Efficacy of Dialectical behaviour Techniques (DBT) in Reduction of Anxiety of Students in Tehran- Iran

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Abstract

Background and objective: Dialectical Behavior Therapy techniques can be used as useful and effective method in reduction of many clinical symptoms. In this study, Efficacy of dialectical behavior therapy in reduction of anxiety of students in Tehran City is investigated. Methods and materials: this study is in kind of empirical study with pretest and posttest design with control group. Statistical population in this study consists of all high school female students of Tehran (n=674) educating during academic year of 2015-2016. First, cluster sampling is used and 4 schools are selected from schools of Tehran and from each couple of schools, 2 classrooms were selected and the students with high score in Beck's Anxiety Inventory (BAI) were selected as sample. Then, 30 students were selected using random sampling method and were placed in two groups with 15 people in each group. Both groups fulfilled the BAI in basic step. Experimental group received 12 sessions’ intervention with dialectical behavior therapy techniques and control group remained in waiting list. Both groups fulfilled BAI again after the treatment. Obtained data are analyzed using MANCOVA. Results: obtained results from the study showed that Dialectical Behavior Therapy can affect reduction of anxiety of female students and mean values of both groups are significantly different from each other (p<0.01).Conclusion: Dialectical Behavior Therapy (DBT) techniques can lead to reduction of anxiety of female students.

Keywords: Dialectical behavior therapy (DBT) techniques, Anxiety, Female students.

Introduction

Anxiety is an unpleasant emotion experienced by person as a result of feelings of real or innate and ambiguous threat [1]. Anxiety can be considered as a normal and adaptive response, which can result in preservation of life and when there is risk of physical and mental losses, anxiety can make people take an action to prevent the risks and dangers or to reduce its consequences [2]. Anxiety is along with physical symptoms (hands and feet trembling, palpitations, nausea, diarrhea, dry mouth), cognitive symptom (Lack of concentration, alert, feel...
confusion, fear of going crazy, negative and worrying thoughts), perceptive symptoms (depersonalization and de realization) and behavioral symptoms (Irritability and passiveness) [3].

Some scholars speak about two types of state and trait anxiety, so that trait anxiety shows personality anxiety of person and state anxiety shows positional anxiety of people [4]. Anxiety disorders can reduce quality of life and cause additional costs in patients [5] and hence, the disorders should be controlled. One of the most important techniques to control and treat anxiety is dialectical behavior therapy technique.

Dialectical behavior therapy (DBT) was originally developed to treat emotional deregulation problems among borderline personality disorder and the co-occurring problems (e.g., depression and anxiety) [6]. DBT integrates behavior strategies with acceptance strategies [7] and it is included four main skills: Mindfulness techniques, Distress tolerance, Emotion Regulation and Effective Communication Skills [7].

Dialectical therapy plan is in form of a completely structured plan, which can make it easy to be used by therapists [8, 9]. In this approach, relevant interventions of cognitive-behavioral therapy based on principle of changing are integrated with techniques of eastern philosophy such as meditation that is based on principle of acceptance.

Accordingly, 4 main and key skills are presented in field of the therapeutic method including mindfulness and distress tolerance as components of acceptance and emotion regulation and effective interpersonal relations as components of changing [9]. Some techniques are based on meditation and some others are based on skill training such as interpersonal relation skill that is derived mainly from same traditional methods of cognitive-behavioral therapy that encompass training social skills and assertiveness skills [10]. Dialectical behavior therapists tend in fact to change and modify cognitive-behavioral therapy method [11]. This approach has combined acceptance and sympathy with references with problem solving and social skill training [12] and has presented a mixture for emotion regulation in psychiatric disorders that anxiety is one of the disorders.

Studies have shown effectiveness of dialectical approach in reduction of anxiety and irritability [13]. According to findings of Pasieczny and Connor [14] in Australia, it was found that dialectical behavior therapy techniques are effective in reduction of symptoms of anxiety, depression, self-harm behaviors and suicide Control. Montazernia [15] has conducted a study under the title of 'investigating effectiveness of dialectical behavior therapy-based skill training in state and trait anxiety in patients with diabetes type II'. The study showed that dialectical behavior therapy-based skill training can affect symptoms of state-trait anxiety in patients with diabetes type II.

Moreover, Swales and Heard [10] in Spain studied dialectical behavior therapy-based skill training technique during 3-month period in 13 sessions on people with Borderline Personality Disorder. Results of the study showed significant reduction of symptoms of depression, anger, irritability and emotional instability in patients.

In this field, according to negative role of anxiety in academic achievement, relationship and total performance of students; controlling and treating it in students is essential. This study has investigated the Efficacy of dialectical behavior therapy in reduction of anxiety of students of Tehran City.

Method

Statistical population in this study consists of all high school female students in Tehran. (n=674) educating in academic year 2015-2016. In first step, sample was selected using cluster random sampling to 4 schools and 2 classrooms were selected from each school. All students of 8 classes fulfilled Becks Anxiety Inventory (BAI) and among the students with high score in this inventory, 30 people were selected randomly and were placed in two groups with 15 people in each group. Both groups fulfilled the BAI in basic step. Experimental group received 12 sessions intervention with dialectical behavior therapy techniques and control group remained in waiting list. Both groups fulfilled BAI again after the treatment.
Obtained data are analyzed using MANCOVA.

Instrument

Beck Anxiety Inventory (BAI)

Beck’s Anxiety Inventory (BAI) is a 21-item scale to diagnose anxiety. Each item of the inventory measures one symptom of anxiety. The respondent would describe his/her mood state over the few weeks based on test items in scale range of 0-30. Total score of the inventory is in range 0-63. This scale has high consistency and validity and total value of correlation in range 30-70% [16]. In Iran, validity of the inventory is 0.91 based on Cronbach’s alpha and its reliability is 0.72 [17].

Content of Sessions

All students in experimental group were under intervention of 12 sessions of dialectical behavior therapy techniques. Content of sessions is regulated based on the book “Dialectical Behavior Therapy”[7].

Session 1: Introducing group members and explaining rules of group and presenting self-review papers.

Session 2: Distraction techniques such as counting numbers divert attention, to engage in enjoyable activities and leave the position.

Session 3: Diaphragmatic breathing and relaxation techniques training.

Session 4: Training distress tolerance techniques such as self-relaxation techniques and gentle smile technique.

Session 5: Training mindfulness skills such as conscious breathing, conscious walking and Conscious Eating.

Session 6: Training emotion regulation skills such as emotion identification, emotion validation and emotion acceptance.

Session 7: Describing emotions, writing negative emotions, releasing of excitement with sports and activities.

Interpersonal Efficiency Skills: training problem solving, empowering family environment, absolute expression of what is going to be said and preserving self-confidence.

Session 8: Verbal expression of emotions using positive sentences such as “I feel angry”

Session 9: Training problem solving skills to control emotions.

Session 10: Training communicative skills like requesting skills and criticism.

Session 11: Training certainty skills and dispute solving and negotiating with others.

Session 12: Review of last sessions and implementation of posttest.

Findings

The main objective of the present study has been investigation of effect of dialectical behavior on reduction of anxiety of students. In this section, the results related to research data using descriptive statistics (mean value and standard deviation) and inferential statistics (MANCOVA) are used to test research hypothesis. To test the hypotheses, mean values of pretest and posttest of both experimental and control groups are analyzed using MANCOVA.

<table>
<thead>
<tr>
<th>Source</th>
<th>Value</th>
<th>F (25.2)</th>
<th>Sig</th>
<th>Eta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined variable (group)</td>
<td>0.012</td>
<td>989.278</td>
<td>0.000</td>
<td>0.988</td>
</tr>
</tbody>
</table>

Table 1: Manova of F ratio to measure combined variable

Note: multivariate F ratio is obtained by Wilk Lambda approximate

Squared values of Eta in table 1 are a portion of variance related to new combined variable. Total rule is that if the value is higher than 0.14, the effect is high. In table 1, this value for new combined variable (group) is obtained to 0.988, which shows high effect. Moreover, obtained results from Wilk's Lambda test on combined variable are significant. Additionally, significance level of combined variable shows that the participants of two groups are different and mean values of groups are significant under effect of independent variable. The results of adjusted mean value and results of covariance of dependent variables are presented in table 2.

Table 2: Adjusted mean value of dependent variables
In table 2, adjusted mean values of dependent variable are observed. Effect of auxiliary random variables is eliminated statistically. The mean values show that mean value of experimental group is lower than control group.

Table 3: Results of ANOVA for components of dependent variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>F (26.1)</th>
<th>P</th>
<th>Eta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>158.948</td>
<td>0.000</td>
<td>0.859</td>
</tr>
</tbody>
</table>

Moreover, ANCOVA in table 2 has shown that although there are 2 independent variables, through dividing 0.05 to 2, Bonferroni correction is performed. Hence, significance level is below 0.025 and this is true for all 6 variables. Eta value shows that about 85% of variance of anxiety variable is for "group" variable.

Figure 1: illustrating mean values of anxiety in experimental and control groups

Figure 1 show properly that people under dialectical behavior therapy have shown less anxiety than control group.

According to the aforementioned data, obtained results are as follows:

Main hypothesis: training dialectical behavior therapy techniques can affect level of anxiety of students.

Obtained results from table 1 show that there is significant difference between experimental group (received sessions of dialectical behavior therapy) and control group (with no intervention) (Eta= 0.988; p=0.000; F (25.5) = 989.278). The difference between two groups is in benefit of experimental group according to adjusted mean values.

According to the results of MANCOVA in table 3, it could be found that adjusted mean values of two groups are significantly different in terms of level of anxiety (Eta= 0.859; p= 0.000; F (26.1) = 158.948).

Discussion

Obtained results from this study show that training dialectical behavior therapy can lead to reduction of anxiety in female students.

The results have been in consistence with findings of Armand et al [9] based on effectiveness of dialectic behavior therapy in changing illogical beliefs and anxiety of prisoned men with anti-social disorder in prison of Ilam and with findings of Montazernia [15] based on effect of dialectical behavior therapy-based skill training on reduction of anxiety symptoms in patients with diabetes type II.

Moreover, obtained results from this study are in consistence with findings of Salehi et al [18] based on effectiveness of DBT techniques in reducing symptoms of
depression, anxiety and interpersonal sensitivity in anxious and depressed patients and with findings of Kroger et al [19] based on effect of dialectical behavior therapy and group skill training on reduction of symptoms impulsivity, self-harm, depression and emotion regulation; reduced anxiety, anger, emotional instability, irritability and improved quality of life. Obtained results from this study are also in consistence with findings of Fleischhaker et al [20] based on investigating effect of DBT on reduction suicidal and self-injurious Behavior and Borderline Symptoms with a one-year Follow-up and with findings of Pasieczny and Connor [14] showing in a study in Australia that DBT can be effective in reduction of symptoms of anxiety and depression and also reduction of self-harm behaviors and suicide.

Moreover, the results are in consistence with findings of Swales and Heard[10] in Spain based on effect of DBT in a 3-month period (13 sessions) on people with Borderline Personality Disorder along with results such as significant reduction of symptoms of depression, anxiety, anger, irritability and emotional instability.

In order to discriminate the findings, it could be mentioned that dialectical behavior therapy (DBT) technique is a combination of training interpersonal skills and cognitive-behavioral techniques that learning them helps students to control different symptoms of anxiety. In this field, it is vital to train these techniques and to consider them in routine maintenance of anxiety in students. [21-22]

References
