



Comparison of the Effect of Group Transdiagnostic Therapy and Group Cognitive Therapy on Anxiety and Depressive Symptoms

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(Received 21 Aug 2012; accepted 10 Dec 2012)

Abstract

Background: The cognitive behavioral interventions based on the transdiagnostic approach for emotional disorders have received useful empirical supports in recent years. Most of the researches on this area have been conducted without any control group. Moreover, little information about comparative effectiveness has reported. The current study was compared transdiagnostic group therapy with classical cognitive group therapy.

Methods: Thirty three collages students with anxiety and depressive symptoms participated in eight two-hour sessions in Akhavan Hospital, Tebran, Iran during May and June 2011. The results were analyzed by The Depression, Anxiety, and Stress Scale, and Work and Social Adjustment Scale in pre and post intervention.

Results: Both groups showed the significant difference in research variables pre and post test. However, there was no significant difference in the results analysis using ACOVAs except for anxiety symptoms.

Conclusions: The effectiveness of transdiagnostic group therapy was confirmed in reducing anxiety and depressive symptoms. Implications of the study are discussed.

Keywords: Transdiagnostic group-therapy, Anxiety, Depression

Introduction

During the recent years, the effective treatments have been found for emotional disorders especially anxiety and depression (1). Nevertheless, a large number of people cannot access to these treatments. Norton and Hope (2) noted that this problem was related to the dissemination of effective treatments and accessibility to effective treatments. The cognitive behavioral approaches have published many therapeutic manuals and protocols for emotional disorders and their effectiveness have been confirmed by many studies (1). Using these treatments face to two great obstacles including lack of access to these treatments by the clients and the lack of applying these treatments through therapists (3).

Lifetime prevalence of anxiety disorders and depressive disorders has been reported respectively, 29 % and 21% (4). These disorders associated with considerable burden on the societies directly and indirectly (5, 6). Comorbidity between these two disorders has been reported about 40% -80% and they have high comorbidity with other disorders such as drug abuse. These chronic disorders have the risk of relapse, recurrent and low chance for improvement without treatment (7).

Although current cognitive therapies have been found successful in improving emotional disorders, they have some limitations such as loss of response to the current therapies among patients (8). In addition, the successful cognitive therapies are mainly complex and merely aimed at especial dis-

orders. However, different therapeutic instructions have been published for disorders, training and obtaining skills in each of them need to spend money and time. Moses and Barlow (8) suggested that the solution for these problems was to create a unified therapeutic approach for a range of emotional disorders. It is necessary to utilize transdiagnostic models for a great range of mental disorders. Transdiagnostic treatments (unified approach) have been introduced for these limitations. Unified approach or cognitive-behavioral transdiagnostic therapy is a therapy that has the same therapeutic principals for all emotional disorders without any adaptation to the especial disorder (9). Remarkable attention has been devoted to the transdiagnostic therapy that has been newly practiced (10-12). The transdiagnostic therapies have been shown their effectiveness in the treatment of wide variety of emotional disorders (9, 12, 13).

In the area of cognitive behavioral transdiagnostic treatments, different therapeutic protocols have been introduced (3). The current study was examined the effectiveness of transdiagnostic group therapy in reduction of sub-clinical symptoms of anxiety and depression and compares it with classical cognitive group therapy.

Materials and Methods

This study was a comparative or relative efficacy study that compared two therapeutic models with each other based on the outcomes scales instead of comparison of the one therapy with a control group without any intervention or in the waiting list. As we know, the cognitive therapy is a common and useful intervention (14) and a standard treatment was considered for one of the control groups. Therefore, the current study compared transdiagnostic group therapy with classical cognitive group therapy.

Participants

Population of the study was collage students. The sample of about 20 people in each group was selected. Forty one participants (in tow groups) were enough to gain appropriate statistical power for testing hypotheses. People with inclusion and ex-

clusion criteria were selected and assigned randomly to experimental and control groups. This study was carried out in Akhavan Hospital, Tehran Iran during May and June 2011.

The inclusion criteria included as anxiety and depressive symptoms based on the cut-off of 18 and higher in the depression subscale and score of 16 and higher in the anxiety subscale of The Depression, Anxiety, and Stress Scale (DASS-42; 20). These cut-offs were determined based on the Lovibond and Lovibond's (15) method that used percentage points for determination of severity levels. According to this matter, the percentage points of 78 and higher formed low level of severity. The exclusion criteria was based on the Axis I disorders, including anxiety disorders, depression, psychosis, Psychosomatic and drug abuse, by using the *Anxiety Disorders Interview Schedule for DSM-IV* (ADIS-IV).

After advertising in Universities and volunteers' follow up, DASS-42 was administrated. Participants who obtained a score equal to or greater than 18 in depression subscale and 16 in subscale of anxiety evaluated based on the Anxiety Disorder Interview Schedule for *DSM-IV* in order to determine inclusion and exclusion criteria. Then, we explained the study, its conditions, and moral status to them and got the informed consent, after that the study instruments were administrated and readministered after treatment sessions.

Demographic Characteristics of Sample

The study administrated on the students' population of universities across Tehran city. Among all prepared participants, only data of 33 students analyzed after the end of invention. 16 students assigned at control group (cognitive group therapy), and 17 students in transdiagnostic group. 25 were female (75.8) and 8 were male (24.2). The mean (standard deviation) age of the participants was 22.6 (SD=3.1). All of the students were undergraduate students except six of them were graduate students. Independent *t* test was used for evaluation of differences between two groups. Results showed that experimental group's age with mean (standard deviation) of 22.88 (1.62) and control group mean (standard deviation) of 23.75

(2.75) statistically not significant ($M= 0.87$; $SD= 0.77$; $t= 1.12$; $P< 0.27$). In addition, differences between genders in two group not statistically significant using chi square test ($X^2=0.24$ & $P< 0.62$).

Procedure

The participants filled out demographic and informed consent at intake. In addition, all of them completed the WSAS and DASS questionnaires. Then, they assigned randomly to the experimental and control groups. They participated in the group cognitive therapy (16) and transdiagnostic group therapy (17) for 8-sessions per week (a two-hour session). Sessions' content, procedures, and techniques were based on the published and known therapeutic instructions (16, 17). Two absent sessions was permissible and three absent sessions was considered as drop-out.

Measures

The Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV; (18)), is a semi-structured diagnostic interview designed to assess the presence, nature, and severity of DSM-IV anxiety, mood, and somatoform disorders, as well as previous mental health history. The interview also contains a brief screen for psychotic symptoms, and alcohol and substance abuse. All ADIS-IV interviewers, advanced doctoral students, were trained to rigorous standards for reliability with an expert ADIS-IV interviewer. This measure has demonstrated acceptable to excellent interrater reliability for the anxiety and mood disorders (19). The ADIS-IV was administered during the first assessment. We administered the Persian version of ADIS-IV (20).

The Depression, Anxiety, and Stress Scale (DASS;(15)) is a 42-item self-report measure in which participants rate the frequency and severity of experiencing negative emotions. Frequency/severity ratings are made on a series of 4-point scales. The DASS is comprised of three subscales, physical symptoms of anxiety (DASS-A), mental stress (DASS-S), and depression (DASS-D). Each of 42 symptoms is presented as an item, and is rated on a 4-point frequency and severity scale. The 14 items contributing to each factor are summed to yield factor scores. Internal consistency

for all three factors were in the very good to excellent range (DASS-D 0.91; DASS-A 0.84; DASS-S 0.90). The Depression, Anxiety and Stress subscales have shown strong psychometric properties with a range of populations (15, 21). Persian version of DASS-42 was published by Sahebi and his colleagues (22). They were reported good internal validity for Depression (0.77), Anxiety (0.79) and Stress (0.78) subscales.

Work and Social Adjustment Scale (WSAS: 24). The WSAS is a 5-item measure asking participants to rate the degree of interference caused by their symptoms in work, home management, private leisure, social leisure, and family relationships. Interference is rated over the past week on a 0 to 8 scale (0= not at all interfering to 8 = severe interference). The WSAS is a descriptive measure of subjective interference in various domains of living. The final score represents the average of scores across domains. The WSAS has shown adequate internal consistency, ranging from 0.70 to 0.94, and test-retest correlation (0.73) in a clinical sample (23). This scale preliminary validated in Iranian students sample (24) ($n=41$). WSAS had a correlation with DASS-D ($r=0.75$, $P<0.01$) and DASS-A ($r=0.66$, $P<0.01$) and test retest reliability of WSAS was statistically significant ($r=0.69$, $P<0.01$).

Results

An independent t test was used to examine the age difference between control and experimental groups. The results explained that there was not any significant difference in age ($M=0.87$, $SD=0.77$, $P=0.27$) between experimental group ($M=22.88$, $SD=1.62$) and control group ($M=23.75$, $SD=2.72$).

Comparison of Means of Pretest in the control and experimental groups

Mean and standard deviation of both groups have been shown in Table 1. There was not a significant difference between variables in t -test comparing the means. Thus, there was not any significant difference between two groups on the symptoms of anxiety, depression, and general performance in pre test.

Table1: Comparison of groups using independent *t* tests

Masseurs	M (SD) ^{con}	M (SD) ^{exp}	M (SD) ^{dif}	<i>t</i> (P)
DASS-D	22.25 (2.96)	23.06 (3.19)	-0.81 (0.46)	-0.75 (0.46)
DASS-A	20.94 (2.82)	19.94 (2.66)	0.99 (0.95)	1.05 (0.3)
DASS-S	19.13 (3.52)	19.71 (3.89)	0.58 (1.29)	-0.45 (0.66)
WSAS	18.81 (4.43)	18.82 (4.43)	-0.01 (1.35)	0.01 (0.98)

Note: M(SD)^{con} = Mean (Standard Deviation) Control; M(SD)^{exp} = Mean (Standard Deviation) Experiment; M(SD)^{dif} = Mean (Standard Deviation) Difference; *t* (p): *t* test (Significance)

Effectiveness of transdiagnostic group therapy

The results of dependent *t* test have been displayed in Table2 that shows transdiagnostic group therapy was significant in all variables. In fact, it was significant in depressive symptoms reduction

(*t*=13.09), anxiety (*t*=13.75) and stress (*t*=6.48) at the level of 0.001. Moreover, it led to general performance improvement in the group that was measured by Work and Social Adjustment Scale (*t*=6.93, *P*<0.001).

Table2: Analyses of pre & post-test of experiment group using dependent *t* tests (N= 17)

Masseurs	M (SD) ^{pre}	M (SD) ^{post}	M (SD) ^{dif}	<i>t</i> (P)
DASS-D	23.06 (3.19)	12.65 (2.26)	10.41 (3.28)	13.09 (0.001)
DASS-A	19.94 (2.66)	10.59 (2.21)	9.35 (2.8)	13.75 (0.001)
DASS-S	19.71 (3.89)	13.59 (2.21)	5.76 (3.67)	6.48 (0.001)
WSAS	18.82 (3.3)	11.06 (4.01)	7.76 (4.61)	6.93 (0.001)

Note: M(SD)^{pre} = Mean (Standard Deviation) Pre-test; M(SD)^{post} = Mean (Standard Deviation) post-test; M(SD)^{dif} = Mean (Standard Deviation) Difference; *t* (p): *t* test (Significance)

Effectiveness of cognitive group therapy

The cognitive group therapy was considered as a control group and it caused a significant change in all variables. Results are shown in Table3. The results illustrated that the cognitive group therapy could reduce significantly symptoms of depression,

anxiety, and stress. These results are statistically significant respectively (*t*=9.08, *t*=8.04, *t*=7.51; *P*<0.001). In addition, the cognitive group therapy provided significant changes (*t*=7.36, *P*< 0.001) and improved general performance among group.

Table3: Analyses of pre & post-test of control group using dependent *t* tests (N= 16)

Masseurs	M (SD) pre	M (SD) post	M (SD) dif	<i>t</i> (P)
DASS-D	22.25 (2.96)	13.00 (3.08)	9.25 (4.07)	9.08 (0.001)
DASS-A	20.94 (2.82)	13.13 (2.31)	7.81 (3.89)	8.04 (0.001)
DASS-S	29.13 (3.52)	12.81 (2.1)	6.31 (3.36)	7.51 (0.001)
WSAS	18.81 (4.43)	11.75 (3.75)	7.07 (3.84)	7.36 (0.001)

Note: M(SD)^{pre} = Mean (Standard Deviation) Pre-test; M(SD)^{post} = Mean (Standard Deviation) post-test; M(SD)^{dif} = Mean (Standard Deviation) Difference; *t* (p): *t* test (Significance)

Comparison of Transdiagnostic group therapy with classical cognitive group therapy

The comparison of two groups results are shown in Table4 and explained that there was not any significant difference between transdiagnostic and

cognitive therapy in non of the variables expect anxiety ($F=9.22$, $P=0.005$). In other words, the transdiagnostic group therapy illustrated a signifi-

cant difference in anxiety reduction not cognitive group therapy. Difference between two groups in the other variable was not significant.

Table4: Descriptive statistics and ANCOVAs for DASS subscales and WSAS

Measures	Control (N=17)		Experiment (N=16)		F	df	P	η^2
	M	SD	M	SD				
Pre DASS-D	22.25	2.96	23.06	3.19				
Post DASS-D	13	3.08	12.65	2.26	0.27	1,30	0.61	0/01
Pre DASS-A	20.94	2.82	19.04	2.66				
Post DASS-A	13.13	2.31	10.59	2.21	9.22	1,30	0.005	0/24
Pre DASS-S	19.13	3.52	19.71	3.89				
Post DASS-S	12.81	2.1	13.94	2.51	1.69	1,30	0.2	0/05
Pre WSAS	18.81	4.43	19.65	2.52				
Post WSAS	11.75	3.75	11.06	4.01	0.3	1,30	0.59	0/01

Note: pre= pre-test; post= post-test; M= Mean; SD= standard deviation; N= frequency; P= significance; df= degree of freedom; η^2 = partial eta squared

Discussion

The present study evaluates the effectiveness of transdiagnostic group therapy and compares it to standard cognitive group therapy in reduction of anxiety and depressive symptoms and improvement of general performance. The findings confirm study hypothesis based on the effectiveness of transdiagnostic group therapy in reduction of emotional components and improvement of general performance. In comparing post-test scores for two groups, a significant difference was not shown except in anxiety. Generally, we can conclude that transdiagnostic group therapy can reduce anxiety and depression same as cognitive therapy. However, transdiagnostic group therapy is superior to cognitive therapy in reduction of anxiety symptoms, because the transdiagnostic approach is a unified (8) and reduces the anxiety by techniques such as emotional and interoceptive exposure (25). Theses interventions are considerable efficacy for anxiety disorders.

These findings are consistent with Norton's (13, 25). Ellard et al. (12) in the primary study in order to construct and evaluate the primary protocol found that transdiagnostic treatment could be effective for a range of emotional disorders. Boisseau and his colleagues reported the similar results

on a case study (26). Indicative prevention based on cognitive approach could reduce effectively symptoms of depression and anxiety among students' population (27).

Generally, the transdiagnostic approach have benefits in the treatment and prevention of mental disorders including the dissemination and accessibility, high capacity in applying for a group, their application for most of emotional disorders and relapse prevention. Clark and Taylor (28) believed that there was no need to replace transdiagnostic cognitive behavioral therapy with disorder specific therapies. Although, they declared that transdiagnostic therapies could be applied as a complimentary treatment for empirical supported treatments. In other words, transdiagnostic therapies can be used before specific therapies in order to train general skills and coping with problems. Clark and Taylor (28) explained three major problems for specific cognitive behavioral therapies: "(a) failure to demonstrate a significant additive advantage of cognitive ingredients over "purely" behavioral interventions, (b) difficulty in establishing cognitive mediation, and (c) neglect of common or shared features across disorders" (p: 61). Conducting studies to provide comprehensive and effective therapeutic results is recommended for the future study.

Therapeutic programs based on transdiagnostic approach were effective, but it was necessary to investigate inclusion and exclusion criteria, severity of target disorders and multiple comorbidities in the therapy (29). Moreover, therapeutic protocols should have less complexity.

It is notable that the differentiation between specific therapies and transdiagnostic is difficult. Specific theories mostly are different in content not in process. For example, selective attention to treat is most likely to be experienced by individuals with anxiety disorders but its content can be different in a variety of anxiety disorders. The transdiagnostic therapies are process oriented and the main diagnosis is not important in the therapies. Although, there are some limitations for this approach, more studies should be applied to answer the questions related to this novel approach (28).

The present study involved some limitations. There may be limitations with respect to the generality of the findings because of sample selection that was among college students. On the other hand, drop out in the sample had been occurred because of some reasons, in fact, 20% drop out took place in the session's procedure. There were some reasons for dropping out such as: educational problems and transportation problems. Applying both methods of interventions by the researcher caused individual biases that were other research limitations.

Recommending the future studies apply transdiagnostic interventions in the selective and universal prevention research. In addition, the study of this therapeutic model can be conducted in a variety of samples such as children, elderly and in different levels like school, family, and multi level. Efficacy study is necessary for preventive studies. We believed that protective, mediator and moderator factors investigation could be done for emotional disorders. Furthermore, a long-term follow up for outcomes of transdiagnostic group therapy is suggested. The study of transdiagnostic therapy mechanism and its effectiveness in the other disorders and problems is necessary for the procedure dismantling studies (12). Finally, it seems that transdiagnostic interventions need to more inves-

tigations to compare specific intervention and the other disorders with this approach.

Conclusion

The effectiveness of transdiagnostic group therapy was confirmed in reducing anxiety and depressive symptoms. Transdiagnostic group therapy was superior to group cognitive therapy in reducing anxiety symptoms.

Ethical considerations

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc) have been completely observed by the authors.

Acknowledgements

This study was financially supported by Tehran University of Medical Sciences. Also, IRCT unique code of this article is IRCT138903244178N1 and registered ethical is 90/ ۱ /709/130 from Tehran University of Medical Sciences. The authors declare that there is no conflict of interest.

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