

**\* An Investigation of Childhood Depression  
In United Arab Emirates**

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\* This paper was presented at the Second UAE Psychiatric Conference, Emirates Medical Association, Abu-Dhabi, UAE, from April 30 to May 2, 1990.

\*Also, published in: Journal of College of Education, UAE University, 1992, 8, 182-212.

\* Psychological Research in United Arab Emirates and Egypt . The Anglo Egyptian Bookshop. 1995

**An Investigation of childhood depression in UAE: Its  
frequency, components, and age and sex differences in a normal  
\* prepubertal population.**

By  
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**Abstract:**

This study examines the frequency, components, and sex , age difference of depression in a normal prepubertal population in United Arab Emirates. Three hundred and seventy two 3rd, 4th, 5th, and 6th, grade students (218 females & 154 males) from three Emirates volunteered to complete The Children's Depression Inventory (CDI). Data were analyzed in order to address the following questions:

- (1)What is the frequency distribution of depression in normal prepubertal population?
- (2)Are there age and sex differences related to depression in a normal prepubertal population?
- (3)What are the major components of depression in a normal prepubertal population?

**Finding indicated that:**

- (1)Depression, as measured by the Children's Depression Inventory, is reported at relatively low levels in a normal prepubertal population. Graphically, the depression scores distribution can be described as being slightly skewed to the right, thus indicating a tendency towards lower levels of depression.
- (2)A clear pattern of age and sex differences in depression was apparent in this population.

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(3) The major components of depression in this population were identified as:

- (1) indecisiveness,
- (2) pessimistic worrying,
- (3) reduced appetite,
- (4) somatic concerns,
- (5) general anhedonia,
- (6) suicidal ideation, and,
- (7) anhedonia at school.

The results are discussed in the light of the previous studies in the literature. Implications for counseling and future research are presented.

### **Introduction:**

Until the beginning of the twentieth century, affective disorders in childhood were completely ignored as clinical entity. At the beginning of the century, however, many seasoned clinicians described depressed children with great sensitivity and detail. Many viewpoints about childhood depression have been offered. An early extreme view was that the psychosexual development of young children precluded the development of depressive disorders (Rie, 1966, Cited in Puig-Antich, & Gittelman, 1982, p.379). Many other workers in the field of child psychiatry did not accept the existence of affective disorders prior to adolescence, and some of their doubts were based on theoretical grounds, such as the link between depressive illness and the time of the formation of the superego and the ego ideal (Puig-Antich, & Gittelman, 1982, p.379). Others argued that depression did occur in children, but it assumed clinically different forms. This commonly held theory gave rise to the concepts of "masked depression", and "depressive equivalents"(Glaser, 1967, pp.565-574). The "masked" depression theory of childhood depression proposes that, many types of behavior disorders emerge in children because of the child's defensive reaction to the underlying depression, such as: hyper kinesis, enuresis, headaches, delinquency, phobias, and under-achievement (Kovacs, & Beck, 1977, pp.1-25). Another held by conners (Connors, 1976, Cited in Puig-Antich, & Gittelman, 1982, p.379) argued that the immature cognitive and emotional development of the child was responsible for the adult-child differences in the differences in the behavioral manifestations of the same depressive disorder.

Basing their argument on reports and clinical observations, some workers in the field advanced the hypothesis that some depressed children display disorders similar to those of adults (Puig-Antich et al, 1973, Cited in Puig-Antich, &Gittelman, 1982, p.380). Kovacs and Back(1977, pp.1-25), using a self-report from of the Beck Depression Inventory (BDI) found that the items of depressive syndrome tended to cluster with depressed mood in a sample of 8-13 year olds from a regular school. Recently a consensus has evolved in the clinical field regarding the existence of childhood depression, and the similarity of the child and adult major depressive disorders. This consensus has been reflected in the official American Psychiatric Association Classification of Mental Disorders (DSM-III-R) where no distinction is made in the diagnostic criteria for prepubertal, adolescent and adult depression (DSN-III-R,1987, p.128).

As a result of the aforementioned development in the subject, childhood depression has received increased attention in recent years, both in clinical research and practice. A substantial majority of studies of depression in children include pre-and post-pubertal subjects, but, in contrast to prepuberty, the existence of major depression disorders in adolescents is well accepted among clinicians. Consequently, knowledge of the nature and treatment of adolescent major depressive disorders is well ahead of that in prepuberty.

Roughly, prepuberty covers the age range of 8-13 years and has many features, developmentally and educationally, which make it a very important stage in the individual's life.

From a developmental viewpoint, this stage, also called childhood, witnesses certain structural cognitive/developmental changes. Children at this stage face various critical ecological transitions. They face an important curricular transition in reading (age 9-10)-from an emphasis on decoding to an emphasis on comprehension. At age twelve, children are typically affected by the transition into adolescence and its association emphasis on peer group comparisons (Kaslow, et al, 1984, p.608).

For the above reasons, many workers in the field consider prepuberty as a very important factor in understanding the individuals' later behavior. Kagan and Moss (1962) believe that many traits in late childhood can be better indicators of behavior in youth than traits in early childhood (Cited in, Zanden, 1978). Kagan and his colleague (1964) consider the circumstances

surrounding the child during late childhood as critical factors in precipitating the problems he has to encounter afterwards in adolescent and youth.

On the other hand, although childhood depression is similar to that of adults, it encompasses many other symptoms that pertain to childhood, such as: disobedience, delinquent behavior, school phobia, failure to achieve in school (Glasser, 1967, pp565-574), psycho- physiologic reactions, boredom, restlessness (Toolan, 1962, Cited in Kovacs, &Beck, 1977, p.8), hyperactivity, aggressiveness (Cytryn, & Mcknew, 1974, Cited in Kovacs, &Beck, 1977, p.8), school avoidance, and whining and whimpering (Renshaw, 1974, Cited in Kovacs, &Beck, 1977, p.8). Further more, one of the conclusions that participants in the fourth congress of the Union of European Pedopsychiatrists reached was that depressive states account for an important and relatively large share of mental disorders in children and adolescents (Anell Al, 1972, Cited in Kashani, et al, 1981, p.144).

The nature of childhood depression as described above sheds light on the serious effect of depression on the children's lives in the prepubertal population, both at school or the family, as well as in their present or future life. With regard to age, the great majority of empirical studies have made an attempt to assess developmental differences (Kaslow, et al, 1984, p.608). Children aged 6 through 13 are typically lumped together, and only a few studies perform even post hoc analysis on the differences between younger and older children. Yet, it is clear that younger and older children are different both in terms of structural cognitive-developmental levels, and in terms of the different ecological/ cognitive/ social situations they face. Kazdin and Petti (1982, p.446) mention that, for existing measures of childhood depression, little has been done to examine whether symptoms vary as a function of age. With regard to sex, Kazdin and Petti state that different patterns of symptoms have been identified among boys and girls ages 4-5, 6-11, and 12-16; they indicate that, presumably, finer distinctions might be obtained as well within these ranges (Ibid).

The present investigation studies childhood depression in a normal prepubertal population in an attempt to shed light on its frequency, components, and age and sex differences. To accomplish these objectives the study addresses the following questions:

- 1- What is the frequency of depression in a normal prepubertal population?
- 2- Are there age and sex differences related to depression in a normal prepubertal population?

3- What are the major components of depression in a normal prepubertal population?

**Method:**

**Subjects:**

The subjects were 372 elementary school children (218 females, 154 males) all of them were Emirates nationals. Their age was in the range of 8 to 12 years, and they were enrolled in the third, fourth, fifth, and sixth grades.

The subjects were from three Emirates: Abu-Dhabi, Dubai, and Sharjah.

**Measures used:**

The Children's Depression Inventory (CDI) (Kovacs, 1983, 1985) was the only measure used in this study. The CDI is a self-report inventory consisting of 27 multiple choice items designed to assess the presence of symptoms of depression. Each item consists of three statements graded from "0" to "2". The statement receiving a score of "0" represents absence of the symptom, the one receiving a score of "1" represents mild degree of the symptom, and the statement receiving a score of "2" represents the presence of the symptom to a marked degree.

The twenty seven symptoms are as follow: 1–Sad mood, 2–Hopelessness/ Pessimism, 3 –Self deprecation, 4–General anhedonia, 5–Acts bad, 6–Pessimistic worrying, 7–Self-hate, 8–Self-faulting 9–Suicidal ideation, 10–Crying, 11–Low frustration tolerance, 12–Reduced social interest, 13–Indecisiveness, 14–Negative body image, 15–Reduced motivation for school work, 16–Sleep disturbance, 17–Fatigue, 18–Reduced appetite, 19–Somatic concerns, 20–Loneliness, 21–Anaerobia at school, 22–Friendlessness/ social isolation, 23–Decline in school performance, 24– self-deprecation (via peer comparison ), 25–Feeling unloved, 26–Disobedience, 27– Social problems.

The CDI was translated into colloquial Arabic, prepared, and standardized in Egypt by the present author (Ghareeb, & Beshai, 1989, pp.322-326), and into classical Arabic in UAE (Ghareeb, in Press). Many studies demonstrated the CDI reliability and validity in Western Countries (Kovacs, 1983, 1985). Ghareeb and Beshai (1989) demonstrated the reliability and validity of the colloquial Arabic version of the CDI. In UAE four separate studies of test-reliability were conducted for the classical

Arabic version of the CDI on a sample of eighth and ninth grades. Test-retest reliability in a sample of 25 female eighth graders (nationals) yielded an  $r$  of 0,76 over a nine day interval. Test-retest reliability in a sample of 24 female eighth graders (non-nationals) yielded an  $r$  of 0,83 over a nine day interval. Similarly, a sample of 24 male ninth graders (nationals) yielded an  $r$  of 0,92 over a 7-day interval. For a sample of 31 male ninth graders (non-nationals) an  $r$  of 0,91 over 7-day interval was obtained. All reliability coefficients mentioned are significant at the 0,001 level.

Four studies were conducted to evaluate the validity of the classical Arabic version of the CDI. The first study correlated the CDI with the Arabic version of the Beck Depression Inventory (BDI) (Beck, et al. 1979, pp. 398-399; Ghareeb, 1984, 1985 and 1990). In a sample of 52 boys (24 nationals, 28 non-nationals) from ninth and tenth grades, the correlation between the CDI and the BDI was 0,82. A second study examined the relation between depression as measured by the CDI and self-concept as measured by the Arabic version of the Piers-Harris Children's Self-concept scale (Abdel-Hamed, & Al-Azaby, 1984). The two inventories were administered to a sample of 30 females and another one of 30 males, all of them were eighth grade nationals. The correlation were -0,73, and -0,86, respectively (both  $P.s < 0,001$ ).

#### **Procedures:**

All subjects were completed the CDI in a group setting. Previous research has shown that the CDI scores obtained in group administration don't differ significantly from those obtained in individual administration (Saylor, et al, 1984, cited in Finch, et al, 1985, p424). The researcher administered the CDI to 90% of the sample, while five female graduate students administered the remaining 10%. The administrators ascertained that no items of the CDI were left unanswered. Items of the CDI were read aloud to the pupils in all grades to ensure that all testing procedures were standardized. Data were analyzed using one-way analysis of variance, simple regression, and t-test in order to address the study's questions.

#### **Results:**

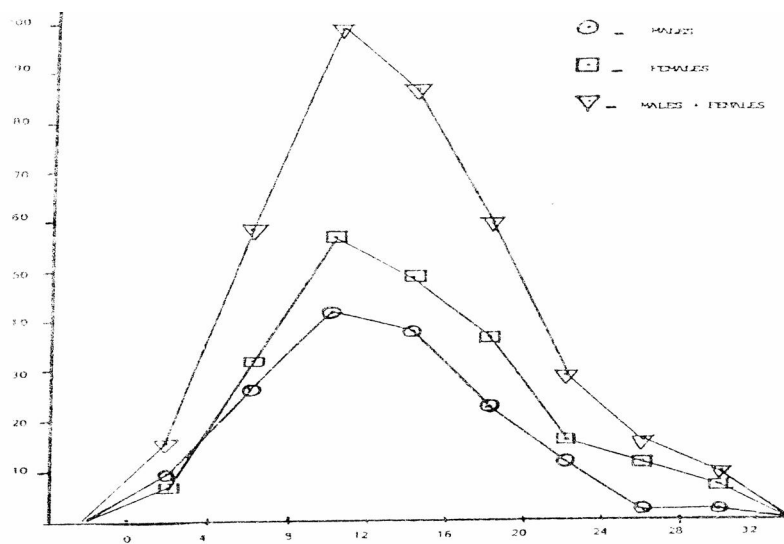
The mean score of the CDI for the whole sample ( $n=372$ ) is 12,91, with a standard deviation of 6,237. The corresponding score for males alone ( $n=154$ ) is 12,00 (S.D=5,8), and for females alone ( $n=218$ ) is 13,61 (S.D=6,44). Scores on the CDI ranged from 1-32 and yielded a slightly positively skewed distribution. This feature of the population distribution of

this study means that low scores on the CDI are more frequent than high scores. Descriptive data for the entire sample and for each grade separately are presented in Table 1.

Table 1  
Descriptive data for the entire sample and for each grade separately

| Grade | N   | Dep. Mean | Dep. S. D | Mean of Age | Age S. D |
|-------|-----|-----------|-----------|-------------|----------|
| 3     | 57  | 11.140    | 5.62      | 9.08        | 1.106    |
| 4     | 114 | 12.026    | 5.752     | 10.298      | 0.931    |
| 5     | 92  | 13.326    | 6.004     | 11.130      | 0.940    |
| 6     | 102 | 14.440    | 6.876     | 12.450      | 1.198    |
|       | 372 | 12.919    | 6.237     | 10.949      | 1.554    |

Graph 1 demonstrates the aforementioned slight positive skewness of the CDI scores for the total sample. It is likely that the corresponding population distribution is symmetric, and possibly normal. However, a formal hypothesis test of this normality was not carried out.



Graph 1 Childhood Depression in UAE

To show that depression increases with age, the CDI scores were regressed on age. The regression coefficient was equal to 0,759, and the test for the equality of this coefficient to zero was significant at  $P < 0,001$



( $t=3,707$ ,  $p=0,000$ ). This means that there is a positive relationship between depression and age, in the sense that depression increases with age. The average increase is approximately 0,8 of a score point per year of age. This, of course, is an estimate of the rate of increase in population.

The results also showed that the age ranged from 8-16 years, with a mean of 10,949 years and a standard deviation of 1,554. Because the standard deviation of age within different grades is very small, grade was used as categorical variable reflecting age.

Using one-way analysis of variance to address the question of age difference in depression, the F-ratio was 4,756, and  $P<0,003$  which means that the mean CDI scores is different for different age groups. However, the value of the estimate of omega-square was found to be equal to 0,0293, indicating that approximately only 3% of the variability of depression can be attributed to age differences. Bonferroni's follow up t-test was run at a significance level of 0,05. This test indicated that only the mean of age 12 is significantly different from the mean of both ages 9 and 10.

The different between males and females in depression was tested via a t-test, and the results are shown in Table 2. It can be seen from Table 2 that the significance was significant at 0,05 ( $t=2,487$ ,  $p=0,015$ ).

Table 2  
Sex significances in Depression

| Sex    | N   | Dep.Mean | Dep.S.D | t     | Sign. |
|--------|-----|----------|---------|-------|-------|
| Male   | 154 | 12,00    | 5,813   | 2,405 | 0,017 |
| Female | 218 | 13,569   | 6,455   |       |       |

The major components of depression were studied by using a method similar to that used by Kovacs, and beck (1977, pp.13-14), and by Nelson, and his colleagues (1987, p.47). Two approaches were used to address the question of the major components of depression in this study. The first was by calculating the percentage of subjects who endorsed either "1" (mild depression) or "2" (marked depression) on the CDI items in the total sample as indicators of major signs of depression. Table 3 shows the results of this approach.

Table 3  
Percentage of Subjects who endorsed CDI item choices  
greater than "0" (n = 372)

| CDI Item                               | Endorsed choices<br>Greater than "0"<br>% |
|----------------------------------------|-------------------------------------------|
| General anhedonia                      | 66                                        |
| Pessimistic worrying                   | 64                                        |
| Hopelessness/Pessimism                 | 59                                        |
| Anhedonia at school                    | 58                                        |
| Indecisiveness                         | 55                                        |
| Reduced motivation for school work     | 55                                        |
| Somatic concerns                       | 51                                        |
| Suicidal ideation                      | 49                                        |
| Friendlessness/Social isolation        | 47                                        |
| Reduced appetite                       | 46                                        |
| Negative body image                    | 46                                        |
| Social problems                        | 41                                        |
| Decline in school performance          | 41                                        |
| Loneliness                             | 40                                        |
| Sleep disturbance                      | 37                                        |
| Self-deprecation (via peer comparison) | 36                                        |
| Self-faulting                          | 32                                        |
| Fatigue                                | 32                                        |
| Disobedience                           | 31                                        |
| Feeling unloved                        | 30                                        |
| Self-hate                              | 22                                        |
| Self-deprecation                       | 20                                        |
| Reduced social interest                | 20                                        |
| Low frustration                        | 16                                        |
| Crying                                 | 15                                        |
| Sad mood                               | 12                                        |
| Acts bad                               | 7                                         |

Table 3 shows that the major components (signs) of depression in the total sample studied were as follows: 1. general anhedonia 2. pessimistic worrying, 3. pessimism, 4. anhedonia at school, 5. indecisiveness, 6. reduced motivation for

school work, and 7. somatic concerns. The above seven items were chosen to be the major components (signs) of depression in the sample studied on the grounds that they were endorsed by more than 50% of the total sample .

The second approach used in studying the major components of depression in the sample was by identifying the depressed subjects in the sample and then calculating the major items endorsed by these subjects. For this purpose, a depressed subject was defined as one whose score exceeds the total sample mean by one standard deviation. The sample's mean on the CDI was 12,91, the standard deviation was 6,237. Thus, the score of 19,00 on the CDI was the cut-off score for the above purpose. Sixty four subjects met this criterion (23 males, 41 females).

The major components of depressed subjects are shown in Table 4.

Table 4  
 Percentage of depressed subjects who endorsed CDI Item  
 choices greater than "0" (n = 64)

| CDI Item                               | Endorsed choices<br>Greater than "0"<br>% |
|----------------------------------------|-------------------------------------------|
| Indecisiveness                         | 84                                        |
| Sleep disturbance                      | 84                                        |
| Pessimistic worrying                   | 81                                        |
| Reduced appetite                       | 81                                        |
| Somatic concerns                       | 81                                        |
| General anhedonia                      | 80                                        |
| Suicidal ideation                      | 80                                        |
| Self-deprecation (via peer comparison) | 80                                        |
| Loneliness                             | 78                                        |
| Anhedonia (at school)                  | 78                                        |
| Social problems                        | 78                                        |
| Reduced motivation for school work     | 77                                        |
| Decline in school performance          | 75                                        |
| Hopelessness/Pessimism                 | 72                                        |
| Self-faulting                          | 72                                        |
| Negative body image                    | 70                                        |
| Friendlessness/Social isolation        | 63                                        |
| Self-hate                              | 61                                        |
| Fatigue                                | 56                                        |
| Disobedience                           | 56                                        |
| Feeling unloved                        | 55                                        |
| Self-deprecation                       | 50                                        |
| Low frustration tolerance              | 47                                        |
| Crying                                 | 42                                        |
| Reduced social interest                | 42                                        |
| Crying                                 | 28                                        |
| Acts bad                               | 19                                        |

It can be seen from Table 4 that 22 out of the 27 items constituting the CDI were endorsed by more than 50% of the depressed subjects. Eighty four percent of the depressed subjects endorsed indecisiveness, and sleep disturbance: 81% endorsed pessimistic worrying, reduced appetite, and somatic concerns; 80% endorsed general anhedonia, suicidal ideation, and

self-deprecation via peer comparison; 78% endorsed loneliness, anhedonia at school, and social problems; 77% endorsed reduced motivation for school work, and 75% endorsed decline in school performance, and so on.

Using Table 3 and 4, and considering the first ten items in Table 3 endorsed by the total sample as signs of depression, it can be seen that seven of these items appear in the first ten major items in Table 4 endorsed by the depressed subjects. These items could be considered the major components of depression in the sample of this investigation.

### **Discussion:**

The major findings of the present study are:

1- Depression as measured by the CDI is relatively low in a normal prepubertal population from UAE. The mean score of the CDI for the whole sample studied ( $n = 372$ ) is 12,91 (S.D = 6,24). Scores in the CDI ranged from 1-32, yielding a slightly positive skewed distribution.

This result agrees with the majority of studies done using similar age samples, except for the high mean compared to the studies cited in the literature, Kaslow and his colleague (1984, p. 612) in their study of 108 normal children from first, fourth and eighth grades, found that the CDI scores ranged from 0 to 36, yielding a positively skewed distribution. Smuker, et al (1986, pp. 25-39), in their study of 615 elementary pupils in grade 3-6, found a mean CDI score of 8,67 (S.D=7), and a range of 0 to 47. Kovacs (1983, p.8), after her own analysis of data gathered from 860 Canadian youngsters aged 8 to 14, noted that the sample's CDI scores have a shape resembling an inverted J curve, with the bulk of the scores concentrated in the lower range. Kovacs (1985, p.997) mentioned that the mean CDI score of the Canadian sample was 9,3 (S.D.=7,3), the scores range from 0 to 50. She also mentioned a study done by Kline et al (1982) who tested 123 clinic-referrals and 175 public school students, aged 7 to 12 years. For the clinical sample, the author found a mean CDI of 11,18 (S.D.=6,8), while for public school students, the mean CDI was 8,54 (S.D. 7,75).

The only study available to the present author that used the CDI and was done in an Arab country is the one done by Ghareeb and Beshai (1989, P.325). In their study of 2029 public school children in Cairo, Egypt, the authors found that the mean CDI score for the elementary school children, grade 2 to 6 ranged from 13,16 (S.D. = 7,72) to 15,38 (S.D. 6,92) for males ( $n=580$ ), and from 13,41 (S.D. = 7,10) to 16,22 (S.D. = 7,35) for females

(n=531). Ghareeb, and Beshai offered a culture-specific interpretation of their results pertaining to the high mean scores of the CDI in their sample comparable to the studies done in Western countries.

The present author believes that cultural differences may not be the only reason of the discrepancy found in the CDI mean scores in the studies done across different cultures. We believe that the topic of cross-cultural differences in the CDI scores-or any other psychological measurement-needs more thorough investigation before reaching final conclusions.

2. The results of this study indicate that there are differences in depression related to sex and age. However, the magnitude of the difference in depression related to age is very small. With regard to the difference in depression related to sex, not only was this difference found, but also the number of females depressed was approximately double of that of males depressed .

depressed subjects in this research were 64, 41 of whom were females, and 23 were males. In other word, approximately 64% of the depressed subjects were females, while only 36% were males.

In fact, there are conflicting results in the literature pertaining to the differences in depression related to age and/or sex in children. Kaslow and her colleague (1984, p.613) found that, although the CDI scores were lower for the younger than the older children, this difference was not significant. They also found that the difference between boys and girls on the CDI was not significant. Weissman and his colleague (1980, Cited in Kazdin, & Petti, 1982, p.446) found that the children's reports of depression on the CDI were not correlated with age in a sample ranging from 6 to 17 years. Finch., et al. (1985, p.425), using grade as a categorical variable reflecting age, found that there were significant grade effects, as well as significant sex effects in depression . However, they found that the magnitude of these differences was very small.

Kovacs (1983, p.10), examined CDI scores for sex and age effects and found that in a psychiatric outpatient sample (n=75) the correlation between chronological age and CDI score was not significant, neither was there a significant difference between boys and girls in the severity of self-rated depression. Also, Kovacs indicated that, the analysis of the Toronto public school study (n-860), data yielded similar results, namely that there was no significant mean score difference between boys and girls. Kazdin and his colleague (1983, p.159), in their study of 104 disturbed children, found that

there were no reliable differences in childhood depression related to measures of age, gender, race, IQ, or parents' occupation. Nelson and his colleague (1987, p.44), in their study of 535 of disturbed children aged 6-18, found that the relationship between gender and depression holds only for adolescents and not for younger children aged 6-12. Ghareeb, and Beshai (1989, p.325), in their study of a sample from Egypt, found no sex differences in depression in children of grades 2-6, but they found that the difference in depression began to emerge in children from grades 7-10. Kudfer, and Frank (1981, p.35) stated that although the results are mixed apparently the sex ratio of depressed children resembles the 2:1 or 3 : 1 female/male ratio of children referred for guidance or psychiatric help .

Finally, Kudfer, and Frank (Ibid) mentioned another study in which adult research diagnostic criteria for depression were used in children over age seven to diagnose a major depressive disorder. The results indicated that even at this early age, the sex ratio favored girls over boys, and the results suggest that the preponderance of affective disorders in female adults was already beginning to show.

To summarize, the literature pertaining to the differences in depression related to age and sex, it is noticed that the majority of the studies agree that there are no differences in depression related to age and/or sex in prepubertal population (age 6-12). However, some of these studies mentioned the possibility that these differences may emerge during adolescence (Kupfer, & Frank, 1981, p.25; Nelson, et al, 1987, p.44; Ghareeb, & Beshai, 1989, p.325; Girgus, et al, 1989).

3. The results of this study indicate that there are major signs of depression in the total sample studied, and that there are major components of depression in the depressed sub sample. The major seven components of depression in this study are in a descending order of frequency: 1- indecisiveness, 2- pessimistic worrying, 3- reduced appetite, 4- somatic concerns, 5- general anhedonia, and 6- suicidal ideation, and 7- anhedonia at school. Although the importance of the other items endorsed by the depressed subjects cannot be denied, the seven items mentioned seem to be of more importance as major components of depression since they were endorsed by both the total and depressed samples. It can be hypothesized that these seven signs had first appeared as signs of emotional states (depressed mode) in currently depressed children, but were ignored or not taken

seriously by parents and other adults. This led to their persistence and ultimately turned them into symptoms of the depression syndrome.

There are two studies in the literature that used a method similar to the one used in the present study, namely, Kovacs, and Beck (1977, pp.13-14) and Nelson et al., (1987, p.47). Only the latter used the CDI as a measure of depression. Nelson and his colleague found that approximately 37% of their sample endorsed item scores of the CDI higher "O". The present author calculated the percentage of the subjects in the younger age group in the Nelson et al study (Age 6-13 years-n=220) who endorsed item scores higher than "O" on CDI. The results were the following in a descending order: 1- 53% endorsed general anhedonia, 2- 51% endorsed suicidal ideation, 3- 49% endorsed somatic concerns, 4- 48.2% endorsed friendlessness, 5- 45.6% endorsed self-deprecation via peer comparison, 6- 44% endorsed indecisiveness, 7- 44% endorsed loneliness, 8- 43.6% endorsed anhedonia at school, 9- 43.3% endorsed fighting, and 10- 43.1% endorsed pessimistic worrying.

Comparing the results of the depressed subjects in the present study with the Nelson et al., results of the disturbed children, it can be seen that there is a high agreement on the major components of depression in the prepubertal sample.

Both studies agree on the following components: 1- general anhedonia, 2- suicidal ideation, 3- somatic concerns, 4- self-deprecation (via peer comparison), 5- indecisiveness, 6- loneliness, 7- anhedonia at school, and 8- pessimistic worrying.

Also, with reference to DSM-III-R (1987, pp. 128-129) the author has found that there is agreement between his results related to major components of depression in the depressed subjects and criterion A of the DSM-III-R. six of the nine criteria in the text are in agreement with the present results, namely : general anhedonia, criterion 2; reduced appetite, criterion 3; sleep disturbance, criterion 4; self-deprecation (via peer comparison, criterion 7; indecisiveness, criterion 8; and suicidal ideation, criterion 9.

The above findings are very valuable to the investigation and understanding of childhood depression in UAE and other Arab countries. First, the results support the legitimate use of the DSM-III-R in the assessment of childhood depression in UAE and other Arab countries. Secondly, the results indicate content validity of the CDI in UAE and other



Arab countries, as well as its usefulness in studying childhood depression in these countries.

The results of this study point to some crucial areas for further inquiry. The first of these is concerned with accountability. Since the student may spend up to two-thirds of his waking hours in school, it seems reasonable that the school should assume some responsibility for the pupil's emotional well-being through school or professional intervention. Second, advocacy of faculty awareness of depression and encouragement for teachers and counselors to help the student ventilate his feelings seen mandatory. Whenever a pupil is consistently withdrawn, exhibiting maladaptive behavior, or underachieving, it is recommended that some psychometric tool, such as the CDI, can be used. In other words, it is suggested that accountability for student mental health should be incorporated into the school system through earlier intervention and preventive guidance programs.

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