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**Effectiveness of Cognitive Behavior Therapy (Cbt) on Depressed Adolescents in Tehran, Iran**

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**Introduction**

Depression in childhood and adolescence is among the most common and disabling disorders. It is reported that childhood depression ranges from 2% - 6% among the school-age population and in childhood and may end up seriously affecting such children in adult life (World Health Report, 2001). Depression is among the most common mental disorders is often referred to as the common "cold" of mental illness. It is estimated that between 5% and 25% of the population experience depression at some point in their lives and 15% of severely depressed people will commit suicide in the world (Gotlib and Hammen, 2002). During puberty, about 2% of 13-year-olds

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**Abstract**

The major purpose of this study is to examine the effectiveness of cognitive behavioral therapy in reducing level of adolescents in Tehran, Iran. An instrument for data collection was CDI. The total number of samples is (63). The age of the respondents was 12-17 years. There was significant difference in pre-test and post-test of CBT ( $t=16.26$ ,  $p<.05$ ) showing the effectiveness of CBT therapy, which led to a reduction in the depression score of participants in 6 week. The findings from the present study reveal that CBT enables change in cognitive behavior and helps to avoid the problems of depression in adolescents.

suffer from depression and on average, 17% at age 18 years in the world are similarly afflicted (Angold, 2002). Using the program for emotional disorders and schizophrenia (SADS) was performed. The current prevalence of depressive disorders is 2 % (1.8% major depressive disorders, and 0.2% minor aged), living in cities and not housewives (Mohammadi, et al., 2006). Using the Disorder Statistical Manual-IV (DSM-IV) criteria and clinical interviews, the findings indicate that the prevalence of depression disorders is 9.2 % (4.4% major depressive disorder, 3.9% minor depressive, and 0.8% dysthymia) (Noorbala, 2008).

A literature search of epidemiological studies of adolescent psychological health provides a

lot of support that depression, substance abuse, and suicide are among the three most prevalent causes of death in adolescents (Brookman, 2006). Numerous studies have been conducted to estimate mental health in Iran. In a current study in the Northwestern part of Iran using face-to-face interviews conducted by psychiatrists based on the DSM-IV, 9.7% of the 17 to 24-year-olds were diagnosed as having a mental disorder/ The number of cases is expected to increase with growing age, and women are twice more likely to be diagnosed with a mental disorder than men (Fakhari et al, 2007).

Clinical depression has an indubitably difficult impact on the development trajectories of youth and adolescents. Despite this well-established reality and the current increase in depression treatment investigations, the evidence for particular treatment approach connecting antidepressant medicine or cognitive behavioral therapy recommend only modest optimistic effects achieved with a substantial investment of resources. The exact advantages over placebo for either treatment alone have been modest in many studies and nonexistent in several studies. (Tads, 2004). Cognitive behavioral therapy for depression is a current focused, time-limited, collaborative approach. It emphasizes the significance of a careful considerate or functional psychoanalysis of cognitive and behavioral factors associated with primary symptoms. The CBT psychotherapist commonly aims to accomplish one or more of the following: decrease depressingly distorted cognition, develop problem solving and coping skills and enhance the youth's participation in healthy, enjoyable actions. CBT treatments frequently consist of necessary skill- building sessions and optional modular session for particular problems. Studies have integrated variants of CBT, with some placing a larger emphasis on cognitive reorganization and others taking a more behavioral and modular skills education approach, such as the adolescent coping with depression classes (Clarke, 2005).

#### **Previous research**

Rohde (2006) found that CBT intervention

was more effective for depressed Caucasian youth than a life skills control condition, whereas non-white adolescents had similar recovery rates across conditions. In addition, there is evidence from a prevention of depression study to show that youth participating in CBT have been found to have significant reductions in their depressive symptoms when they entered the trial with a greater number of past psychiatric diagnoses, lower levels of depression, and suicidal ideation (Barbe, 2004).

Meta analysis has been shown to support the effectiveness of cognitive behavioral therapy (CBT) in treating childhood depression, with moderate to strong effect sizes compared with wait list control conditions and other treatments. In the CBT model, depression results from faulty interpretations of the environment and negative interactions with it. Treatment Involves challenging negative cognitions and increasing adaptive behaviors. Cognitive behavioral skills include practicing positive attributions, accurate identification of feelings, monitoring and increasing self reward, problem solving, social skills, and relaxation procedures (Asarnow, 2001).

#### **Objective**

The main objective of the present study is effectiveness of CBT in reduction depression among adolescents in Iran.

#### **Method**

##### **Location and respondents of the study**

The location for this research was Tehran, the capital of Iran. Tehran is the largest city in the Middle East and the 16th most populated city in the world, with a population of 8,429,8071. Tehran is the economic centre of Iran. About 30% of Iran's public-sector workforce and 45% of large industrial firms are located in Tehran and almost half of these workers work for the government. The city of Tehran is divided into 22 municipal districts, each with its own administrative center (Statistical Center of Iran, 2006).

One of the most common mental disorders in children and adolescents in Tehran is depression illness. These children are referred

for treatment and problem solving to psychological clinics and counseling centers, which prove to be the best locations for choosing the samples.

### **Measures**

The CDI (Kovacs, 1983) is a self-rating scale modeled on the BDI (Beck depression inventory) and adapted to young people 7-17 years of age. The depressive symptoms assessed include cognitive, affective, somatic and behavioral aspects and the 27 items are scored from 0 to 2, where 0 means the symptom is not present, 1, the symptom is present and mild, and 2, the symptom is present and marked. The clinical / categorical approach is evidenced in that it covers most of the symptoms of major and minor depression according to the DSM IV (American Psychiatric Association, 2000). The CDI takes about 10-20 minutes to fill in and contains five subscales: Negative Mood, Interpersonal Problems, Ineffectiveness, Anhedonia and Negative Self-esteem.

### **Data analyses**

Data were coded and entered into Statistical Package for Social Science (SPSS version 16). This program was used for analyzing data for specific aims of the study. The analysis began with a report of the characteristics of the participants in detail. Descriptive statistics such as frequency, percentage, means and standard deviations were used to characterize the demographic variables, the rate of depression, subscales in groups and variables. Comparison Analyses: The paired test (Pre and post) were used for testing the difference between dependent groups in experimental groups.

### **Children's background**

A demographic background of the children is presented. The total number of respondents in the present study is 63, including 46% male and 54% female samples. The age range of the children was from 12 to 17 years, which was divided into three categories; 12.7% (12-13), 34.9% (14-15), and 54.4% (16-17). The mean age of the whole sample was 15.3, and the standard deviation of 1.43 indicated a moderate variation in age among the children.

### **The parental demographic characteristics of children**

This section discusses the educational level of the participants' parents. The educational status was divided into four levels (Under diploma, diploma, bachelors, and master's/doctorate. In terms of educational attainment, only (8.5%) of fathers held a PhD or master's and. The same percentage was true about mothers (8.5%). The majority of the parents in all the three groups had a bachelor's degree, whereas the minority was related to those either under diploma or with a master's/doctorate. While the educational level of under diploma (25.1%) in mothers was higher than fathers (8.5%), the educational level of diploma (34%) and bachelor's (49.5%) in fathers was higher than mother (25.1%) diploma and 44.1% bachelors.

### **The levels of depression in respondents**

Depression was measured using CDI, comprising 27 items with three choices scored (0-2). According to data collection, respondents' levels of depression were those of mild depression. The normal score in depression was (Normal $\leq$ 20) (Kovacs, 1983). It indicated that there was no severe depression in any of the three groups. Only (1.7%) showed normal depression in pretest stage, but more than half (50.80%) were normal in post test.

### **Analysis on the differences between pretest and posttest in CBT**

The result of the paired sample t-test (Table 4.1) illustrated the pre-test score for CBT group (29.49, SD=5.47) while post-test score had mean value of (19.94, SD=5.59).based on data above, the mean score for the post-test of CBT group was 19.94 lower mean value in pre-test indicated that the depressed score decreased in post-test of CBT than Pre-test. The t-value, degree of freedom, and the two – tail revealed significant difference ( $p < .05$ ) between the mean scores of the pre-test and post-score which suggests that CBT program led to decreased depressed score in adolescents. Thus, the result showed that there was a significant difference in mean value ( $t = 16.26, p < .05$ ) between the pre-test and the post-test score of CBT group. Effect size is a technique used to assess the magnitude of

difference between two groups. Eta squared for paired sample t-test can be obtained using the following formula:

$$\text{Eta squared} = \frac{t^2}{t^2 + N - 1}$$

cohen (1988) classifies .01 as a small effect , .06 as a medium effect and .14 as a large effect. The eta-squared obtained was  $\eta^2=1.3$  indicated that the mean difference between two measurements is large.

**Table-1** Paired sample t-test (pre-test and post-test) CBT scores

Tes	N	Mean	SD	t	sig
t				df	
<i>Pre</i>					
-	6	29.	5.4	26	.00
test	3	46	7	62	0
<i>Pos</i>					
t-	6	19.	5.5		
test	3	94	9		

*P<.05*

**Results**

Only (1.7%) showed normal depression in pretest stage, but more than half (50.80%) were normal in post test. the pre-test score for CBT group (29.49, SD=5.47) while post-test score had mean value of (19.94, SD=5.59).based on data above, the mean score for the post-test of CBT group was 19.94 lower mean value in pre-test indicated that the depressed score decreased in post-test of CBT than Pre-test. Thus, the result showed that there was a significant difference in mean value ( $t=16.26, p<.05$ ) between the pre-test and the post-test score of CBT group.

**Discussion**

The results from hypothesis of this study indicated that there was significant difference in mean scores of CBT between pretest, post test and follow-up assessments in the

experimental groups. The outcome of this research demonstrated the potential efficacy of Cognitive Behavioral Therapy for the treatment of depression in adolescents. These findings supported the effectiveness of CBT intervention for decreasing depression. Consequently, results indicated that participants who received CBT for depression obtained greater decrease in mean scores of depression from pretest to post test, and follow-up. This result was supported by the findings of a meta-analysis which examined the efficacy of CBT therapy including group CBT by Oei & Dingle (2008). Oei & Dingle (2008) reviewed 34 papers and reported that group Cognitive Behavioral Therapy is one of the most effective treatments for depression, comparable to medication and other forms of psychotherapy for depression including individual CBT (Oei & Dingle, 2008). This review demonstrated that group CBT is an effective treatment for depression with the average effect size of 1.11 to 1.30 indicating that the average person in a group Cognitive Behavioral Therapy condition was over one standard deviation more improved than the average person in the control condition by the end of treatment (Oei & Dingle, 2008).

**Conclusion**

This research is limited to depression, Cognitive Behavior Therapy (CBT).The findings from the present study reveal that CBT method will specifically avoid the problems of depression in adolescents by cognitive and behavioral programs. The findings from the present study reveal that CBT method will specifically avoid the problems of depression in adolescents by cognitive and behavioral programs. Thus, it is recommended that the Iranian Ministry of Education support and encourage both the establishment of counseling centers in schools and other education centers, where counselors and clinical psychologists can help students to treat mental and academic problems. At the same time, knowledge gained from the present research can be conveyed by various means such as workshops, seminars, conferences, publications and training programs. To control depression, there must be practical programs such as relaxation, mediation, individual and

group counseling, etc. These programs can help and support students and also increase their capabilities to perform better in school. Based on literature, this is due to the fact that youth with better mental health succeed in their education and work, more easily get married, and have useful relationship with their partner and other dependents.

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