The Social Sciences 10 (6): 1217-1222, 2015
ISSN: 1818-5800

The Effect of Cognitive Therapy on Student's Depression

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Abstract: Depression is a psychopathological label that have been subject to an extensive discussion over the last decades and is a one of the major issues in psychology and a pessimistic view of the future. The main objective of this study was to survey the impact of cognitive therapy on students' depression between Iranian student residing in Iran and India. The participants of the study which was done in 2014, comprised only women. The investigation was done using Beck's Depression Inventory (BDI) (1987) questionnaire. The results showed that cognitive therapy can impact female depression well ($p<0.01$). The results support the positive impacts of the cognitive therapy intervention on the depression between Iranian student residing in Iran and India.

Key words: Cognitive, cognitive therapy, depression, positive impact, BDI

INTRODUCTION

Depression is a major health problem worldwide and it is expected to be the main contributor to the burden of disease in the future (Mathers and Loncar, 2006). In the National Comorbidity Survey (NCS) of the United States, the lifetime prevalence of major depressive disorder was 12.7% for men and 21.3% for women (Kessler *et al*., 1993) and a pessimistic view of the future.

Major depressive disorders occur in approximately one in five Australians over a 12 month period (Slade *et al*., 2009). A depressed person's thoughts tend to be past-oriented and represent themes reflecting loss. With different causes. Depression and diabetes mellitus are two chronic disease states that have a profoundly negative impact on quality of life and overall life expectancy (O'Connor *et al*., 2009).

It can be difficult to diagnose because it can masquerade as physical pain affecting various systems. The depression is the natural reply of the pressures of life. The depressed people live unhealthy life. The person feels tired, gets disinterested with life, he is restless, cannot be comfortable. One etiological theory of depression is the Aaron Beck cognitive theory of depression (Gerald *et al*., 2001). About 20 years ago cognitive therapy was identified with the treatment of depression, Aaron Beck's seminal work in the 1970's proposed that depression is the consequence of the conscious negative thoughts of the depressive who viewed self, experience and the future as bleak and empty (Beck, 1972). Beck (1976) proposed that specific cognitive content characterized each psychiatric disorder and that the goal of therapy was to identify and modify the patient's distortions or biases in thinking and the patient's idiosyncratic cognitive schemata.

The cognitive model suggested that neurotic functioning was maintained and aggravated by the self-fulfilling negative information processing of the patient. According to Beck (2005)'s theory of the etiology of depression, depressed people acquire a negative schema of the world in childhood and adolescence. Depressed people acquire such schemas through a loss of a parent, rejection of peers, criticism from teachers or parents, the depressive attitude of a parent and other negative events.

Beck (2005) also included a negative triad in his theory. A negative triad is made up of the negative schemas and cognitive biases of the person. A cognitive bias is a view of the world. Depressed people, according to this theory have views such as "I never do a good job." A negative schema helps give rise to the cognitive bias and the cognitive bias helps fuel the negative schema. This in the negative triad. Also, Beck proposed that depressed people often have the following cognitive biases: arbitrary inference, selective abstraction, overgeneralization, magnification and minimization.

These cognitive biases are quick to make negative, generalized and personal inferences of the self, thus fuelling the negative schema. However, there is a paucity of appropriately trained therapists to provide standard cognitive therapy to the large numbers of patients with

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depression. Cognitive therapy aims to change emotion by changing meanings. Cognitive therapy is the most extensively researched psychological treatment for nonpsychotic, unipolar outpatient depressive disorders (Scott, 2001).

The cognitive model emphasizes a number of commonalities. And also, typical rules are "I should be perfect", "I should be liked by everyone", "My worth depends on others' approval", "I need to be certain" and "My partner should understand and meet my needs without my having to tell him." It is important for the therapist to recognize that each individual has his or her own idiosyncratic rules or assumptions. The process of inquiry and questioning employed by cognitive therapists is useful in uncovering the underlying assumptions of the patient Cognitive therapists also focus on the patient's "automatic thoughts" or "cognitive distortions" that is the conscious, spontaneous thoughts that are associated with negative affect. It is customary for us to categorize these distortions into their typical bias or illogic.

It is important to realize that "automatic thoughts" are sometimes true or partly true may be that person at the party really does think I'm a loser. Perhaps, the use of the word "distortion" is inaccurate, perhaps, we should speak of "biases" in thinking. After all, depressed people are often correct bad things do happen. Therefore, the goal of this study was survey of cognitive therapy on depression between Iranian student residing in Iran and India.

MATERIALS AND METHODS

Sample and sampling technique: This research is Quasi experimental because it is not random sampling (Table 1).

The present study follows two treatment groups (experimental groups) and two control groups (control groups) as shown in Table 2.

The present study aims at investigating the role of cognitive therapy in the management depression Iranian female students residing both in Iran and India. The sample for the present investigation which was done in 2014 was selected from 5 counselling centres in Iran (Karaj) and all universities in India (Delhi) were selected, since they had been referred to counselling centres with signs of depression and female students between 18-45 years old, married or unmarried from Iran and India but in India sampling was according to testing all female students on depression in all universities in Delhi, then choose depressive female students, finally invited them to therapy. Total 64 female students of two countries, each country 32 female students, 16 female students as experimental group and 16 female students as control group were selected as sample according to gettable sampling. Depression was diagnosed according to the Beck's Depression Inventory (BDI) (1987). Thereafter, the screened group those who showed high scores on depression has been administered cognitive therapy. All the female students that scored between 0-20 in depression inventory are excluded from the study altogether. This is because the norms of Beck's Depression Inventory show that those scores indicate minimal or a absence of depression to means that who take number 21 up to more in Beck Inventory, then they have chosen for treatment in one method, cognitive therapy, choosing the kind of therapy for female students was randomly.

Table 1: This research is Quasi experimental because it is not random sampling.

Groups	Pre test	Independent variable	Post test
Experimental	T1	X	T2
Control	T1	-	T2

independent variable

Table 2: Iranian female students in Iran and Iranian female students in India

	Iranian female students	
Groups	Iran	India
Experimental	(N = 16)	(N = 16)
Control	(N = 16)	(N = 16)

Measuring instruments: The following tool will be used for data collection.

Beck's Depression Inventory (BDI): In the present investigation depression was measured through the depression Inventory through the Depression Inventory developed by Beck. In 1987, Beck's Depression Inventory (BDI) is the best known and most widely used general measure of depressive functioning. It has 21 items that cover various affective, cognitive, motivational and psychological symptoms associated with depression. Miller and Seligman argued that BDI is a valid measure of depression only for the day on which it is administered, thus, it is a "serious methodological error" to assume temporal stability of this depression measurement.

Procedure: The data has collected as per the details given in the design and sample of the study. The study has conducted in three parts.

In the first part, questionnaire of depression has administered to number of Iranian female students in Iran and India Universities from consolers center, after scoring; only those female students were included in the sample who reported high level of depression. The criteria followed has based on quartile deviation formula, i.e., only those Iranian female students will be included who scored

above Q2 level on the measures of depression. In these way 32, Iranian female students from each country has selected. Thus, a total of 64 subjects have been chosen which is divided into two groups, i.e., control group (a1), N = 32 and the experimental group (a2), N = 32. Experimental groups further are equally divided into two groups, i.e., receiving Cognitive therapy. In the two groups formed, i.e., control and experimental, rapport was established with the subjects. They all were assured anonymity and were told that this is a research project and would not lead to any personal evaluation that would affect their reputation or adjustment in the universities. Initially, the information schedule has been administered to both groups. Thereafter to the selected group of a total of 64 subjects, the depression symptoms have been administered. And the scores obtained have been treated as base score.

In the second part of the study, the subject assigned to each type of therapy undergo either cognitive therapy. Standard procedures of cognitive has followed. Each subject of the experimental group has been engaged in 10 talking sessions of 45 min duration each. Similarly, each subject of the experimental group has been individually administered 10 session of cognitive therapy and each session was of 45 min duration. The first step have been devoted in understanding the subject, his relationship with himself or herself, parents, world, siblings and the other family members his relationship with peers and teachers his attitude toward university. Questions such "how often do you feel depressed?", etc. have been asked. And in the main sessions the therapy focussed on getting the subjects to discuss about their self concept (what they like or dislike about themselves?). Thereafter, they have been given insight into their depression and alter this behaviour. The subjects have been made to imaging that the reduction in the symptoms of depression would have a positive impact on their overall quality of life. This helped the subjects to understand more clearly the consequences of their negative behaviour and rewards in case of altered behaviour which led to thought reconstruction and development pro-social skills. Each subject has also been asked to maintain a dairy indicating the number of times the subject would get depressed, reasons of getting depression his behaviour when he gets depressed, the number of times he has carrying spells.

Third part of the study comprise of the post assessment, i.e., after completion of cognitive therapy intervention, one tool Beck Depression Inventory has been administered to both the groups after 10 sessions. And percentage changes have been obtained with respect to the base scores.

Cognitive therapy procedure: Cognitive therapy has done, according to typical process of CT:

- Intake assessment (diagnosis, severity, suicide potential, moderators of depression and anxiety, functional assessment)
- Case formulation
- Education about the model
- Behavioural activation
- Cognitive restructuring
- Modifying underlying beliefs, schemas
- Review, relapse prevention and discharge planning

Principles of Cognitive therapy:

- Need for cognitive case formulation
- Based upon sound therapeutic alliance
- Emphasizes collaboration and active participation from patient
- The therapy is goal oriented and problem-focused
- Emphasizes the present(at least initially)
- The therapy is educative
- The therapy encourages relapse prevention
- The therapy is time-limited
- Sessions are structured
- The therapy uses a variety of techniques to change thinking, behavior and mood

Statistical analyses: Statistical analysis for the present study was done with the help of SPSS V.16.0 for Windows. Descriptive statistics has reported and group differences has evaluated by independent sample t-test and paired sample t-test. In addition to this qualitative analysis has also used for evaluating group differences.

Also the data for the two groups (experimental and control) have been compared by using ANCOVA (Use ANCOVA in survey research when you can't randomly allocate participants to conditions, e.g., quasi-experiment or control for extraneous variables and outcomes is summarized in results.

RESULTS AND DISCUSSION

The main objective of the investigation was to study the effect of cognitive therapy in decreasing the depression. The investigation was designed to study the role of cognitive therapy. A total sample of depressed Iranian female students was randomly selected and assigned to two groups of 64 female students with depressed. The two groups were:

- A1; Experimental (Group I): Cognitive therapy to Iranian female students with depressed sign only
- A2; Control (Group II): No Cognitive therapy

Pre and Post treatment assessment was done by using the Beck's Depression Inventory (BDI) (1987). Thus, the treatment modality cognitive is the independent variable and the pre and post treatment assessments as revealed by the Beck's Depression Inventory (BDI) (1987).

It is observed from Table 3 that 17 students are in advance diploma, 105 students are in BA and 6 students are in MA. It indicates that most students are in BA and less students are in MA.

It is observed from Table 4 that 87 students of experimental groups are married and 41 students are unmarried. It indicates that most students are married. The summary of the Analysis of covariance of (BDI) scores is as follows (Table 5).

According to Table 3, calculated rate (74.132) and significant level (0.001) with 95% of accuracy the zero hypotheses can be refused. In the other words with 5% of error, it can be concluded that there is a significant different between the means of points in post test of Depression in experimental with cognitive therapy and control groups in Iranian students residing in Iran and India. So it can be concluded that cognitive therapy has effect on the decreasing the Depression points in Iranian students residing in Iran and India. According to Table 3 meanwhile, rate of ETA coefficient which is = 0.72, shows that 72% of variable variance of depression would be explained by Cognitive therapy.

There would be significant differences between before and after cognitive therapy on Depression among Iranian student residing in Iran (Table 6).

In Table 7, it is clear that the calculated value of t was found significant at the 0.01 level of confidence. Therefore, the null hypothesis is rejected. It means that there was significant difference at 0.01 levels between pre and post condition after cognitive therapy on depression of experimental group in Iranian students residing in Iran; therefore, subjects' depression decreased significantly in post condition.

Comparison between pre and post condition on different dimensions of depression with Cognitive therapy in India (Table 8).

In Table 9, it is clear that the calculated value of t was found significant at the 0.01 level of confidence. Therefore, the null hypothesis is rejected. It means that there was significant difference at 0.01 levels between pre and post condition after cognitive therapy on depression of experimental group in Iranian students residing in India, therefore, subjects' depression decreased significantly in post condition.

The research study shows the differences of cognitive therapy on depression. The result indicated that depression of all Iranian students has decreased after cognitive therapy. And also depression of Iranian students residing in Iran has decreased after cognitive therapy. Considering the means of the groups, the mean

Table 3. Frequency of the level of educate of students

Variables	Frequency	Percentage	Valid (%)	Cumulative (%)
Advance diploma	17	13.3	13.3	13.3
BA	105	82.0	82.0	95.3
MA	6	4.7	4.7	100.0
Total	128	100.0	100.0	-

Table 4: Frequency of married and unmarried students

Variables	Frequency	Percentage	Valid (%)	Cumulative (%)
Married	87	68.0	68.0	68.0
Unmarried	41	32.0	32.0	100.0
Total	128	100.0	100.0	-

Table 5: Summary of ANCOVA for the two groups on depression

Variables	Sources	SS	DF	MS	F	Sig.	Partial eta squared
	Pre-test	671.660	1	671.660	30.75	0.001	0.523
Depression	Group	1618.948	1	1618.948	74.132	0.001	0.726
	Error	611.481	28	21.839	-	-	-
	Total	29436.000	32	-	-	-	-

Table 6: Paired samples statistics

Parameters	Mean	N	SD	SE mean
Pair 1				
Score	58.50	8	5.477	1.936
r-test score	39.00	8	8.435	2.982

Table 7: Comparison between pre and post condition on different dimensions of depression with Cognitive therapy in Iran

	Paired differences							
				95% confidence interval of the difference				
Parameters	Mean	SD	SE mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1								
Score r-test, score	13.625	5.999	2.121	8.610	18.640	6.424	7	0.001

Table 8: Paired samples statistics

Parametrs	Mean	N	SD	SE mean
Pair 1				
Score	39.12	8	6.896	2.438
r-test, score	25.62	8	7.170	2.535

Table 9: Comparison between pre and post condition on different dimensions of depression with cognitive therapy in India

	Paired differences							
				95% confidence interval of the difference				
Parameters	Mean	SD	SE mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1								
score r-test, score	13.500	6.234	2.204	8.289	18.711	6.126	7	0.001

of control group (34.59) is larger than the experimental group (16.88) and it means that the level of depression in experimental group after therapy has decreased.

So, it can be concluded that therapy has effect on the decreasing the Depression points. These objectives that studied are based on the research reviewed by Beck and also many researchers. This hypothesis can be supported by a finding in the study conducted by they found that patients who showed improvement very early in the course of cognitive therapy continued to improve. The result show that the addition of CT produced statistically significant differential effects on: two out of four measures of overall severity of depression; specific psychological symptoms and social functioning.

According to the data gathered on the basis of the second question, it is found that cognitive therapy has effected on depression in Iranian students in whole and in Iranian students residing in Iran and India in separable. Cognitive therapy has affected on reduction of depression in Iranian student. And there is significant different between the mean of depression's scores in control group 35/44 and in experimental group 22/44 that 72% of changing in mean of depression were related to cognitive therapy. And also, there is no significant difference between depression's score of Iranian student residing in Iran and Iranian student residing in India before spiritual therapy.

CONCLUSION

The main objective of the investigation was to study the effect of cognitive therapy in decreasing the depression. During the last decade, the efficacy of Cognitive Therapy (CT) for the treatment of depression has been demonstrated repeatedly. Psychologist examined the effect of cognitive therapy on psychological symptoms and social functioning in residual depression (Scott *et al*., 2000).

Melanie *et al*. (1987) who studied sources of outcome variation in a sample of patients who had participated in their outcome study of cognitive therapy for depression. On the basis of the findings, it is clear that cognitive therapy has been effective on depression. Also cognitive therapy for depression was assessed by Whisman *et al*. (1991) in 39 depressed inpatients who completed either a standard inpatient treatment (pharmacotherapy and milieu management) or the standard treatment plus cognitive therapy.

Depression is a mental disorder that is pervasive in the world and affects us all. Unlike many large scale international problems, a solution for depression is at hand. Efficacious and cost-effective treatments are available to improve the health and the lives of the millions of people around the world suffering from depression. On an individual, community and national level, it is time to educate ourselves about depression and support those who are suffering from this mental disorder.

The research findings revealed that this process helps to improve students' mental health. Regarding of the usage cognitive therapy (cognitive therapy) and the effects of this treatment of depression the research finding revealed that cognitive therapy has a significant effects to decrease student's depression.

ACKNOWLEDGEMENT

The researchers gratefully acknowledge the participants for their involvement and helpful comments.

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