.R., Chilcoat, H.D., Andreski, P. 1998.** Major depression and stages of smoking. A longitudinal investigation. *Arch Gen Psychiatry*; 55: 161- 6.
- Cappelli, M., McGrath, P.J., Heick, C.E., Macdonald, N.E., Feldman, W., Rowe, P. 1989.** Chronic disease and its impact: The adolescent's perspective. *J Adolesc Health Care*; 10:282-8.
- Carney, S. 2007.** Understanding teen depression, what Parent, teacher, youth workers need to know, [http:// youth.development. Suite 101.com /cfm](http://youth.development.Suite101.com/cfm).
- Central Agency for public mobilization and Statistics (CAMPAS) 2007.** The statistics year book, Cairo, Egypt.
- Chairman, T. 1994.** The stability of depressed mood in young adolescents: A school-based survey. *J Affective Disord*; 30:109-16.
- Compas, B.E., Oppedisano, G., Connor, J.K., Gerhardt, C.A., Minden, B.R., Achenbach, T.M. et al. 1997.** Gender differences in depressive symptoms in adolescence: comparison of national samples of clinically referred and youths. *J Consult Clinical Psychol*; 65: 617 – 26.
- Coopeland, J.R., Beekman, A.T., Dewey, M.E. et al. 1999.** Depression in Europe. *Geographical distribution among older people. British Journal of Psychiatry*; 174: 312 – 321.
- Curatolo, E. 2000.** Epidemiology of depression among adolescents in Brazil; *J Consult Clin Psychol*; 24:63-67
- Dahlmann, B.H. 2001.** Depressive syndromes and suicide. In: Remschmidt H, ed. *Psychotherapy with children and adolescents*. Cambridge; New York: Cambridge Uni. Press:291-306
- Daradkeh, T.K., Ghubash, R., Abou-Saleh, M.T. 2002.** Al Ain community survey of psychiatric morbidity II. Sex differences in the prevalence of depressive disorders. *Journal of affective disorders*; 72(2):167–76.
- David, M., Fergusson, L., John Horwood, Elizabeth M. Ridder, Annette L. Beautrais 2005.** Sub-threshold depression in adolescence and mental health outcomes in adulthood, *Arch Gen Psychiatry*; 62: 66-72.
- Davis, N. M. 2005.** Depression in children and adolescents. *The Journal of School Nursing: The Official Publication of the National Association of School Nurses*, 21(6), 311-317.
- Doerfler, R.S., Felner, R.D., Rowlison, R.T., Raley, P.A., Evans, E. 1988.** Depression in children and adolescents, a comparative analysis of the utility and construct validity of two assessment measures. *J Consult Clin Psychol*; 56:769-72.
- Donnelly, M. 1995.** Depression among adolescents in Northern Ireland. *Journal of Adolescence*; 30(118); 339-50.
- Douki S, Nacef F, Belhadj A, Bouasker A, Ghachem R. 2003.** Violence against women in Arab and Islamic countries. *Arch Womens Ment Health*. Aug;6(3):165-71
- Duffy, A. 2000.** Toward effective early intervention and prevention strategies for major affective disorders, a review of antecedents and risk factors-*Can J Psychiatry*; 45:340-348.
- Dwairy, M., and Menshar, K. E. 2006.** Parenting style, individuation, and mental health of Egyptian adolescents. *Journal of Adolescence*, 29(1), 103-117.
- Ekundayo, O.J., Stallworth, J.D., Roofe, M. et al. 2007.** Prevalance and correlates of depressive symptoms among high school students in Hanover, Jamaica; *The scie. World Jour*,7, 567-76
- El Missiry, A; Sadek, A; Abdel-Ghani, O; Okasha, T. 2000.** Psychiatric Interviewing Techniques. Ms Thesis. Ain Shams University, Cairo, Egypt.
- El Missiry, A; Sorour, AF; Sadek, A; Fahy, Tom; Mawgoud, M.A; Asaad, Tarek. 2004.** Homicide and Psychiatric Illness: an Egyptian study. MD Thesis. Ain Shams University, Cairo, Egypt.
- Elonheimo, H., Niemelä, S., Parkkola, K., Multimäki, P., Helenius, H., Nuutila, A., et al.(2007).** Police-registered offenses and

- psychiatric disorders among young males : the Finnish "From a boy to a man" birth cohort study. *Social Psychiatry and Psychiatric Epidemiology*, 42(6), 477-484.
- Fahmy, S.I. and EL Sherbini, A.F. 1988.** Determining simple parameters for social classification for health researchers. *The Bull of the High Institute of Public Health*; X; 95 – 108.
- Faulstich, M. E., Moore, J. R., Carey, M. P., Ruggiero, L., and Gresham, F. 1986.** Prevalence of DSM-III conduct and adjustment disorders for adolescent psychiatric inpatients. *Adolescence*, 21(82), 333-337.
- Fergusson, D.M. et al. 2005.** Subthreshold depression in adolescence and mental health outcomes in adulthood. *Archives of general psychiatry*; 62(1):66–72.
- Fergusson, D.M., Woodward, L.J. 2002.** Mental health, education, and social role outcomes of adolescents with depression. *Arch Gen Psychiatry*. 59:225-231.
- Filed, T., Diego, M., Sander, C. 2001.** Adolescent depression and risk factors. *Adolescence*, this article is available on [http://findarticles.com/p/articles/mi\\_m2248/is-268/143-36](http://findarticles.com/p/articles/mi_m2248/is-268/143-36).
- First MB, Spitzer RL, Williams JB, Gibbon M. 1995.** Structured Clinical Interview for DSM-IV (SCID-I) - Research Version: User's Guide and Interview. 1st ed. Biometrics Research, New York, NY, USA.
- Friedmann MS, McDermut WH, Solomon DA, et al. 1997. Family functioning and mental illness: a comparison of psychiatric and nonclinical families. *Fam Process*. Dec; 36 (4): 323-4.
- Ge, X., and Conger, R. D.(1999).** Adjustment problems and emerging personality characteristics from early to late adolescence. *American Journal of Community Psychology*, 27(3), 429-459.
- Georgiades, K., Monroe, S.M., Seeley, J.R. 2006.** Major depressive disorder in adolescence, the role of subthreshold symptoms. *J Am. Acad. Child Adolesc. Psychiatry*; 45(8): 936-944.
- Gharib, A. 1995.** The children Depression Inventory CDI. Second Edition. Dar EL-Nahda: Cairo.
- Goodman, S.H., Schwab-Stone, M., Lahey, B.B. et al. 2000.** Major depression and dysthymia in children and adolescents: discriminant validity and differential consequences in a community sample. *J Am Acad Child Adolesc Psychiatry*; 39:761-770.
- Hammen C. 2005.** Stress and depression. *Annu Rev Clin Psychol.*, 1:293-319.
- Harpham, T. 1994.** Urbanization and mental health in developing countries: a research role for social scientists, public health professionals and social psychiatrists. *Social Science & Medicine*, 39(2), 233-245.
- Hassmen, P., Koivula, N., Uutela, A. 2000.** Physical exercise and psychological well being, a population study in Finland-Prev Med; 30(1):17-25.
- Kashani, J.H., Beck, N.C., Hoepfer, E.W. et al. 1987.** Psychiatric disorders in a community sample of adolescents. *Am J Psychiatry*; 144:584-589.
- Kessler, R.C., M.C. Conagle, K.A., Zhao, S., Nelson, C.B., Mughes, M., Eshleman, S. et al. 1994.** Life time and 12-month prevalence of DSM – III – R Psychiatric disorders in the United States. *Ach Ger Psychiatry*; 51: 8.
- Khan, A., Gradner, C., Prescott, C., Kendler, K. 2002.** Gender differences in the symptoms of Major depression in opposite sex dizgotic twin Paris. *Am J. Psychiatry*; 159: 1427 – 1429.
- Kirmayer, L. J., and Robbins, J. M. 1996.** Patients who somatize in primary care: a longitudinal study of cognitive and social characteristics. *Psychological Medicine*, 26(5), 937-951.
- Klerman GL, Lavori PW, Rice J, Reich T, Endicott J, Andreasen NC, et al. 1985.** Birth-cohort trends in rates of major depressive disorder among relatives of patients with affective disorder. *Arch Gen Psychiatry*;42:689-93.
- Klerman, G. L., and Weissman, M. M. 1989.** Increasing rates of depression. *JAMA: The Journal of the American Medical Association*, 261(15), 2229-2235
- Koeing, L.J., Gladstone, T. 1998.** Pubertal development and school transition. *Sage J Behavioral modification*; 22: 335-357.
- Kovacs, M. 1992.** The children's depression inventory. N Tonawanda, N Y.; Multi-Health Systems.
- Kovacs. M. 1981.** Rating scales to asses depression in school – aged children. *Acta Paedo psychiatric*; 46: 305 – 315.
- Kutcher, S., Kusumakar, V., Le Blane, J., Santor, D., Lagace, D., Morehouse, R. 2004.** The characteristics of asymptomatic female adolescents at high risk for depression: The baseline assessment from a prospective 8-year study. *Journal of affective disorders*; 79: 177-185.
- Lewinsohn, P., Pettit, T.E. Jr. Joiner, T.E. Jr. Sedcv, J.R. 2003.** The symptomatic expressions of major depressive disorder in adolescents and young adults. *J Abnorm Psychol*; 112:244-252.
- Lewinsohn, P.M., Hops, H., Roberts, R.E. et al. 1993.** Adolescent psychopathology, I: prevalence and incidence of depression and other DSM-III-R disorders in high school students. *J Abnorm Psychol*; 102:133-144.
- Lynch, F. L., and Clarke, G. N. 2006.** Estimating the economic burden of depression in children and adolescents. *American Journal of Preventive Medicine*, 31(6 Suppl 1), S143-151.
- Mergl, R., Seidscheck, I., Allgaier, A., Möller, H., Hegerl, U., and Henkel, V. 2007.** Depressive, anxiety, and somatoform disorders in primary care:

prevalence and recognition. *Depression and Anxiety*, 24(3), 185-195.

**Minkovitz, C. S., Strobino, D., Scharfstein, D., Hou, W., Miller, T., Mistry, K. B., et al. 2005.** Maternal depressive symptoms and children's receipt of health care in the first 3 years of life. *Pediatrics*, 115(2), 306-314.

**Modabber, M.J., Tehrani, H.S., Moosavi, S.R., et al. 2007.** The prevalence of depression among high school and preuniversity adolescents: Rasht, Northern Iran. *Arch Iranian Med* vol.10, No.2 Apr 2007;141-146

**Møller, L. R., Sørensen, M. J., & Thomsen, P. H. 2007.** ICD-10 classification in Danish child and adolescent psychiatry--have diagnoses changed after the introduction of ICD-10? *Nordic Journal of Psychiatry*, 61(1), 71-78.

**Murphy, J.M. 2000.** Studying the incidence of depression: an interval effect. *International Methods in Psychiatric Research*; 9, 184 – 193.

**Murray, C.J. and Lopez, A.D., 1996.** Evidence-based health policy--lessons from the Global Burden of Disease Study. *Science*, 274(5288), 740-3.

**Newcorn, J. H., and Strain, J. 1992.** Adjustment disorder in children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 31(2), 318-326.

Okasha A, el Akabawi AS, Snyder KS, Wilson AK, Youssef I, el Dawla AS. 1994. Expressed emotion, perceived criticism, and relapse in depression: a replication in an Egyptian community. *Am J Psychiatry*. Jul;151(7):1001-5,.

**Okasha, A., Kamel, M., Sadek, A. et al. 1977.** Psychiatric morbidity among university students in Egypt. *British Journal of Psychiatry*; 131, 149 -151.

**Olaniyi, J., Joana, D., Michele, R. et al. 2007.** Prevalence and correlates of depressive symptoms among high school students in Hanover, Jamaica. *The ScientificWorld Journal* 2007;7:567-576

**Oldehinkel, A.J., et al. 1999.** Prevalence, 20 month incidence and outcome of unipolar depressive disorders in a community sample of adolescents. *Psycho Med*;29:655-68

**Patel, V., 2007.** Mental health in low- and middle-income countries. *British Medical Bulletin*, 81-82, 81-96.

**Patton, G., Carlin, H., Shao, Q., Rosier, M., Caust, J. and Bowes, G. 1996.** Menarche and the onset of depression and anxiety in Victoria, Australia; (6): 661-666.

**Pelkonen, M., Marttunen, M., Henriksson, M., & Lönnqvist, J. 2007.** Adolescent adjustment disorder: precipitant stressors and distress symptoms of 89 outpatients. *European Psychiatry: The Journal of the Association of European Psychiatrists*, 22(5), 288-295

**Portzky, G., Audenaert, K., and van Heeringen, K. 2005a.** Suicide among adolescents. A

psychological autopsy study of psychiatric, psychosocial and personality-related risk factors. *Social Psychiatry and Psychiatric Epidemiology*, 40(11), 922-930.

**Portzky, G., Audenaert, K., and van Heeringen, K. 2005b.** Adjustment disorder and the course of the suicidal process in adolescents. *Journal of Affective Disorders*, 87(2-3), 265-270.

**Powers, T.A., Zuroff, D.C., Topciu, R.A. 2004.** Covert and overt expressions of self-criticism and perfectionism and their relation to depression. *Eur J personality*.18:61-72.

**Poznanski, E., Mokros, H.B. 1994.** Phenomenology and epidemiology of mood disorders in children and adolescents. New York: Plenum: 19-39.

**Puig-Antich J, Lukens E, Davis M, Goetz D, Brennan-Quattroch J, Todak G. 1985.** Psychosocial functioning in prepubertal major depressive disorder. I: Interpersonal relationship during the depressive episode. *Arch Gen Psychiatry*. 42:500-507.

**Quality and impact of Family Relationships on Psychiatric Patients: case control study.2008.** El-Shafie, TM; Ragheb, KM; Khalil, AH; Demerdash, AM, Seif-EI-Din, AG; Attia, HM, El-Missiry, AA. *ASUIP Current Psychiatry Vol.15 (2)* 356-373; July.

**Reinherz, H.Z., Frost, A.K., Stewart-Berghauer, G., Pakiz Kennedy, K., Schille, C. 1990.** The many faces of correlates of depressive symptoms in adolescence. *J Early Adolesc*; 10 455-71.

**Rohde P, Lewinsohn PM, Seeley JR. 1994.** Are adolescents changed by an episode of major depression? *J Am Acad Child Adolesc Psychiatry*; 33: 1289-1298.

**Rushton, J.L., Forcier, M., Schectman, R.M. 2002.** Epidemiology of depressive symptoms in the National Longitudinal Study of Adolescent Health. *J Am Acad Child Adolescent Psychiatry*. 41:199-205.

**Said, M., Sobhi, A., Yousef, I., et al. 1998.** An epidemiological study of depression among a sample of Egyptian adolescents. M.D. Thesis, Faculty of Med. Ain Shams University.

**Setala, A.T., Marttunen, M., Henriksson, T.A., Poikolainen, K., Lonngvist, J. 2002.** Psychiatric treatment seeking and psychosocial impairment among young adults with depression. *Journal of affective disorder*; 70 (1): 35-47.

**Sethi, B. B., and Sharma, M. 1985.** Depressive disorders in the developing world. *The International Journal of Social Psychiatry*, 31(3), 217-222.

**Shaaban and Baashar 2003.** A community study of depression in adolescent girls: prevalence and its relation to age Med. Principles and practice. *Eastern Mediterranean Health Journal*;12(4):256-9.

**Shaffer, D., Fisher, P., Dulcan, M.K., et al. 1996.** The NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC-2.3): description, acceptability, prevalence rates, and performance in the MECA Study. *J Am Acad Child Adolescent Psychiatry*; 35:865-877.

**Sheeber, L., Alien, N., Davis, B. et al. 2000.** Regulation of negative affect during mother-child, problem-solving interactions, adolescent depressive status and family processes. *J Abnorm Child Psychol*; 28:467-479.

**Statistical Package for Social Sciences** version 10. Available at: <http://www.spss.com>.

**Stewart, S.T. 2002.** Symptom pattern in depression and sub-threshold depression among adolescent in Hong Kong and the United States, *Journal of cross cultural psychology*; 33 (6) 559-576.

**Swadi, H. and Issa, M. 1995.** Depressive symptoms in a community sample of UAE teen age girl. *Arab journal of Psychiatry*; 9(1):22-38.

**Timbremont, B., Braet, C. et al. 2004.** Assessing depression in youth: relation between the children's depression inventory and a structured interview. *J Cli Child Adoles Psychol*;33:149-157.

**Trangkasombat U. 2006.** Family functioning in the families of psychiatric patients: a comparison with nonclinical families. *J Med Assoc Thai*. Nov;89(11):1946-53.

**Unsal, A., Ayranci, U. 2008.** Prevalence of students with symptoms of depression among high school students in a district of western Turkey: An epidemiological study, *Journal of School Health Vol78 No.5*: 287-93.

**Yen, C., and Chong, M. 2006.** Comorbid psychiatric disorders, sex, and methamphetamine use in adolescents: a case-control study. *Comprehensive Psychiatry*, 47(3), 215-220.

**Yurdukoru, B., Demirbas, H., Bayatli, V. 1989.** Investigation of depression using Beck depression inventory in dentistry students. *Ankara University Hekim Fak Derg*; 16:117-21 [in Turkish].

**Zuckerbrot, R.A., Maxon, L., Pagar, D., Davis, M. et al. 2007.** Adolescent depression screening in primary care: Feasibility and acceptability, *Pediatrics*; 119;101-8.

## معدل إنتشار الإكتئاب في عينة من طالبات المدرس الثانوية المصرية

فكري م ، عبد الهادي م.، المسيري أ، سلطان م، الرشيد م، صبري و .

**خلفية:** الإكتئاب هو احد أكثر الإضطرابات النفسية السائدة في فترة المراهقة؛ لكن الدراسات ، المتعلّقة ما زالت نادرة لذا يجب جمع البيانات على نسب الإنتشار و الإرتباطات الديموغرافية و الإجتماعية و السريرية التي قد تمثل وعوامل خطر في عينة من المصريين لإعلام البحث العلمي المستقبلي و تطوير الخدمات الطبية .

**الأهداف:** فحص معدل إنتشار الإكتئاب في عينة من طالبات المدرس الثانوية المصرية و ربط العوامل الديموغرافية و الإجتماعية لتحديد عوامل الخطر التي تؤثر على المرض.

**الطريقة:** ست مئآت وطالبين شاركا في دراستنا، تم إختيارهم من من ثلاثة عامة ، وثلاث مدارس خاصة في شرق القاهرة. تم فحص الحالات بإستعمال قائمة إكتئاب الأطفال (CDI) ونظمت مقابلة سريرية بأستخدام

المقابلة الاكلينيكية المقننة للدليل الاحصائي و التشخيصي الرابع للجمعية الامريكية للطب النفسي (SCID-1) **النتائج:** ١٥,٣ % حصلوا على نتيجة عالية على قائمة إكتئاب الأطفال (CDI)، بينما ١٣,٣ % تم تشخيصهم بواسطة المقابلة الاكلينيكية المقننة. الإكتئاب كان إلى حد بعيد أكثر إنتشارا (٥,٢ %)، تلى بإضطرابات التكيف (٥ %)، ثم بإكتئاب المزاج المزمن (٣,١ %). نسبة كبيرة كان عندها أعراض بسيطة ٨,٧ (%). عدد من العوامل تبين إرتباطها بشكل ملحوظ بالإكتئاب، مثل التأخر الأكاديمي ، العلاقات الاسرية و الجوّ العائلي ، أحداث الحياة السلبية، تاريخ طبي المرضي والتاريخ عائلي للإضطرابات النفسية.

**الاستنتاج :** هناك حاجة الى برامج تعليم صحية لاستهداف المرضى و عائلاتهم و لزيادة وعي المعلمين و الاطباء الاولين بالإكتئاب و تطوير الخدمات الصحية الإكتئاب، و التشخيص و التدخل المبكر. لعلاج الإكتئاب