

Effects of Metacognitive Therapy Instructions on the Depressed Patients' Irrational Thinking

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Abstract: Introduction: The present research has aimed at exploring the effectiveness of meta-cognitive therapy instructions on the depressed patients' irrational thinking. Method: The statistical population of the research consisted of 120 depressed patients who had been introduced to Boroujerd Farhangian Clinic by psychiatrists. 70 patients were randomly selected among them in order to reply to an Irrational Thinking Questionnaire, whereby 45 members gained scores above 5 in, at least, and 6 beliefs. Then, in a totally random manner, 30 subjects were taken as members of the research sample divided into an experiment group and a control group each one consisting of 15 patients. The experiment group members received metacognitive therapy instructions for 8 sessions of 90 minutes. The data gathered were analyzed against a multivariable covariance test through the SPSS software. Findings: The irrational beliefs of the experiment group subjects who had received metacognitive therapy instructions were significantly decreased in comparison with those of the control group members ($P = 0.0001$). Conclusion: Teaching metacognitive therapy techniques can be used as an effective method of decreasing irrational beliefs in depressed patients.

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1. Introduction

Depression is so widespread that it has already been labeled as the common cold of the field psychology (Silgman, 1975). Throughout any specific point of time, some 15-20% of the adult do considerably suffer from depression symptoms and it is estimated that about 75% of the patients admitted to psychiatric hospitals are taken as depressed cases. An individual's system of beliefs has an essential role in the way he/she feels and behaves. Depression is assumed to be rooted in the individuals' irrational belief system (Back, 1976).

Elis (2001) believes that anxiety and emotional disorders are the result of irrational and unreasonable ways of thinking, and do not consider one's thoughts and emotions as being separate from each other. Thus, s/he maintains that as long as the irrational thinking exists, emotional disorders will consistently remain (*ibid.*).

Irrational thinking styles are specifically transferred from parents, instructors and society members to the individuals and to get rid of such a disorder requires being aware of one's thinking characteristics or his/her irrational beliefs (Shafi'abadi, 2001).

Human beings do maintain their irrational belief disorders and behavior through retelling them to themselves. In his/her opinion, individuals who take themselves as captured by their irrational beliefs may locate themselves in the states of anger, resistance,

animosity, defense, sinfulness, anxiety, excessive feebleness and lethargy, lack of control and helplessness. Human being's depression and anxiety is not due to external objects but is a result of his conception of and his attitude towards objects. Irrational points of view have negative impacts on the individual's behavior and make it difficult for him to cope with his problems (Benson and Stewart, 1987). Benson and Stewart do believe that human beings should question their absolute "musts". They believe also that human beings usually desire to enjoy from their loneliness, their social relationships, their sexual relations with others, and their work or entertainments but their defective beliefs do not allow them to achieve such aims. False beliefs lead to false attitudes and behavior (KORRIL AND VINOKOR, 2002).

When human beings expect that whatever they prefer must happen, they may encounter an emotional disorder. This disorder may specifically occur when the individual's frustration tolerance is low. For Elis, irrational beliefs are categorized into three groups: self-expectations, expectations from others, and expectations from the world or the life. They refer to any statements including a "must" component as "thinking of musts" (Elis, 2001).

The processing of the current stimulating events through absolute beliefs will necessarily lead to undesirable or inappropriate consequences typically leading to anxiety and depression. These undesirable consequences, in their own rights, may direct the

individual towards a terrible assessment of his irrational beliefs and opinions, and end up in more annoying emotional consequences such as the belief that there is a solution for each and any problem and you should get upset, if you could not find that particular solution. To believe in perfectionism is, in essence, contrary to the reality since we live in a world full of chances and there is no absolute truth (HERINGEN, 2002). Individuals who have irrational beliefs, due to their negative attitude towards life, are susceptible of depression. It is necessary to pay attention to irrational beliefs so that the individuals can be aware of such beliefs and the way they may change under different situations. Through making use of different treatment strategies, we may help individuals afflicted with irrational ways of thinking in changing their unreasonable beliefs (RUSH, 2001).

Back *et al* do recommend that customary treatments such as hospitalizing and pharmaceutical treatment are merely appropriate in bipolar cases or in very acute cases of depression where there is a high risk of suicide. RUSH and SCHAW (1983) maintain that the chance of success of cognitive therapy behavior in endogenous cases of depression is very low (quoted in Ghasemzadeh, 2010).

So far, there have been several traditional methods applied to decrease the levels of depression while modern treatment procedures are currently under examination. The metacognitive methodology was first introduced by John Flowel (1976). Metacognition refers to personal knowledge of the individual's cognitive flows. In metacognitive therapy (MCT), irrational thinking styles are related to the dominance of verbal, conceptual activities, which the individual is engaged in analyzing and ruminating them and are, therefore, difficult to control (Clark, 1989).

In MCT, it is assumed that psychological disorders result from biased thinking. The way we think about an event or the way we think about a set of conversations, ourselves and the world surrounding us are deeply influential. As a matter of fact, the way we respond to our thoughts and to all actions we frequently do leads to our emotional suffering. Metacognitive therapy relates the problematic internal states to the maladapted processes of anxiety, thinking rumination and mental uncontrollability (Mohammadkhani, 2011).

In the metacognitive model of depression (Wells, 2009), the depressed person responds to his sad, negative thoughts and feelings through activating positive metacognitive beliefs about the need for ruminating as a means of dealing with sadness and negative beliefs or thoughts (Beirami, 2010).

Wells believes that depression is a result of an activated rumination and a maladapted acceptance in

response to sadness or negative thoughts. Mental rumination consists of insisting on negative thoughts about the reasons and meanings of sadness or depression (Toolen-Hoksma, 1993).

As for the roles played by metacognition on general health, findings of research works done by Bradford (2008), Philips (2006), Ashoori (2009) and Salarifar (2009) have already indicated that metacognitive strategies have a considerable impact on the individual's general health status. Adrian Wells, too, has emphasized on the role of metacognitive therapy on the patients' depression.

Metacognition means the individual's knowledge or awareness of his cognitive system and his knowledge of the way he learns and thinks. An interpretation which is very close to metacognition is the concept of acquiring the ability of learning. Metacognition is the individual's ability of thinking about his mental processes, paying prompt attention to them, and more specifically, making efforts to achieve higher cognitive abilities (Strenburg, 1996).

Having in mind the importance of metacognition in changing irrational beliefs, the present research aims at exploring the effectiveness degrees of metacognitive therapy instructions on the depressed patients' irrational beliefs.

2. Method

The present study is an experimental research with a pre-test/post-test plan including a control group. In the first stage of the study, among 120 depressed patients introduced by psychiatrists to the Measurement Centre of Boroujerd Farhangian Clinic, 70 patients were selected to take part in the Jones' Irrational Belief Test. 45 participants gained scores above 5 in at least five irrational belief classes intended in the test. Among this group, 30 persons were quite randomly selected as the research sample subjects and were divided into two different groups, a "control group" and an "experiment group", each consisting of 15 members. In the next step, members of the experiment group received preliminary treatment instructions for three months in 8 sessions of 90 minutes. In the last stage, both groups were post-tested through the same Jones' Irrational Belief Test. The above-mentioned test was developed by Jones *et al* in 1968. It firstly included 140 questions but later on, the questions were decreased down to 120 items and, at the same time, the number of belief classes was decreased from 12 to 10. The reliability of this test for Iran was first gained by Taghipour (1996) at Allameh Tabatabai University. In the same year, the questionnaire was administered by Soudani on a group of 150 single male university students of an average age of 21, who were engaged at the Faculty of Science of Shahid Chamran University of Ahvaz whereby,

through calculation of Chronbach's Alpha Coefficient, a reliability coefficient of 0.79 was gained.

The reliability of this test has derived from three different methods: 1) its correlation with other tests developed for the measurement of emotional confusion; 2) its correlation with other tests which are relevant to the measurement of irrational beliefs such as the "Thought Test" (TT) or rational behavior tests; 3) its sensitivity to changes made in the beliefs of individuals subjected to rational, emotional or behavioral treatment methodologies. Smith and Zoraski (1984) observed in their several research works that there was a high correlation between Irrational Belief Test and tests of emotional confusion.

10 micro-scale irrational beliefs covered in the present research include: high self-expectation, one self's high blaming proneness, dependency, perfectionism, and future problem, helplessness for change, problem avoidance, emotional irresponsibility, frustration reaction, and demand for others' approval.

3. Metacognitive Therapy Interference

This treatment procedure has been developed by Wells and King. In this research, metacognitive therapy included having 8 treatment sessions of 1.5 hours (group sessions) with the participation of the patients for a period of 3 months. In the first session, a treatment relationship was established, necessary and sufficient information about the problem in question, its causes and its consequences were given to the patients, and the rationale behind the treatment with sharing the patient in the conceptualization of the problem was stated. Then, at the very end of that

session, the patients were asked to complete the Jones' Irrational Belief Questionnaire (pre-test).

In the second and third sessions, some conventions for extracting the information needed about the nature and content of depression symptoms were introduced and the confused metacognition in question were addressed.

In the fourth session, negative and positive beliefs about depression were identified and recent experiences were reviewed.

In the fifth session, ineffective beliefs and assessments about depression were extracted.

In the sixth session, the metacognitive beliefs related to depression were challenged and the defense mechanisms, individuals' personality characteristics and his assessment about his beliefs were put under discussion and behavioral experiences were reviewed.

In the seventh session, the correction of metacognitive beliefs was prevented and in the 8th session, an alternative plan for creating exhilarating activities was introduced to the patients. All through these sessions, attention teaching techniques (ATT) and the DM technique were instructed and after two weeks, the patients were once again asked to complete the Jones' Irrational Belief Questionnaire (post-test).

Results

Having in mind the research aim, i.e. exploring the effects of metacognitive therapy teachings on the depressed irrational beliefs, a MANCOVA test has been used. The descriptive data of the irrational beliefs of the two groups under investigation has been demonstrated in Table (1):

Table (1): average and standard deviation of irrational thoughts in the instruction group and the control group

<i>variables</i>	<i>instruction group</i>		<i>control group</i>	
	<i>Mean (X)</i>	<i>standard deviation (s)</i>	<i>Mean (X)</i>	<i>standard deviation (s)</i>
<i>perfectionism (pre-test)</i>	7.13	1.506	7.53	1.407
<i>perfectionism (post-test)</i>	4.53	1.060	7.20	1.474
<i>helplessness for change (pre-test)</i>	7.40	1.242	8	1.254
<i>helplessness for change (post-test)</i>	5.47	1.187	7.07	1.280
<i>dependency (pre-test)</i>	7.73	1.033	8.53	1.187
<i>dependency (post-test)</i>	5.13	0.915	7.47	1.125
<i>problem avoidance (pre-test)</i>	7.53	1.187	8.33	0.724
<i>problem avoidance (post-test)</i>	5.60	1.298	7.40	0.737
<i>future problem (pre-test)</i>	7.60	0.986	6.93	1.280
<i>future problem (post-test)</i>	5.07	1.033	6.07	1.438
<i>emotional irresponsibility (pre-test)</i>	7.07	1.387	7.53	1.187
<i>emotional irresponsibility (post-test)</i>	5	1.069	6.53	1.187
<i>frustration reaction (pre-test)</i>	7.33	1.543	7.87	0.834
<i>blaming proneness (Pre-test)</i>	7.73	0.884	7.40	0.910
<i>blaming proneness (Post-test)</i>	5.47	0.834	6.47	0.915
<i>high self-expectation (pre-test)</i>	7.27	1.223	7.73	1.223
<i>high self-expectation (post-test)</i>	4.67	0.976	6.80	1.146
<i>demand for others' approval (pre-test)</i>	8.20	1.146	8.33	0.976
<i>demand for others' approval (post-test)</i>	5.47	1.187	7.53	1.06
<i>variables</i>	<i>instruction group</i>		<i>control group</i>	

As you see, in all ten belief classes, the mean scores obtained by members of experiment (instruction) group are lower than those of members of the control group.

The results of the analysis of effectiveness of the combined variable "irrational beliefs" are summarized in Table (2):

Table (2): Wilks Lambda 4 test for the combined variable in question

<i>variable</i>	<i>value</i>	<i>f</i>	<i>df₁</i>	<i>df₂</i>	<i>significance levels (p)</i>	<i>effect degree (Eta)</i>
Group	0.013	70.579	10	9	0.001	0.987

As you see, the above results ($p = 0.001$ and $f = 70.579$) show that the instruction of metacognitive therapy techniques is effective on the combined variable "irrational beliefs" and results in a decrease

of such beliefs in the depressed patients. The results of a co-variance analysis of metacognitive therapy instruction on the ten irrational classes are demonstrated in Table (3):

Table (3): Results of the co-variance analysis of the ten irrational belief classes

	<i>sum of squares (ss)</i>	<i>degree of freedom (df)</i>	<i>mean of squares (ms)</i>	<i>f</i>	<i>significance levels (p)</i>	<i>effect degree (eta)</i>	<i>test power</i>
<i>perfectionism</i>	20.615	1	20.615	41.366	0.0001	0.697	1.000
<i>helplessness for change</i>	5.102	1	5.102	16.558	0.0001	0.479	1.000
<i>dependency</i>	10.697	1	10.697	20.918	0.0001	0.913	1.000
<i>problem avoidance</i>	11.795	1	11.795	24.418	0.0001	0.612	1.000
<i>future problem</i>	8.793	1	8.793	71.845	0.0001	0.800	1.000
<i>emotional irresponsibility</i>	5.361	1	5.361	45.352	0.0001	0.716	1.000
<i>frustration reaction</i>	5.290	1	5.390	23.193	0.0001	0.563	1.000
<i>blaming proneness</i>	7.229	1	7.229	56.540	0.0001	0.759	1.000
<i>high self-expectation</i>	10.587	1	10.587	50.338	0.0001	0.737	1.000
<i>demand for others' approval</i>	12.203	1	12.203	37.235	0.0001	0.674	1.000

The results of Table (3) for the two groups under investigation, i.e. the metacognitive therapy instruction group and the control group, through BEN FRONI MIZAN SHODE Alpha (0.001) indicate that metacognitive therapy instruction has resulted in a significant decrease of all ten classes of irrational belief; there has been a significant difference between post-test scores obtained by members of the metacognitive therapy instruction group, on one hand, and those of the control group, on the other. Since the difference between the means is significant at a 99% level of certainty, it can be concluded that the research hypothesis has been verified: metacognitive therapy instruction is effective on the degrees of irrational beliefs in the depressed patients.

4. Discussion

According to the research results, metacognitive therapy instruction in the "experiment group" has had a significant effect on the decrease of irrational beliefs, as opposed to irrational beliefs in the "control group". In the present study, the variables "future problem", "blaming proneness", "high self-expectation", and "emotional irresponsibility" have been reported to be more effective on the change of irrational beliefs.

The above result is in line with the finding reported by Fischer and Wales (2005) with regard to the effect of metacognition on the individual's beliefs. It is also consistent with the results reported by Reis and Kowas World (2008) in regards with the efficiency of metacognitive therapy in the change of symptoms of obsession.

In the metacognitive approach, on the basis of Wales' theory of "KARKERDE EJRAEYEH KHOD NAZM BAKHSH", the individual's vulnerability to emotional disorders is mainly attributed to a certain pattern of self-extreme attention, activation of irrational beliefs as well as certain reflective processes. This model will be activated, when an individual feels that there is a lack of harmony between his internal goals and the external conditions surrounding him.

In his "Cognitive Attention Syndrome" (CAS), Wales (2005) states that a characteristic of depression disorder is that the individual's thinking becomes biased and is difficult to control and this, in its own right, leads to the gravity and continuity of the emotional disorder.

In the thinking rumination, the individual's thinking pattern gets a repetitive, cyclic, and ruminative nature which is hard to control. The depressed individual responds to his sad negative thoughts and feelings through activating positive metacognitive attitudes towards the need for ruminating which are used as a means of dealing with sadness and negative beliefs or thoughts. It is assumed that the rumination leads to sad feelings or to personal impressions of failure or deficiency.

The nature of such disorders which are emphasized by metacognitive approach is the same as the nature of irrational beliefs leading to the depression. In the irrational belief of "blaming proneness" where the individual deserves oneself of being blamed and punished in return for his faults, thinking rumination of blaming or "KARKERDE EJRAEYEH KHOD NAZM BAKHSH" receives emphasis. In the irrational belief related to "frustration reaction" which leads to the individual's confusion and unhappiness in case of unsuccessful experiences, the "KARKERDE EJRAEYEH KHOD NAZM BAKHSH" and CAS will result in an intensification of disappointment and depression. In the irrational belief related to emotional control, the individual has no controls over his unhappiness and excitements since they are caused by others; as a result, the emphasis on the CAS reinforces the respective irrational belief and leads to the gravity of the individual's depression.

Metacognitive therapy techniques can therefore be used in order to decrease the degrees of irrational beliefs. In the "attention teaching technique", the focus of control directly changes. It is believed that the patients afflicted with psychological disorders are subject to maladapted thinking patterns such as self-centered attention, anxiety, and permanent attention which are all difficult to control. It is assumed that redirecting the individual's attention to subjects other than those mentioned above can be a way to stop the

CAS and to reinforce the individual's cognitive control. This technique can well be used for decreasing the irrational beliefs related to "future problem", "blaming proneness", "high self-expectation" and "the demand for others' approval".

Moreover, the DM technique is a technique through which the individuals make a relationship with their cognitive abilities and acquire a flexible control over their styles of attention and thinking. This technique is mostly focused on creating meta-awareness and separating oneself from cognitive events, the latter being a method for communicating with one's cognitive abilities. According to the research findings, this metacognitive technique has considerably been effective on the decrease of irrational beliefs related to "perfectionism", "dependency", "emotional irresponsibility", and "problem avoidance". Thus, the results of the present research indicate that metacognitive therapy is effective on the correction of one's ways of thinking.

Furthermore, the findings obtained indicate that there is a significant difference between the effectiveness of metacognitive therapy instruction on the degrees of the depressed patients' irrational beliefs in members of the two groups in question.

This research has important implications for researchers as an inspiration for the application of modern treatment methods in dealing with chronic degasses. Such findings, however, should be interpreted with a view to the research restrictions and strengths. Since the research subjects have been selected among patients who have been introduced to the Measurement Center of Boroujerd Farhangian Clinic through a sampling procedure, the obtained results may not be capable of being generalized to all depressed patients who refer to clinics or medical centers. Limited number of the sessions of instruction and the heterogeneity of the subjects in regards with their levels of education was among other restrictions of the research which make us be careful in generalizing the findings.

As a final point, other researchers are recommended to do a similar study on a wider statistical population. It is also recommended to follow up the patients to study the consistency of the treatment results in future. Moreover, we suggest doing a similar research on individuals afflicted with obsession.

All in all, the present study aimed at highlighting the importance of modern treatment methodologies including the instruction of metacognitive therapy methods on the degrees of depressed patients' irrational beliefs and the final findings showed the effectiveness of such techniques.

Conclusion

The research findings indicate that the instruction of metacognitive therapy strategies is effective on the degrees of depressed patients' irrational thinking and leads to a decrease in their scores of irrational beliefs. The results show that as for irrational beliefs "future problem", "blaming proneness", "high self-expectation" and "the demand for others' approval", following being instructed, the patients were considerably able to control their irrational beliefs while in cases of "helplessness for change" and dependency", the effects were not that much considerable.

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