

An analysis of the Effectiveness of Cognitive Behavioral Therapy (CBT) in Reducing Generalized Anxiety Disorder (GAD) among Female Patients Affected by this Disorder

Malihe Khosravi¹, Roghayeh Yazarloo²

¹Islamic Azad University Branch of Galikesh

²Master of Women's Studies, Islamic Azad University, Science & Research Branch, Tehran

Received: 24 October 2018, Revised: 05 December 2018, Accepted: 20 December 2018

ABSTRACT

Introduction: this paper aims to investigate the effectiveness of cognitive behavioral therapy (CBT) in reducing Generalized Anxiety Disorder (GAD) among female patients affected by this disorder. Using experimental pretest-posttest control group, 40 female patients referred to Karaj city Charity Committee affecting to generalized anxiety disorder under the criteria of the The fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM), were randomly selected, and put into two experimental and control groups. The participants answered to the Penn State Worry Questionnaire (PSWQ) and Cattell Anxiety questionnaire. The experimental group received 12 sessions of individual therapy. At the end of treatment and one month after treatment, the participants in both groups answered to both questionnaires. The results of research showed that CBT significantly reduced anxiety in participants who are affected to Generalized Anxiety Disorder (GAD) at the stage of post-test. The results of research show that CBT affects reducing Generalized Anxiety Disorder (GAD).

Keywords: Cognitive Behavioral Therapy, Generalized Anxiety Disorder, Generalized Anxiety Disorder, Anxiety.

Introduction

Anxiety is one of the most common mental disorders in adolescents (Cartwright Hatton, 2006). An average from every 100 children, 13 people in age group 9 - 17 years old experience one of those anxiety disorders and prevalence of this anxiety disorder in girls seen more rather than boys (Costello *et al.*, 2003). A variety of evidences show that in different anxiety disorders, separation anxiety, social

anxiety, generalized anxiety and phobia in range of 0.1-2.4, 1-2, 0.4-4.2, 1.9-2.4 percent, respectively, among the general population and adolescents is prevailed (Basak nejad *et al.*, 2011). Generalized anxiety disorder is a common psychiatric disorder. (Wells and Carter, 2006).The overall prevalence of anxiety disorders is shown to be quite high, but with considerable variation from the most

prevalent (specific phobias) to the least prevalent (agoraphobia without a history of panic disorder) disorders. Age-of-onset (AOO) of anxiety disorders is typically in childhood or adolescence and the course is often chronic-recurrent. Anxiety disorders are highly comorbid with each other and with other mental disorders. Because of their early AOO, they are often the temporally primary disorders in comorbid profiles, raising the question whether early interventions to treat anxiety disorders might have a positive effect on the onset, persistence, or severity of secondary disorders such as mood and substance use disorders (Kessler RC, 2001). Results of some other epidemiological research by Javidi (1994), Kokabe (1993), Bagheri yazdi *et al.*, (1992), Palahang *et al.*, (1996), Afshari mongered *et al.*, (1997), Kaviani *et al.*, (2002), Hosseini far *et al.*, (2007) in Iran have shown that GAD is the most common anxiety disorder (Hamidpoor and colleagues, 2010). Anxiety disorder in childhood and adolescence as defined by Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) is classified in the class of generalized anxiety disorder for Adults, a chronic disorder that may continue in lifetime (Ibrahimi and Dehdari, 2012). Such a disorder can be observed besides other anxiety disorders of mental diseases (Kaplan *et al.*, 1994, quoted Poorafkari, 1998). Generalized anxiety disorder is one of the issues of concern that were raised in World Health Organization. Large body of research throughout world has shown that generalized anxiety disorder compared with major depressive disorder includes occupational, physical and social injuries (Behold *et al.*, (1994, 2013) Karami *et al.*, (2005), Hunt *et al.*, (2004), Kessler *et al.*, (2005), Andrews *et al.*, (2000), WHO (1993). One-year prevalence of this disorder equals to 3.1 and prevalence of

this disorder is estimated to be 4 to 7 percent (Kessler *et al.*, 2002). About 12% of the patients who refer to the psychiatric Clinics and roughly 25% individuals who refer to the Anxiety disorder clinics are affected by Generalized Anxiety Disorder (Shafiei, Sang Atash and Rafiei nia, 2011). Given the chronic in nature and high prevalence of generalized anxiety disorder associated with mental disorders, such disorder has been thought as one of the most important disorders which disable the adults (Berkok, 2006). Some scholars believed in this disorder as "Basic anxiety disorder", saying that understanding the factors influencing the etymology of this disorder increases our knowledge about origin of other anxiety disorders and/or bipolar depressive disorders (Shafiei, Sang Atash and Rafiei nia, 2011). The original definition of generalized anxiety disorder includes anxiety, excessive worry and tension that occur on most days for at least six months, causes a central concern appear for daily events (Durham, 2007). Further, specific symptoms of autonomic arousal, muscle tension, dizziness, blurring of vision, and ringing in the ears have been mentioned here where Anxiety and Fear has to be together with three or more than three cases from six key symptoms: restlessness, fatigue, appetite, difficulty in concentrating, irritability, muscle tension, and difficulty in sleeping. Generalized anxiety disorder was associated with an increased risk of medical diseases, and taken as a factor in a range of risk factors in the etiology of psychiatric disorders particularly Depression and alcohol abuse such that timely diagnosis and treatment of that is considerable concern in clinical assemblies (Durham, 2007). However, the majority of epidemiological studies have shown that, however, Generalized Anxiety Disorder (GAD) is accounted as the most common anxiety disorder, an overview of

content of articles published and summary of articles in congresses indicate few therapeutic interventions conducted for this purpose, in a way that the studies in this area among other anxiety disorders have assigned the highest rank to themselves (Shafiei, Sang Atash and Rafieinia, 2011). Nevertheless, the studies conducted grounded on treatment and decrease of anxiety disorder recommended with cognitive behavioral therapy (CBT). Generalized anxiety disorder (GAD) has often been described as the "basic" anxiety disorder. This conceptualization is due in part to its early onset, persistent course, and resistance to change, as well as its gateway status to other anxiety disorders (Brown, Barlow, & Liebowitz, 1994). Furthermore, GAD's central and defining feature of uncontrollable worry is the primary element of anxiety. Individuals with GAD worry excessively about diverse subjects without a persistent focus on anyone thing. It is the pervasive, uncontrollable quality of worry that makes it the hallmark of GAD and the true distinguishing feature of this disorder. Such constant, diffuse worrying leads to chronic feelings of anxiety. GAD might therefore be conceived as the absolute expression of high trait anxiety. Although substantial gains in GAD treatment have been made over the years, it remains the least successfully treated of the anxiety disorders (Brown, Barlow, *et al.*, 1994). Nevertheless, cognitive behavioral therapy (CBT) for GAD has been found to be generally effective against the disorder (for a review, see Newman, Castonguay, Borkovec, & Molnar, 2004). The symptoms of GAD are believed to arise from consistent, spiraling, rigid patterns of interaction between cognitive, imaginal, and physiological responses to continuously perceived threat (Barlow, 1988; Borkovec and Inz, 1990; Newman

and Borkovec, 2002). Cognitive behavioral therapy contains elements designed to target each of these cognitive imaginal, and physiological response systems (Newman, 1999; Newman and Borkovec, 1995). The client learns techniques in CBT with the aim of developing a more flexible and relaxed lifestyle leading to a reduction in their anxiety. The specific interventions in CBT include self-monitoring, stimulus control, relaxation, self-control desensitization, and cognitive therapy. Several recent chapters provide a more complete review of CBT for GAD (Borkovec & Newman, 1998; Newman, 2000a; Newman and Borkovec, 2002). Several studies have examined personality correlates of GAD. Research suggests that children with GAD tend to be perfectionists, often redoing tasks if their performance is less than perfect. They may seek excessive approval and need disproportionate reassurance regarding their worries as well. Children with GAD may also be overly conforming and self-conscious and may have a negative self-image. Moreover, they are likely to report a high rate of such somatic complaints as feeling shaky and heart palpitations (Beidel, Christ, and Long, 1991; Masi, Mucci, Favilla, Romano, and Poli, 1999). Anxious children are described by parents and teachers as lacking social skills, shy, withdrawn, and lonely (Strauss, Lease, Kazdin, Dulcan, and Last, 1989). They are less liked by their peers and have trouble making friends (Strauss, Lahey, Frick, Fram, and Hynd, 1988). It is unclear whether these personality characteristics lead to GAD or whether they arise after the disorder is acquired. It is likely, however, that the relationship between these personality characteristics and the disorder exist in a cycle of interaction, each augmenting the other.

Research Hypothesis

Cognitive behavioral therapy (CBT) in reducing Generalized Anxiety Disorder (GAD) among female patients affected by this disorder comparing to control group is effective.

Research Methodology

Research Design

In present paper, experimental design in the study method has been with the use of preliminary and final test regarding the control group by random selection.

Statistical population

Statistical population consists of 40 female patients referred to Karaj city Charity Committee affecting to generalize anxiety disorder under the criteria of the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM). The groups studied in this paper using sampling put into the research groups; these groups include: experimental group (N=20) and control group (N=20).

In present paper, after diagnosing the Generalized Anxiety Disorder (GAD), two groups filled Cattell Anxiety questionnaire. Then cognitive behavioral therapy (CBT) was applied on experimental group, and then after the treatment finished, again Cattell Anxiety questionnaire was provided for both groups of participants.

Research Tools

Penn State Worry Questionnaire (PSWQ)
Penn State Worry Questionnaire (PSWQ), a self-reported questionnaire consisting of 16 questions, is a measure of worry phenomena and has been demonstrated valid in cross-cultural populations. This questionnaire is used as a means for generalized anxiety disorder. The scale to give response to the questions is provided as five-option Likert scale where the

scores from 1 to 5 range assigns to each question and the domain for the total scores of the questionnaire is classified in 16-80. Coefficients of internal consistency of the questionnaire have been high among the clinical and typical groups, reported in the range 0.88-0.95. Retest reliability coefficients have been reported in the range from 0.74 to 0.92. Cronbach's alpha and test-retest coefficients of this questionnaire among Iranian students have been reported 0.87 and 0.79, respectively. Furthermore, a significant correlation of the scores together with Anxiety and depression scores indicates the Convergent validity.

Cattell Anxiety questionnaire

In this study, test anxiety of Arnold Cattle to collect information in pre and posttest anxiety in both groups was used. This test was provided based on a wide range of research mentioned as the most effective tool provided as a short questionnaire including 40 articles. This questionnaire is supplemented with the clinical diagnosis. This scale can be used for both males and females from 14 years old in most cultures. Materials in anxiety scale have provided the measurement with five factors of personality. The factors of correlations with the 16 personality factors as a cause, have prepared the second grade of anxiety. The five factors in scale include tendency to sin, stress, lack of self-consciousness, my weakness, tendency to paranoid. Further, the materials of the scale have been designed such that the distinction between latent and patent anxiety comes to realize. The alpha coefficient for internal consistency dedicated these tools include patent anxiety, latent anxiety and typical anxiety respectively with 0.95, 0.88 and 0.83 where these tools can distinct the typical anxiety from patent and latent anxiety in terms of validity.

Structured Clinical Interview for DSM-IV (SCID)

The Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) is a diagnostic exam used to determine DSM-IV Axis I disorders (major mental disorders) and Axis II disorders (personality disorders). The Structured Clinical Interview for DSM-IV Dissociative disorders (SCID-D) is widely used to diagnose dissociative disorders, especially in research settings. This interview takes about 30 minutes to 1.5 hours, depending on individual's experiences. The reliability and validity of the SCID for DSM-III-R has been reported in several published studies. With regard to reliability, the range in reliability is enormous, depending on the type of the sample and research methodology. An overview of these tools indicates that the reliability and validity are in good status, reported in range 0.81-0.84. In Iran, Sharifi and colleagues have examined the reliability and validity for an Iranian population. The findings showed that diagnostic agreement was moderate to good for most diagnoses; further, most of the interviewers have evaluated the applicability of the Persian version of the tool in a proper status.

The Structure and Content of Treatment

The experimental group participated in 12 sessions of weekly 1.5 hour individually, and the control group remained in checklist. Cognitive behavioral therapy protocol was the protocol proposed by Hazlett-Stevens. The content of treatments were as follows: first session) Mental Training - Session II) continue to review of mental training, Logic and reason, deep breathing, deep breathing techniques, methods of cognitive therapy, cognitive, logic and reason to identify the thoughts of distress. Third session: logic and reason,

progressive relaxation training, implementation of progressive relaxation. Fourth session: cognitive techniques to challenge anxiety-causing thoughts, creating an alternative interpretation or predictions, examine evidence and possibilities. Fifth Session: recognizing disturbing behavior, recognizing passive avoidance behaviors, training mental relaxation. Sixth Session: identify and evaluate the main ideas, progressive relaxation training. Seventh Session: continue to identify and evaluate the main ideas, mental exposure and practice coping. Eighth Session: continue to identify and evaluate the main ideas, identify and assess meta-cognitive beliefs about worrying, continue to mental exposure and practice coping. Ninth session: continue to identify and evaluate the major beliefs, continue to identify and evaluate meta-cognitive beliefs about worrying, creating new perspectives, training progressive relaxation. Tenth Session: continue to identify and evaluate the main ideas, continue to identify and assess meta-cognitive beliefs about worrying, behavioral changes in lifestyle, identifying activities neglected. The eleventh session: continue to identify and evaluate the main ideas, continue to identify and assess meta-cognitive beliefs about worrying, progressive relaxation training, and mental exposure. Twelfth session) continue to identify and evaluate the main ideas, continue to identify and assess meta-cognitive beliefs about worrying, progressive relaxation training and upcoming mental exposure. Thirteenth session: continue to identify and evaluate the main ideas, continue to identify and assess meta-cognitive beliefs about worrying, relaxation methods applied. Fourteenth Session: continue to previous treatment components as needed, introducing and familiarization with

relapse prevention program, review client progress, mental training review. Fifteenth session: continue to previous treatment components as needed and relapse prevention program. Sixteenth Session: continue to previous treatment components as needed and complete relapse prevention program. It has to be noted that two individuals of the experimental group after 4 to 7 treatment sessions, avoided attending in treatment sessions, so that the sample size of experimental group reduced to 8 individuals. The participants in both groups after 16 treatment sessions finished, completed the Penn State Worry Questionnaire (PSWQ) and Cattell Anxiety questionnaire as the post-test. Further, follow-up was conducted after one month.

Findings of Research

The entire questionnaires completed from two stages pre and post Behavioral interventions - cognitive (CBT) treatment were scored in both experimental and control groups and t-test was used after calculating the mean of scores to compare the means of both experimental and control groups and comparing the means

pre and post Behavioral interventions - cognitive (CBT) treatment in experimental group. Initially, the results have been proposed in two diagrams. In the first one, frequency distribution of mean scores on five Cattell anxiety and general anxiety and trait anxiety in the experimental group pre and post cognitive - behavioral therapy has been shown. As shown in this diagram, the mean of all the scales mentioned above pre cognitive - behavioral therapy was higher than the mean post cognitive - behavioral therapy.

In diagram 2, frequency distribution of mean scores on five Cattell anxiety and general anxiety and trait anxiety among females in experimental and control groups post cognitive - behavioral therapy has been shown. As shown, the mean of all the scales for females in experimental group post cognitive - behavioral therapy is less than the mean of scores for females in control group. Hence, cognitive-behavioral therapy in addition to anxiety can reduce the scales such as stress, tendency to guilt, insecure paranoid, lack of self-consciousness and lack of energy by which the change can be found in cognitive structures experiencing new behaviors.

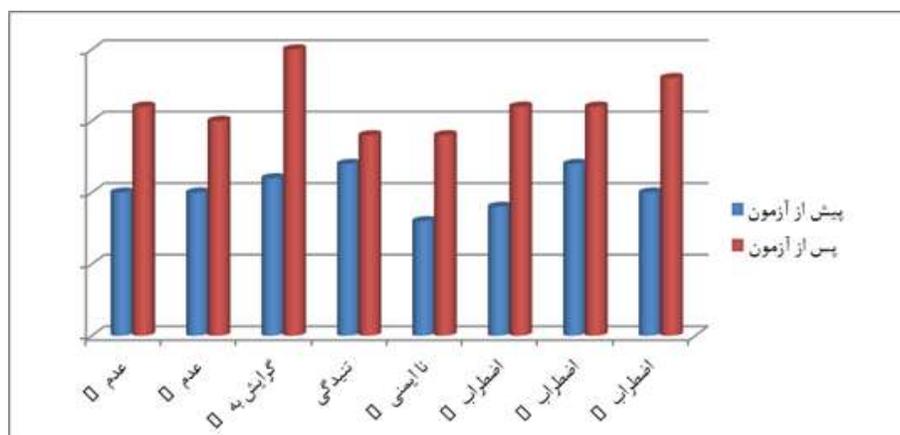


Figure 1. Frequency distribution of the subscale means on Cattell anxiety pre and post cognitive - behavioral therapy in experimental group

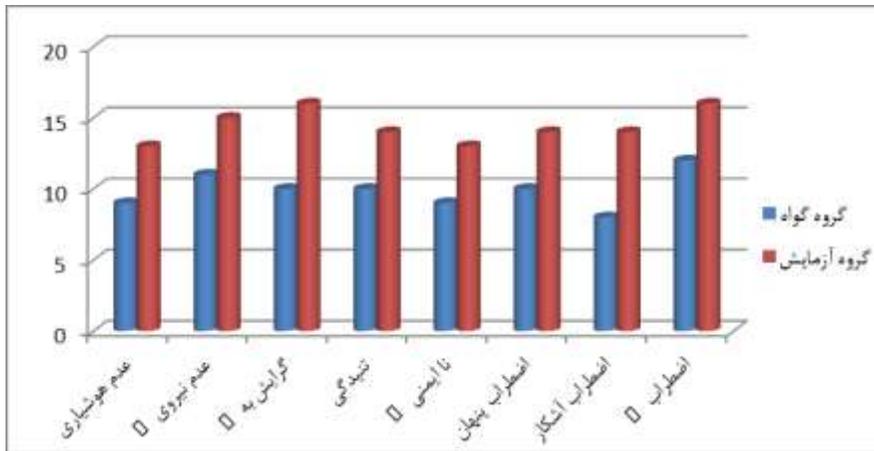


Figure 2. Frequency distribution of subscale means on Cattell anxiety in experimental and control groups

The results from table 1 indicate that there is no difference in the mean scores for Cattell general anxiety before cognitive - behavioral therapy, comparing experimental and control group with each other. Sine t (0.091)

observed at 0.05 level smaller than critical t, so the participants in both experimental and control group experienced the same anxiety before cognitive behavioral therapy (CBT).

Table 1. The results of t-test to compare the means of scores for general anxiety before cognitive behavioral therapy (CBT) in control and experimental groups

Statistics/ stage	No	Mean	Standard deviation	Freedom degree	Ratio of t	Significance level
experimental group	20	50.01	2.22	38	0.091	0.008
control group	20	50.89	4.35			

The results from table 2 indicate that there is a significant difference in the mean scores for Cattell general anxiety after cognitive - behavioral therapy, comparing experimental and control group with each other. Sine t (7.09) observed at 0.05 level is greater than critical t, so anxiety in female participants in experimental and group reduced significantly. Hence, cognitive behavioral therapy (CBT) was effective in reducing anxiety in females in experimental group.

Values shown in table 3 indicate that a significant difference among means of scores for Cattell general anxiety before and after cognitive behavioral therapy (CBT) in experimental group exists. Sine t (7.09) observed at 0.05 level is greater than critical t, so anxiety in female participants in experimental and group reduced significantly. Hence, cognitive behavioral therapy (CBT) was effective in reducing anxiety in females in experimental group.

Table 3. The results of t-test to compare the means of scores for Cattell general anxiety before and after Behavioral interventions - cognitive (CBT) in experimental groups

Statistics/ stage	No	Mean	Standard deviation	Freedom degree	Ratio of t	Significance level
Before CBT	20	43.12	3.39	38	7.33	0.05
After CBT	20	51.66	4.15			

Hence, Behavioral interventions - cognitive (CBT) was effective in reducing Generalized Anxiety Disorder (GAD) in females.

Conclusion

This paper aimed to investigate the effectiveness of cognitive behavioral therapy (CBT) in reducing Generalized Anxiety Disorder (GAD) among female patients affected by this disorder. The results of research showed that CBT significantly reduced anxiety in participants who are affected to Generalized Anxiety Disorder (GAD) at the stage of post-test. Further, the results showed that CBT affected reducing anxiety in experimental group rather than the control group whereby this effectiveness was shown by the sixth session. Another finding is that decrease of anxiety cannot be assigned to just one specific component because due to such a complex treatment program, so interference only by one component is impossible

References

Alirezaei Motlagh, M. and Asadi, Z. (2009). The effect of cognitive behavioral therapy in reducing anxiety in female adolescents with generalized anxiety disorder, research Exceptional Children Spring, 9(31), 25-34.

Basaknejad, S., Niazi, Z., and Davoodi, I. (2011). Effectiveness of cognitive - behavioral therapy on anxiety in adolescent girls through Kendal, Behavior Research / 9(4).

Beck, A.T. and Rusk, A. (1979). Cognitive Therapy for Depression. New York: Guilford press.

Borkovec T.D., Newman M.G., and Castonguay L.G. (2003). Cognitive-behavioral therapy for generalized anxiety disorder with integrations from interpersonal and experiential therapies. *CNS Spectr.* 8, 382-389.

Borkovec T.D. (2006). Applied relaxation and cognitive therapy for pathological worry and generalized anxiety Disorder. In: Davey GCL, & Wells A, editors. *Worry and its psychological disorders: heory, assessment and treatment*. Chichester: Wiley; 273-287.

Cartwright-Hatton S. Anxiety of childhood and adolescence: Challenges and opportunities. *Clin. Psychol. Rev.*, 7 (26), 8-813.

Costello, E.J., Mustillo, S., Erkanli, A., Keeler, G., Angold, A. (2003). Prevalence and development of psychiatric disorders in childhood and adolescence. *Arch. Gen. Psychiatry.*, 60(8), 44-837.

Dehshir, G. (2012). Efficacy of cognitive-behavioral therapy on stress and anxiety for people with generalized anxiety disorder, *J. Clin. Psychol.*, - Year IV, 2 (14).

Durham, R.C. (2007). Treatment of generalized anxiety disorder. *Psychiatry*, 6 (5), 183-187.

Hamidpour, B., Dolatshahi, Poorshahbaz, A., and Dadkhah, A. (2010). The efficiency of schema therapy in women with generalized anxiety disorder, *J. Psychiat. Clin. Psychol.*, year XVI, No. 4, Winter, 420 -431.

Ibrahimi, L. and Dehdaari, A. (2012). Prevalence of anxiety among children between fifth grade and overview of effectiveness in reducing internal and external self-reported methods, *J. Culture Mental Health Counsel.*, 3 (11) Fall.

Joharifard, R., Goodarzi, M.A., and Zamiri A. (2008). The impact of cognitive - behavioral therapy on anxiety and dysfunctional attitudes in a group of patients with generalized anxiety disorder, new findings in psychology, Spring, 2 (6), 81-94.

Kaplan, H. and Sadook, B. (1999). A Summary of psychology: Behavioral Sciences - Clinical

psychology, trans-Nusratullah pour Afkari, Tehran: Shahrab.

Kessler, R.C. and Wittchen, H.U. (2002). Patterns and correlates of generalized anxiety disorder in community samples. *J. Clin. Psychiatry*, 63, 4-10.

Kessler, R.C., Chiu, W.T., and Demler, O. (2001). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Co morbidity Survey Replication. *Arch. Gen. Psychiatry*, 62 (6), 617-627.

Moore, D.P. and Jefferson, J.W. (2004). Handbook of Medical Psychiatry. 2nd ed; 174-175.

Naeinian, M.R., Shaeiri, M.R., Sharifi, M. and Hadian, M. (2011). Reliability and validity of a short scale- generalized anxiety disorder (GAD), *Clinical psychology and personality / control of / May, 3 (4)*.

Shafiei Sang Atash, S. and Rafienia, P. (2012). Mahmoud Najafi, cognitive therapy on generalized anxiety disorder, anxiety and cognitive state author, *J. Clin. Psychol.*, - Year IV, Number 4 (16).

Wells, A.Q. and Carter, K. (2006). Generalized anxiety disorder. In. A. Carr & Q. M. McNulty (Eds.), the handbook of adult clinical psychology (423-457). London: Rutledge.

How to cite this article: Malihe Khosravi, Roghayeh Yazarloo, An analysis of the Effectiveness of Cognitive Behavioral Therapy (CBT) in Reducing Generalized Anxiety Disorder (GAD) among Female Patients Affected by this Disorder. *International Journal of Advanced Studies in Humanities and Social Science*, 2018, 7(4), 368-376. http://www.ijashssjournal.com/article_84098.html