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# CBT for the Treatment of Depression in Young Adults: A Review and Analysis of the Empirical Literature

Elizabeth A. Para

**Abstract:** Much attention has been given to CBT as a treatment for depression in young adults. This literature review seeks to examine the available research regarding the effectiveness and efficacy of utilizing CBT as an intervention for young adults suffering from depression. The areas of focus for the review include internal and external validity, cultural considerations, comorbidity and diagnosis, measurement, reliability, and statistical and practical significance. Specific conclusions regarding the literature and future directions are discussed.

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Young adulthood is the developmental stage including late adolescence thru the twenties (Arnett, 2000). It is a difficult time for many individuals (Greenberger, Chuansheng, Tally, & Dong, 2000). Many young adults struggle through the numerous life transitions that occur during this time, and feel sad, frustrated, and hopeless about the things going on in life. In addition, they may lose interest in activities they once enjoyed, and have difficulty eating, sleeping, and concentrating. These symptoms often indicate the individuals suffer from a mental disorder called depression.

Research has shown that 1.5% to 8% of young adults suffer from a depressive disorder (Rushton, Forcier, & Schectman, 2002; Waslick, Schoenholz, & Pizarro, 2003). Approximately 1% to 2% of youth suffer from major depression or dysthymia. For individuals diagnosed with depression, the risk of recurrent and persistent depressive episodes is much greater than those reporting lesser symptoms. Some suggest that many who are seriously depressed will continue to be depressed throughout adulthood (Greenberger, et al., 2000).

Given substantial prevalence rates, finding an effective treatment for depression in young adults has become an important task for many psychotherapists. Among the many interventions available for treating depression, perhaps the most studied technique is cognitive-behavioral

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therapy (CBT). Some argue that CBT is among the most efficacious treatments for depression (Waslick, et al., 2003), and has been supported by much empirical literature in the past (TADS, 2004; Kaufman, Rohde, Seeley, Clarke, & Stice, 2005).

The goal of this paper is to review and analyze the scientific research regarding CBT in order to evaluate its efficacy and effectiveness in treating young adults who suffer from depression. The review includes a discussion and some conclusions one can make regarding the evidence to support CBT for depression in young adults.

### **BRIEF OVERVIEW OF CBT FOR DEPRESSION**

CBT is mostly derived from Aaron Beck's cognitive approach to treating depressed adults (Weersing & Brent, 2006). Beck's model suggests that depression occurs when individuals develop negative schemas (or mental representations) of the self, world, and future. Stressful life experiences early in life can lead to negative schemas, which are revealed under similar situations later in life. As a result, negative thoughts about the situation appear automatically, and the individual may experience feelings of depression and may engage in maladaptive behaviors. CBT aims to reduce automatic thoughts and negative actions (Kaufman, et al., 2005).

CBT typically is characterized by the combined techniques of cognitive therapy and behavior therapy. For example, Kolko, Brent, Baugher, Bridge, and Birmaher (2000) emphasized problem solving, affect regulation, collaborative empiricism, monitoring and modification of automatic thoughts, assumptions, and basic beliefs in their study examining treatment specificity and potential moderators and mediators in a randomized clinical trial for depressed adolescents. Other important components of CBT often utilized are goal setting, psychoeducation (informing the client about the disease or disorder and its causes and/or educating the client about the specific techniques or components of the treatment), mood monitoring, increasing pleasure activities, relaxation training, social skills training, and cognitive restructuring (Clarke, et al., 2005; Kaufman, et al., 2005; Kerfoot, Harrington, Harrington, Rogers, & Verduyn, 2004; Melvin, et al., 2006; TADS, 2004).

CBT usually lasts seven to 12 sessions when used to treat depression, although the range has been reported to be four to fifteen (Weersing & Brent, 2006; Weersing & Weisz, 2002). Psychotherapists and counselors

utilizing CBT for depression usually meet with clients once a week for 50-60 minutes. Most often CBT in treating depression is used in individual sessions, but sometimes CBT is used in group sessions (Weersing & Brent, 2006).

### RESEARCH ON CBT FOR DEPRESSION IN YOUNG ADULTS

Most of the research on CBT for depression in young adults has been conducted in randomized clinical trials (RCTs). Typically, the RCTs are comparing the effects of CBT to treatment-as-usual (TAU) or a wait-list control group (Weersing & Brent, 2006; Weisz, McCarty, & Valeri, 2006). However, there are several RCTs that compare CBT to medication (e.g., fluoxetine, sertraline, and selective serotonin reuptake inhibitors or SSRIs). Similarly, research comparing CBT to other interventions (e.g. systemic-behavioral therapy, nondirective supportive therapy, relaxation training, and life skills tutoring) is available.

One naturalistic study tracked the outcomes of depressed youth treated in community mental health centers (CMHCs) to those treated with CBT in RCTs focusing on reducing depressive symptoms (Weersing & Weisz, 2002). They found similar levels of depressive symptoms at intake in the two groups. Those in the CBT treatment group showed greater decreases in levels of depression after 3 months, and the levels were maintained through follow-up. The participants in the CMHC group took longer to obtain the same improvements, but showed similar levels of symptoms after a year. Weersing & Weisz argue CBT may produce superior outcomes to other interventions for depression in young adults, as the CBT treatment group reduced levels of depression (and sustained those reduced levels) in a shorter period than the CMHC group.

Although one naturalistic study is available for review for the current paper, the vast majority of research on CBT as a treatment for young adult depression is found in efficacy studies, such as RCTs. Such studies are designed to reduce threats to internal validity, and most of the research in the area of youth depression accounts for these threats. For example, Geisner, Neighbors, & Larimer (2006) sought to examine the efficacy of using a brief, mailed feedback intervention to reduce symptoms of depression, and improve hopelessness and willingness to use coping strategies. The authors addressed many issues related to internal validity in the study. They used random assignment to comparison groups to account for selection effects, and used a homogenous sample to control

for maturation. The mean age of participants was 19.28 ( $SD=1.97$ ). The participants ( $N = 177$ ) were mostly female (70%), and most were Caucasian (49%) or Asian (48%). They had a relatively low attrition rate; 94% of those who completed the pretest measures also completed the posttest measures. In addition, the authors addressed the threat of instrumentation. They used the same measures to account for changes over conditions to avoid confusion with treatment effects. Similarly, they used a pretest-posttest control group design to address testing threats. Other studies account for similar threats (e.g. Clarke, et al., 2005; Kolko, et al., 2000; TADS, 2004).

Although RCTs can be useful in determining the potential beneficial effects of CBT, some suggest they do not provide information regarding the effectiveness of the intervention in practical and clinical settings. Weersing and Weisz (2002) argue RCTs demonstrate the effects of CBT under optimal conditions (i.e., manuals for treatment intervention, extensive training in the specific techniques for therapists, and monitoring of treatment adherence), which is not necessarily always the case in real world settings. They assert the results from RCTs are not as applicable to clinical settings. Thus, it would be beneficial for future research to evaluate the effectiveness of CBT in real world settings.

As mentioned above, some studies address the threat of attrition in the samples. Interestingly, many do not take into account this threat in terms of small sample size. In a meta-analysis conducted by Weisz, et al. (2006), the reported sample size for a majority of the studies addressing CBT as an intervention for depression in youth was under 50. In fact, only 3 of the studies included in the meta-analysis had a sample size greater than 100. Small sample sizes reduce power and the ability to detect true differences. It is important for evaluators of research to consider the sample size and estimates of power in the conclusions of studies.

Another potential area for concern in the literature regarding the use of CBT as a treatment for depression in young adults is the source of the sample. A large number of studies use clinical referrals as the primary method to obtain the pool of potential participants. As suggested by Melvin et al. (2006), referrals from clinicians may bias treatment response because individuals referred by clinicians do not represent the entire population of depressed young adults. In order to address this potential bias, future research should utilize multiple methods to recruit or obtain the sample.

Depression often exists in concordance with other disorders. For example, researchers have found that young adults with presenting symptoms of depression often also present symptoms related to anxiety, attention, and delinquency (Rushton, Forcier, & Schectman, 2002). Even though comorbidity is common among young adults with depression, many RCTs exclude individuals suffering from additional problems (e.g. Melvin et al., 2006,). Almost certainly, comorbidity will affect outcomes of RCTs, thus further limiting the generalizability of RCT results and reducing external validity.

Effectiveness studies (those focused on increasing external validity) are especially important, given that research has shown that gender and cultural differences in the prevalence of depression do exist (Rushton, et al., 2002). Girls are twice as likely as boys to experience depressive symptoms. On a cultural level, Caucasians report more symptoms of depression than other races or ethnicities. Research suggests cultural values, such as those from a collectivist culture versus those from an individualistic culture, may account for differences in reported symptoms of depression (Greenberger, et al., (2000).

The literature concerning CBT to treat youth depression is consistent with the cultural reports, and suggests researchers account for cultural differences in studies. For example, Gaynor, et al. (2003) in an outcome study of large improvements in depressive symptoms during CBT, family, and supportive therapy described the sample (N= 87) as 72% female and 75% Caucasian. Many other studies have similar samples in terms of gender and ethnic representativeness (e.g., Clarke, et al., 2005; Kaufman, et al., 2005; and Kolko, et al., 2000); however, some studies have greater ethnic representation. For example, samples in the Weersing and Weisz (2002) and Geisner, et al. (2006) studies contain greater than 50% ethnic minorities. Therefore, some studies do generate a representative sample. One should always be cautious in generalizing group results to individuals, but it may be appropriate to apply the findings to a similar sample.

There are a number of different possible diagnoses of depression, including major depression, dysthymia, chronic depression, adjustment disorder with depression, bipolar depression, and unspecified depression. Most research in regards to treating depressed young adults with CBT examines only individuals diagnosed with major depressive disorder. There are a few studies which include participants who have been diagnosed with dysthymia or chronic depression (e.g., Kaufman, et al.,

2006; Melvin, et al., 2006), as well as those who suffer from major depression. The limited availability of research regarding other forms of depression calls into question the effectiveness of CBT in alleviating depressive symptoms in individuals with diagnoses other than major depression. Clinicians and practitioners need to consider the symptoms and problems of clients in comparison to that of the research in order to make the best informed decision regarding the care of the client.

In addition to many different diagnoses for depression in young adults, there are many different ways to measure and diagnose depression and symptoms. Most often used for diagnosis of major depression in youth is the Schedule for Affective Disorders and Schizophrenia-Child Version-Present and Lifetime (K-SADS-PL; Gaynor, et al., 2003; Kerfoot, et al., 2004); Kolko, et al., 2000), or alternate versions (i.e. K-SADS, K-SADS-L, or K-SADS-EV-5; Clarke, et al., 2005; Melvin et al., 2006; TADS, 2004). Also often used to measure depression are the Beck Depression Inventory (BDI), Beck Hopelessness Scale (BHS), and the Reynolds Adolescent Depression Scale (RADS). However, there are a number of additional assessment tools (which all measure different aspects of depression) available that are also widely used. It is difficult to compare studies, because each one utilizes a different combination of measurements tapping into different areas of the disorder.

One can understand the importance of learning the degree of reliability and validity for each assessment scale considering the variety of tools available. However, after reviewing several studies examining the effects of CBT on young adult depression, it was observed that many researchers do not provide information regarding the reliability and validity of the scales used. In fact, only two reports (of seven) indicated any degree of reliability and validity for the K-SADS-PL: Melvin, et al. (2006) and the TADS study (TADS, 2003). Both studies concluded the K-SADS-Lifetime has high inter-rater and test-retest reliability, and, in addition, Melvin et al. (2006) argue the K-SADS-Lifetime has high criterion and predictive validity as well. Interestingly, they do not provide the data to support their conclusions.

Similarly, researchers who report degrees of reliability and validity for other scales do not provide rationale for the inferences, simply that the scales have reliability and/or validity. For example, Kolko, et al. (2005) discussed reliability and validity for the Children's Negative Cognitive Errors Questionnaire (CNCEQ) by saying the measure has been shown to have internal consistency, test-retest reliability, and both convergent and

discriminant validity. Consumers of research have no way of evaluating the appropriateness of using measures such as the BDI, BHI, RADS, K-SADS, and CNCEQ for assessment when specific information about reliability and validity is not provided.

The research is conflicting in regards to the effects of CBT in treating young adults suffering from depression. Data suggests CBT works well for youth suffering from mild to moderate depression, when delivered in eight to sixteen sessions, and in combination with medication (Kaufman, et al., 2005). However, some research (e.g. Weersing & Brent, 2006) shows CBT may not be effective for young adults suffering from severe depression and impairment, in families with a history of maternal depression, and in cases with externalizing comorbidity.

According to Weersing and Brent (2006), early research revealed high effect sizes for CBT on measures of depression; but recent research demonstrates much lower effect sizes than previously reported. In their meta-analysis, Weisz, et al. (2006) reported a mean effect size of 0.34, suggesting a small to medium effect, which is smaller than indicated in previous research (e.g. 0.72; Michael & Crowley, 2002) concerning youth depression.

Although some studies report effect size, many only report statistical significance. Statistical significance estimates the probability of the sample results differing from the actual sample, while practical significance (i.e. effect size estimates) evaluates the consistency of treatment across situations. Only looking at statistical significance, researchers may disregard potentially beneficial treatments. They may miss helpful interventions because they did not consider the practical or clinical significance of the treatment. Thus, it is important for future research to include effect size estimates to help evaluate clinical and practical implications.

For example, the TADS (2004) study showed that CBT was not significantly more effective than fluoxetine (an antidepressant medication) or a placebo. They did find statistically significant results for the combination of CBT and fluoxetine in comparison to CBT alone and fluoxetine alone. This study did not report effect sizes, so we are limited in our ability to establish practical and clinical significance.

However, TADS (2004) and other studies (e.g. Clarke, et al., 2005; Melvin et al., 2006) provide evidence for practical significance through reports of secondary outcome measures in CBT intervention groups. They found significant improvements on measures of anxiety, self-efficacy, and



suicidality. It is important to recognize the effects on the secondary outcome measures, because they suggest CBT may be practically significant in reducing not only depressive symptoms, but also other common comorbid disorders. Practitioners may decide using CBT as an intervention is worthwhile even if CBT does not produce statistically significant results because it can reduce other problem areas.

## CONCLUSIONS

The goal of CBT as intervention for depressed youth is to reduce (or eliminate, if possible) negative thoughts and actions. Although much research has been conducted in this area, few definitive conclusions can be made. Depression, especially in young adults, is a complex disorder, requiring significant amounts of literature to disentangle the components affecting the population.

The literature regarding CBT in treating depression in young adults is conflicting. Earlier research provided strong evidence for the effectiveness of CBT, although findings that are more recent argue CBT is not as beneficial for reducing depressive symptoms as once thought. An in-depth investigation of the available literature suggests the research is limited. There is a large amount of efficacy studies, but few effectiveness studies. In addition, many of the RCTs have small sample sizes, reducing the power of the studies. Furthermore, RCTs do not address threats to external validity, like examining the effects of CBT in other settings. Many of the RCTs do account for threats to internal validity, such as testing and maturation effects (e.g. Clarke, et al., 2005; Geisner, et al., 2006; Kolko, et al., 2000; TADS, 2004).

There is not one single method to measure symptoms and sources of depression in young adults. Each measurement examines different aspects of depression. It is difficult to compare findings from one study (for example, one that looks at negative cognitions) to another study (which observes negative affect). Thus, it is important to think about the expected results when considering the effectiveness of CBT as intervention for clients.

Much of the research does not provide information regarding the reliability and validity of the measurement tools used to diagnose and assess depression in young adults. Similarly, many studies only report statistical significance (or lack thereof in some cases), which limits the

conclusions regarding clinical and practical significance of the intervention one can make.

Although there is still much room for improvement in reporting the effects of CBT to treat young adult depression, there have been significant gains in the research. More and more studies are including information about comorbid disorders existing with depression and are testing samples that are more diverse. Similarly, more authors are indicating effect sizes and information regarding practical and clinical significance. As Weersing and Brent (2006) suggest, CBT for the treatment of depression in young adults is “a promising intervention and rational treatment choice” (p. 953).

Future research should help separate the complex aspects of both CBT and depression in young adults. Researchers can focus on using larger sample sizes and examine mediators and moderators of treatment response. They can compare different measurements, settings, and designs to determine what depression factors are influenced by which components of CBT.

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