

The Study of Dialectical Behavior Therapy Efficacy on the Amount of High School Student's Depression and Suicide Thoughts in Rasht City, Iran

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ABSTRACT

The main objective of this study was to identify non-drug approaches to reduce rates of depression among high school girl students; therefore, this study aims to consider dialectical behavior therapy efficacy on the amount of high school student's depression and suicide thinking in Rasht city, Iran. The research methodology in this study is experimental and statistical community includes high school adolescents aged 15-18 years old of that Efaf high school was firstly chosen among girl high schools in Rasht city in the selection stage, which 1000 students were studying in two shifts, then ten classes were selected and all students in these classes who totally were 300 ones responded to the Beck's Depression Questionnaire and Beck's Suicide Thoughts Assessment. 55 subjects of 300 ones gained high scores on taken tests concerning the cut-off points. These people scored 16 and higher than in Beck's test and in suicide thoughts assessment test were of those who have been inclined to committee suicide based on the types of questions in which 30 people were chosen in random sampling and are randomly involved in two 15 ones of control and experiment groups. Then therapeutic intervention was implemented in experiment group. The therapeutic process was individually made almost in 20 sessions (2 sessions per week, 45 minutes for each session). After implementing the independent variable on individuals in experiment group, the dependent variables were reassessed in both groups and the results obtained in both groups were compared to each other. Based on the statistical data namely $\eta^2=0.635$, $p=0.000$, $F(1,29)=73.108$, $\eta^2=0.671$, $P=0.000$ and $F(1,29)=55.049$, it was found out in Beck's suicide thoughts assessment test that the F ration is statistically significant for the effect of efficiency and there is a difference between the two groups. This result indicated that dialectical behavior therapy is effective in reducing the amount of depression and suicide thoughts. Dialectical behavior therapy is effective in reducing the amount of depression and suicide thoughts in high school girl students of Rasht city, Iran.

KEY WORDS: Dialectical Behavior Therapy, Depression, Suicide Thoughts, Students.

INTRODUCTION

Despite remarkable advances obtained in therapeutic interventions related to depression, we are still faced with high incidence, frequent recurrence of periods and depression disorder being chronic, a note that refers to current therapeutic interventions inadequacy and the need to present new therapies with greater efficiency and durability to deal with the challenges faced with depression therapies according to its social and human costs. (Alavi, 2009). 400 thousand people are annually seeking treatment for depression and 15% of them kill themselves. Among the patients who referred to physician for physical complaints are at least 15% ones are depressed and one third of them are affected to mild or severe depression. Social surveys show that 6 to 9 percent of those who do not need help to solve their problems are depressed. Some of the worldwide conducted research estimated the prevalence of depression 6% in general population and almost 2% in adolescents of the total population. Reactive depression (that is influenced by environment and individual's psychological-cognitive structure) has a much higher prevalence of biological depression (which is essentially a biological basis) (Sarasoun, quoted from Najarian, 2004). It is relatively difficult to diagnose depression in adolescents. The sensitivity of individuals towards themselves and all their thoughts and actions is increased in early adolescents (Sarasoun,

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quoted from Najarian, 2004). Adolescents who attempt to commit suicide are socially isolated; this is especially true to boys. The effectiveness of DBT has been studied on those having suicide records. The results of this research indicate a significant reduction in suicidal behavior, self-hurt, anger, impulsivity, depression and hospitalization period and a significant increase in overall function of mental health in DBT group. Not only has DBT been an effective treatment in various diagnosis, but it has positive results in different situations. It has been recognized, for instance, that DBT is effective in treatment patients families affected to BPD (Fruzzetti, Hoffman, and Linhan, 2001, quoted from Chou) and also as a method for couples therapy (Hiss, 1987, Jacobsen, 1991; quoted from Chou).

According to social biology hypothesis proposed by Linhan, it is supposed that BPD shows a disintegration in normal function and this disorder is conceptualized as a systematic insufficient productivity in emotional adjustment. It is suggested by socio-biological theory that BPD creation morbid is resulted from several factors. Some of these factors are natural preparations that creates individual differences in making ready for emotional turmoil, though other factors are resulted from one's interaction with the environment. The data related to clinical support the results of DBT effectiveness as a treatment for women affected to BPD and American Psychology Association (APA) introduced it as one of the empirically supported treatments. In the first RCT conducted in the field of DBT by Linhan and colleagues (1991, quoted from Dimeff, Koemer and Linhan, 2001), the effectiveness of DBT on women affected to borderline personality (BPD) was considered in comparison with common treatment group (TAU). The results achieved in this study showed that the subjects showed a significant reduction in DBT group semi-suicide behaviors. In continuous assessment, the amount of repeating semi-suicide in DBT group subjects was significantly less than TAU group (26% against 60%). The modified DBT was studied in the treatment of drug abuse women having borderline personality disorder characteristics, and the obtained results showed a decline in the level of distress, an increase in positive coping skills and behaviors (Fischer, 2007).

Turner and Ralph (quoted from Dimeff and colleagues, 2001), McCann and Ball (1996, quoted from Dimeff and colleagues, 2001), studied the effectiveness of DBT in treatment of legally hospitalized patients who often committed violent crimes (50% have personality disorder and 50% have anti-social personality disorder). The results showed that compared with TAU group, DBT subjects showed a significant reduction in depressed and agitated mood, paranoia, psychotic behavior, several maladaptive interpersonal coping style and increase in adaptive coping style.

RESEARCH METHODOLOGY

The research designed in two groups pretest-posttest. The statistical community consists of 30 high school girl students (aged between 15-18) in Rasht city who are selected by random sampling. The instruments to gather data were as follows:

Beck's Depression Questionnaire (BDI-II):

This test is one of the common measures to depression self-assertiveness and is made by Beck in 1967. This questionnaire has been extensively evaluated in psychometrics since it has been developed. Meta-analysis results showed that the internal consistency coefficient is between 0.73 to 0.92 with a mean of 0.86 (Marnat, 1990). Grading scores for the subjects is determined by drawing a circle (i.e. only one response per category) will be gathered together. If the circle marks a circle with more than one question in one or more categories, just one question of that category and the question that has the highest score will be considered (Proun and Proun, quoted from Mansour, 2005). Rates of depression are designed in a table based on the results considered for Iranian subjects and distribution of depression is estimated in seven categories or classes. In addition, the material chosen for this test is based on the abbreviated form of analysis which has provided the density of the material without loss of reliability and test accuracy.

Beck Suicide Scale Ideation

A rapid test is useful to measure the tendency to commit suicide both for a clinical work and for research. Because, not only can it provide a way to assess the risk of suicide, but makes it easy to provide quantitative score to express a person's risk of suicide. One of the scale tests is suicide thoughts formed by Aaron Beck and his colleagues. This test is designed in such a way that the interviewer can assess one's preoccupations about to commit suicide. Beck's suicide thoughts scale is a self-assertiveness tool composed of 19 questions. This questionnaire is

provided to detect and measure the attitudes, behaviors and making plans to committee suicide during past week. This scale is set based on 3-point scale from 0-2. Option A is zero, B (1) and C is 2. One's overall score is calculated based on the total score which is from 0-38. In scale questions, materials such as wishing death, a desire to committee suicide actively or passively, duration and frequency of suicidal thoughts, a sense of having control over oneself, deterrent factors of suicide and one's amount of readiness to committee suicide assessed are assessed.

In Beck suicide scale ideation, there are 5 screening questions which the responses indicate a desire to committee suicide actively or passively. Then the subject should continue to respond the next 14 questions. This scale has a high reliability. The coefficients were 0.87 to 0.97 based on Cronbach's alpha method and reliability is obtained 0.54 using test-retest method.

RESULTS AND DISCUSSION

Table 1: the mean and modified mean of depression dependent variable

Resource	pretest		Posttest	
	M	Sd	M	Sd
Experiment	20.73	2.76	13.93	1.75
Control	20.73	2.73	20.53	2.82

The modified means of depression dependent variable can be seen in the above table which the effect of auxiliary random variables are statistically removed. These means indicate that first group mean is lower compared to that of control group.

Table 2: Summary of covariance analysis data in experiment and control group to mutual effect test.

Source of changes	Total of squares	Degrees of freedom	Squares mean	f	Significance level	Eta
Hamprash	413.533	3	137.844	52.834	0.000	0.859
Group A	23.611	1	23.611	9.050	0.006	0.258
Pretest B	38.644	1	38.644	14.812	0.001	0.363
A*B interaction	52.822	1	52.822	20.244	0.000	0.438
Error	67.834	26	2.609			
Total	481.367	29				

According to data mentioned in table above, the mutual effect between pretest and depression is significant (Eta=0.438, P=0.000 and F(1.26)=0.20).

Table 3: Summary of covariance analysis data in experiment and control group by removing the mutual effect.

Source of changes	Total of squares	Degrees of freedom	Squares mean	f	Significance level	Eta
Hamprash	360.711	2	180.355	40.359	0.000	0.749
Depression pretest	34.011	1	34.011	7.611	0.010	0.220
Between groups	326.700	1	326.700	73.108	0.000	0.730
Within groups	120.656	27	4.469			
Total	481.367	29	-			

As is shown, the Hamprash's effect (P=0.000 and F(2,29)=40.359 is statistically significant and therefore is related to criterion. Therefore, F is statistically significant. In the equation, (Eta=635, P=0.000, F(1.29)=73.108), it is shown that there is differential effect between the two groups. In other words, there is a significant difference between experimental method and depression reduction. Therefore, it can be concluded that dialectical behavior therapy is effective in high school girl students as a non-drug method on depression reduction (Beck's depression test).

Table 4: mean and modified mean and standard deviation of the variable related to suicidal thoughts:

Source	Pretest		Posttest	
	M	SD	M	SD
Experiment	15.53	8.41	12.407 ^a	540
Control	14.27	7.34	17.814 ^a	539

Modified means of dependent variables of depression can be seen in the table above which the effect of auxiliary random variables are statistically removed.

Table 5: Summary of covariance data analysis of suicidal thoughts in experiment and control groups for mutual effect test:

Source of changes	Total of squares	Degrees of freedom	Squares mean	f	Significance level	Eta
Hamprash	1203.372 ^a	3	401.124	227.574	0.000	0.936
Group A	8.412	1	8.412	4.773	0.038	0.155
Pretest B	506.415	1	506.415	287.309	0.000	0.917
A*B interaction	251.631	1	251.631	142.760	0.000	0.846
Error	45.828	26	1.736			
Total	1249.200	29				

According to data mentioned in table above, the mutual effect between pretest and suicidal thoughts and the group is significant ($F(3,29)=227.574$, $P=0.000$, $Eta=0.936$).

Table 6: summary of covariance analysis of suicidal thoughts in experiment and control groups with removing the effect:

Source of changes	Total of squares	Degrees of freedom	Squares mean	f	Significance level	Eta
Hamprash	951.741	2	475.871	43.194	0.000	0.762
Depression pretest	422.541	1	422.541	38.354	0.000	0.587
Between groups	606.475	1	606.475	55.049	0.000	0.671
Within groups	297.459	27	11.017			
Total	1249.200	29				

As is shown, the effect of Hamparsh ($F(2,29)=43.194$, $P=0.000$) is statistically significant and is therefore related to criterion. The F ration is also statistically significant for functional effect ($Eta=0.671$), $F(1,29)=55.049$, $P=0.000$), which shows that there is a differential effect between two groups. In other words, there is a significant reduction between experimental method in reducing suicidal thoughts and control group.

In the above-mentioned studies, the DBT subjects showed a significant reduction in depressed mood compared to other groups which approves the hypothesis. In addition, dialectical behavior therapy techniques has a positive effective in reducing suicidal thoughts which is confirming the related hypothesis is compatible with connotative meanings of related conducted studies.

According to above-mentioned results concerning depression and the significant difference in depression scores in both tests, it has been shown that therapeutic techniques was able to has an effect in reducing depression, in which DBT capability can be observed according to this study and other studies conducted in this area (Fatehizadeh, Shafiabadi and Delavar, 2006-2007), Khadijeh Alavi 2009, Kornou and colleagues (2011, quoted from Fingenbam, 2007), Bohos, Haff, Estigelmire, Poul and Bam (2000), Mcquillan and colleagues (2005, quoted from Fingenbam, 2007).

Kornou and colleagues (2011, quoted from Fingenbam, 2007), Vohl and colleagues (2003, quoted from Fingenbam, 2007), Bohos, Half and Stigelmire, Paul and Bam (2000), Vonden Boush, Kouter Stigenen, Werholou Wenden Brink (2005), Turner and Ralph (quoted from Daimoff and colleagues, 2001), Miller, Ratous and Leigh (1996, quoted from Daimoff and colleagues, 2001).

The results of this study showed a significant reduction in suicidal behavior, self-hurt, anger, impulsivity, and a significant increase in general mental health function in DBT group. Therefore, this model of treatment can be applied as a non-drug method to reduce suicidal thoughts. In general, the presents results suggest that DBT is lead to reducing depression through the components of pervasive consciousness, tolerating distress and interpersonal effectiveness. In this regard, there is a mechanism through which pervasive consciousness can lead to reducing depression.

Suggestions for Further Research

It is suggested that future studies be performed in three groups and the efficacy of dialectical behavior therapy approach be compared to a group received non-drug DBT treatment as well as the waiting list which do not receive treatment.

Finally, along with the growing use of dialectical behavior therapy on a wide range of disorders in the world, it is hoped that the usefulness of this approach be studied in the treatment of other disorders by expanding the research in this field in Iran and helps overcome the challenges faced with the current treatments if its effectiveness is determined.

Conclusions

The results of mutual correlations of Beck's dependent variables of depression and suicidal thoughts indicate that the correlation is very high (more than 0.80). Therefore, it is impossible to apply the statistical method of MANCOVA, as a result, the ANCOVA statistical method is used for each separate variables.

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