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THE EFFECTIVENESS OF ACCEPTANCE AND COMMITMENT GROUP THERAPY ON REDUCING DEPRESSION IN THE MOTHERS OF AUTISTIC CHILDREN

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ABSTRACT

The special conditions of autistic children are accompanied by the emergence of depression symptoms in their parents. Therefore, the purpose of this research is to investigate the effectiveness of acceptance and commitment group therapy on reducing depression in the mothers of autistic children. This research was conducted as quasi-experimental and its statistical population is all of the mothers of autistic children aged 3 to 6 years, who are the members of the Iranian Autism Society of Qods Branch, as 80 persons. The statistical sample size of the present research consisted of 30 individuals who were randomly categorized in two experimental and control groups (each 15 participants). Based on the Bond et al. (2011) model, the Acceptance and Commitment Therapy Protocol was implemented as one session every week by the researcher for the experimental group. The second version of the Beck Depression Inventory (BDI-II) by Beck (1963) was used to collect information and statistical data. Mean, standard deviation and multivariate covariance, via SPSS-24 software, were used for data analysis. The results showed that there is a difference between posttest and follow-up depression scores of groups by controlling the pretest scores, and this hypothesis is significant at p<0.001 level. Therefore, the research hypothesis is confirmed.

Keywords: *Autism, Group Therapy, Depression of Mothers.*

INTRODUCTION

Autism is a type of pervasive developmental disorder that emerges before the age of three and its main cause is still unknown. Autistic individuals have impairment in verbal and nonverbal communication and social interactions (Rafeie, 2014). The prevalence of autism disorder has increased dramatically in recent decades and it is currently being addressed as one of the most common developmental disabilities (Newschaffer et al., 2007). Autism disorder has lifelong problems not only for the sufferers themselves but also for their families (Cachia et al., 2016). The presence of a child with autism in a family often imposes irreparable damages to the family (Wainer et al., 2016). A child's persistent illness, anxiety about his/her future, social isolation, delayed diagnosis, and associated symptoms, and poor access to healthcare services and social support make parents of these children experience psychological problems (Lilly and Tungol, 2015), in a way that it puts a lot of pressure on caregivers, especially mothers (Gomes et al. , 2015).

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The initial period after diagnosis of autism is a period associated with sadness, stress and high pressure for the parents of these children, especially mothers. Depression, anxiety, and anger are common problems for these mothers. The stress intensity decreases in later years, but the difference in the mental states of the mothers of autistic children with the mothers of children with normal growth is often sustained for a long time (Sastre and Ager, 2012). Due to the impact of autism disorder on marriage, financial status, parents' occupation, family social interactions and the mental health of mother; depression, and stress are observed more in the mothers of autistic children (Sastre and Ager, 2012; Schieve et al. 2007; Istez et al. 2009).

Flexibility, accepting reality rather than struggling with it, contact with the present time, awareness and enhancement of the physical and mental health are assistances of the mothers of autistic children in life (Sastre and Ager, 2012). Fundamental processes of acceptance and commitment therapy are acceptance, mindfulness (self as context), contact with the present moment, cognitive defusion, values , and committed action, all of which lead to psychological flexibility (Hayes and Lillis, 2007), which are needed by the mothers of autistic children because of mentioned mental states and problems. Researchers believe that using therapeutic approaches such as acceptance and commitment therapy because of their mechanisms such as acceptance, mindfulness, and contact with the present moment, recognizing values and committed action can be an effective treatment (Samadi and Dostkam, 2017). Research findings showed that acceptance and commitment group therapy led to the reduction of parenting stress and depression symptoms in the mothers of autistic children in Ahvaz (Abdollahi Mousavi, 2007).

Considering the prevalence of stress and depression among the population of the mothers of children with autism disorder (Kousha et al., 2016; Khorshidian et al., 2017), and their negative effects on mothers' performance in life, As well as the costs that they will incur on society and families, as well as considering the urgent need to develop and expand effective therapies among the population of the mothers of children with autism disorder, as well as the shortage of research with the approach of acceptance and commitment therapy on the mothers of autistic children, conducting such a research seems necessary.

THEORETICAL FOUNDATIONS OF RESEARCH

Autism Disorder

Autism disorder is considered as a spectrum because its manifestations are very diverse and heterogeneous. Cognitive and verbal disabilities, for example, are extremely severe in some of these individuals, while others have mental genius and a very high talent (Sastre and Ager, 2012).

Parents of children with autism face many challenges (Duart et al., 2005), and it has been observed that these parents experience higher stress than the parents of other children with special needs (Chime et al., 2008). One of their biggest concerns about the future of the child is that the child will never be completely normal and that the people around him/her would not understand the child's conditions and show negative reactions towards the child and his/her parents (Mansell and Morris, 2004). In fact, the most stressful factor that autism parents experience is low community acceptance regarding autistic behaviors and failure to receive social supports (Chime et al., 2008).

Acceptance and Commitment Therapy

Acceptance and commitment therapy is a psychological intervention based on modern behavioral psychology, which includes communication framework theory, in which the attention, awareness and acceptance processes, as well as commitment and behavior change, are used so that psychological flexibility is created (Hayes et al., 2012).

Podder, Sinha, and Urbi (2015) investigated the effectiveness of acceptance and commitment therapy on the parents of children with autism spectrum disorder. Results showed that through the treatment of anxiety, depression, and psychological flexibility, the quality of life improvement was found. Acceptance and commitment therapy can help parents to better manage the problems of raising children with autism spectrum disorder. Kawalkowski (2012), investigated the effect of acceptance and commitment group therapy on the parents of children with autism disorder; the results showed that this treatment reduced the parenting stress of mothers, reduced negative automatic thoughts, and improved the positive caregiving indicators of mothers, but no change was created in the depression of mothers.

Montgomery (2015) compared the effectiveness of acceptance and commitment therapy and behavior analysis on reducing stress, depression, and the quality of life improvement on the 57 parents of children with autism. The results showed that neither of these two treatments significantly reduced parents' stress and depression. But both treatments improved the quality of parents' life. Jones, Gold, Totsika, et al. (2018) in their research showed that acceptance and commitment therapy led parents to precede more worthwhile behaviors. Blackledge and Hayes (2006) investigated the effectiveness of acceptance and commitment therapy-based education in the parents of children with autism disorder; the results showed that treatment reduced depression symptoms, improved parenting performance, and increased the general health and psychological flexibility of the parents.

Basic Processes of Acceptance and Commitment Therapy

1. Acceptance

Acceptance is different from tolerance and submission because both are passive and fate-based and means to embrace active non-judgmental experiences of here and now. Acceptance includes a non-defensive encounter with thoughts, feelings, and physical sensations as they are directly experienced (Hayes, 2005). Acceptance, therefore, means the tendency for what one experiences to be a "complete and defenseless experience" (Bach and Moran, 2008).

2. Cognitive Defusion

The goal of acceptance and commitment therapy is to change the context in which thoughts occur so that the impact and importance of difficult private events are reduced. Cognitive defusion is also called cognitive dissonance. Cognitive fusion occurs when thoughts are considered serious and objective. It is as if thoughts are not just thoughts but exactly what they say. This may force one to react to the evaluations and verbal rules rather than reacting to the present events. Fusion is considered as one of the language products and when thoughts are taken seriously one becomes easily involved in self-destructive behaviors (Hayes, 2005; Bach and Moran, 2008).

3. Self-Observer (Self as Context)

Acceptance and commitment therapy seeks a different kind of thinking and evaluating, which is at the present time and focuses on self-awareness. Awareness helps us to have non-judgment look ability and stay in the moment. The flexibility of attention that is the underlying of "being in the moment" becomes more possible when the difference existing between thoughts and thinker, emotion and emotion feeler, memories and is understood by the person who remembers (Hayes, 2005). Acceptance and commitment therapy uses strategies to consider self as context to eliminate the effects of considering self as content (Hayes, 2005).

4. Contact with Present Moment

From one perspective, all core processes of acceptance and commitment therapy are related to the present moment processes. In order to benefit from treatment, patients have to be psychologically present at the moment of treatment. If they are to learn something, they must first learn to be completely in the present moment (Hayes et al., 2012).

5. Values

Acceptance and commitment therapy assumes that every patient has values that make his/her life enrich and meaningful completely. However, the ability to observe and pursue them has been damaged by verbal fusion and experiential avoidance (Hayes et al., 2012).

Master therapists of the acceptance and commitment therapy to create behaviors align with values struggle with intolerable pains if these behaviors become under arbitrary control rather than annoying control. The reason for this point is that there is a great deal of empirical evidence in the tradition of behavioral analysis; evidence that shows annoying control will be followed by undesirable effects. In other words, desired value behavior is not about ideas, musts, obligations, and requirements, but it is about desires. Therefore, values are a full-scale reflection of resources that bring positive reinforcement, not negative reinforcement (Flexman, 2011).

6. Committed Action

Committed action in acceptance and commitment therapy is an action that occurs at a particular moment in time and is voluntarily linked to the creation of a pattern of actions that serve the values (Kashdan and Rottenberg, 2010). The interventions related to committed action have mainly been derived from traditional therapeutic behavior and are not unique to acceptance and commitment therapy approach (Bach and Moore, 2008).

Depression in Families with Autistic Children

According to the definition of the World Health Organization (WHO), depression is a feeling of sustained sadness and a decline in the tendency to do the works we normally enjoy them, as well as a decrease in the motivation to do routine affairs lasting at least two weeks. The depressed person may also experience some emotions such as sadness, anxiety, absurdity, despair, helplessness, worthlessness, guilt, sleep or impaired appetite, feeling tired and weak in concentration. There are also other different symptoms such as overeating, inability to remember details or decision making, relational problems, physical pain, digestive problems, and general energy loss. In a very extreme state, depression can lead to a suicide attempt (Mohammadkhani et al., 2013).

Lynfvrdys states that depression is an illness that its first and major characteristics is mood change and involves a sad feeling that may have fluctuation from mild despair to severe despair feeling. This change of mood is relatively constant and continues for days, weeks and years. Along with this mood change, there are specific changes in behavior, attitude, thinking, efficiency, and physiological actions. Generally, depression is a mental illness with biological, psychological, and social aspects that have causes, symptoms, and treatments and the person having it does not easily get rid of it. Whether under treatment or not, the disorder can worsen or return (Hawton et al., 2013).

Blackledge and Hayes (2006) held a (14-hour) two-day workshop of acceptance and commitment group therapy for the parents of American autistic children and demonstrated a reduction in depression in them. Alaei (2016), also in his research entitled "Effectiveness of Acceptance and Commitment Therapy on Depression and Anxiety of the Mothers with ADHD Children in Sanandaj", showed a decrease in depression and anxiety by this treatment. Montgomery (2015) compared the effectiveness of acceptance and commitment therapy and behavior analysis on the reduction of stress, depression, and quality of life improvement in the parents of children with autism disorder with each other. The results showed that neither of these two treatments significantly reduced the stress and depression of parents, but both treatments improved the quality of life of the parents.

RESEARCH METHODOLOGY

This research was performed by a quasi-experimental method and its statistical population is all mothers of autistic children of 3 to 6 years old, a member of the Iranian Autism Society of Qods Branch, as 80 people. The statistical sample size of the present research consisted of 30 persons who were randomly located into two 15-person experimental and control groups. Due to a problem occurred for one of the members, he was no longer present from the fourth session, and data analysis was performed for the 14-person of experimental and control groups. The acceptance and commitment therapy protocol were implemented as one session in a week by the researcher for the experimental group based on the model of Bond et al. (2011). The Beck Depression Inventory, second version (BDI-II) by Beck (1963) and Cohen's Perceived Stress Questionnaire by Cohen et al. (1983) were used to collect information and statistical data. SPSS-24 software and mean, standard deviation and multivariate covariance have been used for data analysis.

RESULTS

The normality of the data is first investigated. Kolmogorov-Smirnov test was used to investigate the normality of the scores, the results of which have been shown in Table (1).

Table 1: Kolmogorov-Smirnov Test Results for Research Variables at the Pretest and Posttest Stages

Results		Depression Pretest	Depression Posttest	Depression Follow-Up
Absolute Value of the Difference between Ratios	Positive Difference	0.13	0.15	0.11

	Negative Difference	-0.10	-0.10	-0.08
Kolmogorov-Smirnov Statistic		0.13	0.15	0.11
Significance Level		0.187	0.075	0.200

As it is observed in Table (1), the absolute value of the difference between the ratios and the highest positive difference is equal to 0.13 and the negative difference is equal to -0.10. This test shows that the Kolmogorov-Smirnov statistic value for depression pretest is equal to 0.13, ($p<0.187$) which is not significant at $p<0.05$ level. Therefore, the assumption of data normality for the depression pretest has been observed.

According to the results, the absolute value of the difference between the ratios and the highest positive difference is equal to 0.15 and the negative difference is equal to -0.10. This test shows that the Kolmogorov-Smirnov statistic value for depression posttest is equal to 0.15, ($p<0.75$) which was not significant at $p<0.05$ level. Therefore, the assumption of data normality for the depression posttest has been observed.

Also, the absolute value of the difference between the ratios and the highest positive difference is equal to 0.11 and the negative difference is equal to -0.08. The test showed that the Kolmogorov-Smirnov statistic value for depression follow-up is 0.11, ($p<0.200$), which is not significant at $p<0.05$ level. Therefore, the assumption of data normality for the depression follow-up has been observed.

The following table shows the mean, standard deviation, minimum and maximum scores of participants at the pretest stage.

Table 2: Mean, Standard Deviation, Minimum and Maximum Scores of Participants in the Research Variables at the Pretest Stage

Variable	Group	Mean	Standard Deviation	Minimum	Maximum
Depression	Experimental	22.07	11.71	6	42
	Control	22.92	11.91	7	42

As it is observed in Table 2, the mean and standard deviation of depression score at the pretest stage in the experimental group is respectively 22.07 and 11.71, and in the control group is respectively 22.92 and 11.91.

Table 3: Mean, Standard Deviation, Minimum and Maximum Scores of Participants in the Research Variables at the Posttest Stage

Variable	Group	Mean	Standard Deviation	Minimum	Maximum
Depression	Experimental	17.14	10.27	3	39
	Control	23.64	11.27	8	41

As it is observed in Table 3, the mean and standard deviation of depression score at the posttest stage in the experimental group are respectively 17.14 and 10.27, and in the control group are respectively 23.64 and 11.27.

Table 4: Mean, Standard Deviation, Minimum and Maximum Scores of Participants in the Research Variables at the Follow-up Stage

Variable	Group	Mean	Standard Deviation	Minimum	Maximum
Depression	Experimental	17.28	10.46	4	40
	Control	23.35	11.24	7	42

As it is observed in Table 4, the mean and standard deviation of depression score at the follow-up stage in the experimental group are respectively 17.28 and 10.46, and in the control group are respectively 23.35 and 11.24.

Table 5 shows the results of the multivariate analysis of covariance on the posttest scores by controlling the pretests of the dependent variables of the research (depression).

Table 5: Results of Multivariate Analysis of Covariance for Comparison of Posttest Scores of Depression Variables of the Experimental and Control Groups

Trace	Test	Value	F Ratio	df Hypothesis	df Error	(P)
Groups	Pillai's Trace	0.58	16.30	2	23	0.001
	Wilks' Lambda	1.41	16.30	2	23	0.001
	Hoteling's Trace	1.41	16.30	2	23	0.001
	Roy's Largest Root	1.41	16.30	2	23	0.001

The contents of Table 5 show that there is a significant difference between the experimental and control groups in terms of at least one of the dependent variables (depression). Table 5 shows the results of a one-way analysis of covariance on the posttest scores by controlling the pretest of the dependent variables of the research (depression).

Table 6: One-way Analysis of Covariance Results for the Comparison of Posttest Scores of the Dependent Variables of Depression of the Experimental and Control Groups

Dependent Variable	Sum of Squares	df	Mean of Squares	F	P	Trace Size	Test Power
Depression	230.02	1	230.02	20.83	0.001	0.392	0.202

The results inserted in Table 6 show that one-way analysis of covariance was significant for depression (F = 20.83 and P = 0.001). According to Table (3), the mean of posttest depression score in the experimental group is 17.14 and in the control group is 23.64 which shows that it has a significant difference with controlling the depression pretest of the experimental group in the posttest and the control group. Therefore, the research hypothesis is confirmed.

Table 7: Results of Multivariate Analysis of Covariance for the Comparison of Follow-Up Scores of the Dependent Variable of Depression of Experimental and Control Groups

Trace	Test	Value	F Ratio	df Hypothesis	df Error	(P)
Groups	Pillai's Trace	0.64	20.79	2	23	0.001
	Wilks' Lambda	0.35	20.79	2	23	0.001

	Hoteling's Trace	1.80	20.79	2	23	0.001
	Roy's Largest Root	1.80	20.79	2	23	0.001

The contents of Table 7 show that there is a significant difference between the experimental and control groups in terms of at least one of the dependent variables (depression).

Table 8: One-Way Analysis of Covariance Results for the Comparison of Follow-Up Scores of the Dependent Variable of Depression of Experimental and Control Groups

Dependent Variable	Sum of Squares	df	Mean of Squares	F	P	Trace Size	Test Power
Depression	198.70	1	198.70	12	0.001	0.229	0.170

The results inserted in Table 8 show that one-way analysis of covariance for depression (F = 12, P = 0.001) is significant. To understand how this difference is sufficient, we compare the follow-up mean of the experimental and control groups in terms of the aforementioned dependent variables. According Table (4), the follow-up mean of depression score in the experimental group is 17.28, and in the control group is 23.35, which indicates that it has a significant difference with controlling depression pretest of the experimental group at the follow-up stage and the control group.

CONCLUSION

In this research, the effectiveness of acceptance and commitment group therapy on the depression of the mothers of autistic children was investigated. The results of one-way analysis of covariance indicate that there is a difference between posttest depression scores and follow-up of groups by controlling pretest scores, and this hypothesis is significant at $p<0.001$ level. Therefore, the research hypothesis is confirmed. The results obtained from testing this hypothesis are consistent with the researches results of Ghodrati and Hayati (2018), Lahootizad (2017), Abdollahi Mousavi (2017), Alaei (2016), Anvari (2012), Poudar et al. (2015), McCracken et al. (2013), Blackledge and Hayes (2006) and Peterson (2004).

According to Teasdal, Segal, Williams, Ridgeway, Soulsby, and Lau (2000), people interpret and comment about events happened to them, leading to sustained emotions and reactions. Depression-prone people continuously tend to thoughts that arouse his/her discomfort and are negative, which in turn stimulates depression in the individual. With the acceptance and commitment therapy approach, one's thoughts are experienced as mental events and incidents and the focus and attention on breathing are used as a tool for living in the present moment. Using this treatment method, a person with depression is trained to stop the intellectual rumination cycle and to keep away from his/her negative thoughts.

According to Kabat Zinn et al. (2007), Acceptance and Commitment-Based Training, by combining relaxation and mindfulness meditation exercises, is one of the treatment methods based on stress reduction and psychotherapy in which breathing and thinking exercises, the mental representation of objects existing in life that are beyond the immediate control of the human being are taught to the individual. Among the positive aspects of acceptance and commitment are increasing attention and awareness about the thoughts, emotions, and behavioral tendencies, which lead to the coordination of coping behaviors and positive

psychological states, even followed by improving one's ability towards individual and social activities, and interest in these activities (Hayes, 2005). Therefore, this treatment can improve the mental health of individuals and be effective in this respect by improving abilities and encouraging people to participate in individual and group works.

One of the dimensions of acceptance and commitment therapy that is highly emphasized in the sessions of this treatment to enable the depressed person to consider thoughts creating depression is to live in the present and current moment. To achieve this goal, mindfulness exercises are used to create the ability in depressed people to return to the present moment and to separate the individual from intellectual rumination. In this way, the depressed person develops the ability to stay in the present moment, and thus achieving a sense of changeability from him/herself and to reduce the intellectual rumination process (Ashja et al., 2012).

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