Acceptance and Commitment Therapy effect of group education on the reduction of psychological distress (anxiety and depression) in mothers of children with autism

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Abstract

The study aims to examine a training group Acceptance and Commitment Therapy to reduce psychological distress (anxiety and depression) in mothers of children with autism. The present study is experimental with pretest-posttest and control group. The population includes all mothers of children who referred to autism center in Tehran in 2015, out of which 30 were randomly selected and assigned to two experimental and control groups. The measuring tool consists of anxiety and depression questionnaire and SPSS software was used to analyze the results of covariance test. The results showed that the difference between mean scores of psychological distress (anxiety and depression) of subjects in both control and experimental groups was significant. So we can conclude that based on acceptance and commitment therapy has a significant effect on participants' psychological distress and has managed to significantly reduce the psychological problem of mothers of children with autism.

Keywords: Acceptance & commitment, psychological distress, autism.
Introduction

Family is a human resource and productive approaches to other social institutions; it is one of the pillars and the main institutions of any society. Abnormal and normal society is dependent on the general conditions of families. None of the social harm does arise regardless of family influence. For this reason, no society can claim to be healthy unless they have healthy families.

Family is an organization that has the highest impact on the individual and its members and shapes their behaviors. Many psychological and behavioral abnormalities of family members has roots in the family, yet many human progress comes from the family, and also many studies that have been conducted recently in the field of family focus on the view (Yaghubloo, 2015). If we accept that family plays an important role in withstanding the effects of the accident or disease is quite natural that one of its members supports the needs of families with a child training (Walsh, 2009).

Parents and family relationships are usually strongly influenced by having a sick child and its resulted stress (McConkeya, Truesdale, Changb, Jarrahc & Shukric, 2008). With the birth of children with autism and the awareness of the disorder, parents often suffer from shock, disbelief and frustration (Ahmadi Halsamluei, Pashang and Saliminia, 2013).

The research have shown that caregivers and parents of children with autism have lower quality of life than other parents of other children (Ahmadi Halsamluei, Pashang and Saliminia, 2013). Several factors influence the quality of life of individuals, and having the disabled children is also a difficult period. For example, having a debilitating condition is difficult and denominated important health and social problems and decrease the quality of life of this group of children’s parents (Kheir, Ghoneim, Sandridge, Al-Ismail, Hayder & AlRawi, 2012).

Parents of autistic children compared with parents of normal children and other children who have special needs or chronic illnesses, have higher stress, and in this area are experiencing a lot of psychological distress (Osborne and Reed, 201; Dabruska and Peesola, 2010). Parents, especially mothers often experience a lot of stress in their parenting role (Xing Xu, 2009). The continued performance of each individual within the family affects others ‘retention behaviors. Thus, disruption of family members is the effective on functioning of other members and thus disrupts family functioning (Saber, Bahrampur Qumrani and Yarmohammadian, 2014).

Children with disabilities have profound effects on how family members behave together and each of them with children and the effects, if are not resolved logically will result in damages to the parents and other family members, especially children with distal disabilities. Any understanding and acceptance or rejection of agreement, originally roots in parents behavior. Thus, the reaction of the parents in front of their children plays a very sensitive role in establishing an atmosphere favorable for the relationship between your child and the other family members.

In general, parents of a child as having different childhood from other children, are faced with many problems in the field of maintenance, training and education and these are all issues that put pressure on parents, and disturbing the peace and unity of the family as a result affects their adaptation and adjustment. That’s why many researchers who work with the children are aware
and emphasize the importance of family and sick children effects particularly children with autism on the dynamics of families (Bidi, 2015).

One of the pressing issues of mothers with autistic children is the care of their child who try to react to more-emotional issues, family relationships and cross-reacted family stress, anxiety and depression is the most common among them. Because of the need to care for ill children by mother and stressful conditions and factors causing anxiety and stress, as well as due to the conflict between the ideal and reality in the environment, some strategies have to be thought to reduce the level of anxiety, tension and depression and improve their social and family relationships. Different strategies and treatments are presented to reduce anxiety and depression in psychology (Dashti, 2015).

For the treatment of depression and anxiety have been mentioned as the main causes of psychological distress in people several interventions. One of these interventions is Acceptance and Commitment Therapy (Andrea et al., 201). Acceptance and commitment are important based experience alternatives to avoid including active and conscious acceptance of personal events that are associated with the individual's history and are related with no effort required to reduce the frequency or change its shape events, especially when cause the psychological damage.

Finally, in commitment activities, the individual is encouraged to undo his best in order to reach the goal. The main goal in the treatment is to establish the mental flexibility; it means the creation of practical ability to choose among various options that may be more appropriate, not practical rather than merely to avoid thoughts, feelings, disturbing memories or desires to a person committing. Therapy based on acceptance and commitment has two parts mindfulness practice and experience in the present tense and people are taught that by accepting their emotions and to avoid experimental refrain from and now lived in the present moment they can better cope with everyday challenges (Hayes and Strosahl, 2010).

Research has shown that acceptance and commitment based therapy on cognitive emotion regulation in consumer craving and glass, reducing the severity of pain in women with chronic headache disorder, social anxiety disorder treatment, the frequency and intensity of symptoms of OCD, job stress and burnout, depression are effective in patients with diabetes, anxiety and depression in women with MS, social phobia, social anxiety disorder, chronic pain (cited by Dashti, 2015).

As was mentioned because of the need to take care of a sick child and maternal stressful conditions and factors causing anxiety and stress, as well as due to the conflict between the ideal and reality in the environment, some measures should have been thought to reduce the level of anxiety, stress and depression and improve their social and family relationships. Despite the inability of some children within the family, disability such as autism adverse effects is checked on the entire family system, the existing research literature, has often studied autistic children functions (Volkmar, 2007, Montesand Halterman, 2013 Ahmadi Halmasluei, Pashang and Saliminia, 2013; McConkeya, Truesdale, Changb, Jarrahc & Shukric, 2008).

And treatments are designed also focused on the of children with autism and little attention have not been paid to these children family functions, however, if a family environment and child care is not developed, not only to achieve the outcomes does not facilitate and extend education to the
family environment, but in many cases undermine them. Therefore, to study the role of the family function in turn, is essential to more effective treatment of this disorder in children. According to this description, new acceptance and commitment therapy used in Iran in this study, we sought to answer the question whether group training is effective on reducing psychological distress Acceptance and Commitment Therapy (Anxiety and depression) mothers of children with autism or not?

**Methodology**

The study was a quasi-experimental with pretest-posttest control group. The population includes all mothers of children with autism referred to the center of Arashahr in Tehran in 2015. In order to identify mothers with anxiety and depression, anxiety and depression questionnaires and clinical interviews were used. Of these 41 patients entering the study had the criteria that 30 patients were selected randomly and were assigned randomly in 15 groups (to the 15 patients in the treatment group based on acceptance and commitment and 15 patients in the control group). Then, this training based on acceptance and commitment was performed for 10 sessions of 2 hours and 3 sessions per week on the experimental group. During this period the control group received no training based on acceptance and commitment therapy. After a training session based on acceptance and commitment therapy on anxiety and depression questionnaires control and experimental groups was performed to determine the test scores at a later stage. After collecting the data, they were analyzed using SPSS software and analysis of covariance.

**Summary of acceptance and commitment therapy based content**

First session: Dating and relationship therapy groups, the people familiar with the subject and pre-test session.
Second session: review of autism, and explained to the mother of the children's symptoms
Session III: the internal and external review and acceptance-based treatments commitment; create a desire to leave and explained that the control program ineffective, the problem is not the solution and introducing alternative to control the desire.
Fourth session: identification of values, said values; involving objectives, clear actions and clear obstacles.
Fifth Session: The value of each of the deepening of previous concepts.
Sixth session: understand the fusion and fault and do exercises for this fault.
Seventh session: understand the concept of mingling and learning how to fault it.
Eighth Session: Mindfulness and the emphasis in the present.
Ninth session: review and act responsibly story.
Tenth session: Summary of meetings and holding post-test.

**Research Tools**

**Beck Anxiety questionnaire**: Beck Anxiety questionnaire consists of 21 articles and measures the severity of anxiety in adolescents and adults. The scale is graded on a 0 to 3 and the maximum score is 63, which indicates severe anxiety. 1-7 score reflects the lack of anxiety or anxiety is normal, mild anxiety score represents by8-15, 16-25 and 26-63 indicates moderate anxiety that is indicative of severe anxiety (Beck et al., 19889. Beck, et al, 1988)
Internal consistency reliability has been reported 0/92 through Cronbach. The week-long test-retest research by Bakhtiari (2015), reliability have been estimated 0/75 through Beck Anxiety Inventory. The content validity, concurrent, diagnostic and functional structures of the questionnaire were examined and the effectiveness of the tool has been approved in measuring the severity of anxiety (Bakhtiari, 2015). In this study, Cronbach's alpha coefficient was used to check the overall reliability of the questionnaire that alpha reliability was calculated 0/85.

**Beck Depression Inventory**: This questionnaire was developed by Beck in 1961 and was revised in 1974. The questionnaire contains 13 questions. In previous studies, internal consistency reliability coefficient reported as 0/73 to mean 0/86 (Osman, Barrios, Gutierrez, Williams & Baily, 2008). The correlation between standard form and short form of Beck depression was 0/61 (Carnival, 2011).

In research of Carnival (2011) 0/84 Cronbach’s alpha reliability coefficient was obtained. Responses provided to each of the questions of test were determined on a four point scale (from normal to severe). 3 was considered as the highest score on each question; so the maximum scale score was 39. The degree of depression based on the scores obtained from the questionnaire was as follows: scores of 0 to 4 normal, mild depression 5 to 7, 8 to 15 moderate depression and severe depression scores was 16 and more. In the study conducted by Moradhaseli (2015) Cronbach alpha coefficient was 0/89.

**Results**

Table 1. Mean and standard deviation of the pre-test and post-test variables by separating the Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control</th>
<th>Experiment</th>
<th>Step</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>1/125</td>
<td>32/47</td>
<td>Pre-test</td>
<td>2/017</td>
<td>33/07</td>
<td>1/320</td>
<td>9/22</td>
</tr>
<tr>
<td></td>
<td>1/320</td>
<td>31/80</td>
<td>Post-test</td>
<td>1/242</td>
<td>25/40</td>
<td>1/320</td>
<td>9/22</td>
</tr>
<tr>
<td>Depression</td>
<td>1/047</td>
<td>25/33</td>
<td>Pre-test</td>
<td>1/242</td>
<td>25/40</td>
<td>1/195</td>
<td>2/440</td>
</tr>
<tr>
<td></td>
<td>1/195</td>
<td>25/00</td>
<td>Post-test</td>
<td>2/440</td>
<td>20/33</td>
<td>1/195</td>
<td>2/440</td>
</tr>
</tbody>
</table>

**Review of research hypotheses**

- **Hypotheses of homogeneity of covariance matrices**

  Table 2. Test results of bank of consistency matrix of variance - covariance

<table>
<thead>
<tr>
<th>Sig</th>
<th>F</th>
<th>Box’s M</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/802</td>
<td>0/332</td>
<td>1/013</td>
<td>Anxiety</td>
</tr>
<tr>
<td>0/120</td>
<td>1/948</td>
<td>6/333</td>
<td>Depression</td>
</tr>
</tbody>
</table>

Based on the data in Table 2, the results obtained show that the level of significance is larger than 0/05, so research data did not reject the assumption of homogeneity of variance-covariance matrices, so the default has been met.

- **Hypotheses of homogeneity of variances**

  Table 3. Levene's test results by default draws variance covariance

<table>
<thead>
<tr>
<th>Sig</th>
<th>Df2</th>
<th>Df1</th>
<th>F</th>
<th>Dependent variable index</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/250</td>
<td>28</td>
<td>1</td>
<td>1/380</td>
<td>Anxiety</td>
</tr>
<tr>
<td>0/235</td>
<td>28</td>
<td>1</td>
<td>1/452</td>
<td>Depression</td>
</tr>
</tbody>
</table>
Based on the data in Table 3, the results of Levine test show that the level of significance obtained is larger than 0.05, so there was no significant differences between experimental and control groups in terms of variance, so the default is observed to perform an analysis of variance.

- Hypothesis of normality of the data

<table>
<thead>
<tr>
<th>Source of Change</th>
<th>KS</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>1/077</td>
<td>0/197</td>
</tr>
<tr>
<td>Depression</td>
<td>0/605</td>
<td>0/858</td>
</tr>
</tbody>
</table>

Results of Table 4 shows the values of P in the above test are greater than 0.05. The null hypothesis in Kolmogorov-Smirnov test is the data following a given distribution (which is normal). Failure to follow the hypothesis is that the distribution of the data in question (which is normal) is considered according to the amount of P and confirms the null hypothesis, and the data are distributed in accordance with the normal distribution.

- Hypothesis of slope of the regression line consistency

<table>
<thead>
<tr>
<th>Source of changes</th>
<th>SS</th>
<th>df</th>
<th>Source of changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>45/671</td>
<td>1</td>
<td>Group</td>
</tr>
<tr>
<td>Error</td>
<td>558/73</td>
<td>1</td>
<td>Error</td>
</tr>
<tr>
<td>Total</td>
<td>166/50</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

Based on the results set forth in Table 5, the significance level of effect equals sig = 0.239, and is larger than 0.05 so homogeneous regression hypothesis is accepted.

Evaluate the research hypotheses

First hypothesis: acceptance and commitment therapy is effective in reducing maternal anxiety.

<table>
<thead>
<tr>
<th>Square of Etta</th>
<th>Significance level</th>
<th>F</th>
<th>Mean Square</th>
<th>Degrees of freedom</th>
<th>sum of squares</th>
<th>Source of changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/759</td>
<td>0/001</td>
<td>108/081</td>
<td>294/453</td>
<td>1</td>
<td>294/453</td>
<td>Group</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2/724</td>
<td>1</td>
<td>1</td>
<td>73/558</td>
<td>Error</td>
</tr>
</tbody>
</table>

Anxiety data analysis in Table 6, there was a significant difference between the control and test anxiety in two groups statistically (sig = 0/001 =; F = 108/081). So it can be said that there was a significant effect on acceptance and commitment based therapy that decreases anxiety and autistic children have been able to significantly reduce maternal anxiety.

Second hypothesis: acceptance and commitment therapy is effective in reducing depression in mothers.

Table 7. Results of analysis of variance between subjects variable effects of depression on post-test
The data in Table 7, the difference between mean scores of depression and anxiety was statistically significant in both control and experimental groups (sig = 0/001; F =43/245). So it can be said that acceptance and commitment therapy had no effect on subjects' depression and has managed to significantly reduce depression in mothers having children with autism.

Conclusion

The aim of this study group was to investigate group training of Acceptance and Commitment Therapy to reduce psychological distress (anxiety and depression) among mothers of children with autism. The results showed that the difference was significant between mean scores of psychological distress (anxiety and depression) of subjects in both control and experimental groups. So we can conclude that the acceptance and commitment based therapy has a significant effect on participants’ psychological distress and has managed to significantly reduce the psychological problem of mothers of children with autism. The results based on the impact of treatment on anxiety and depression commitment and acceptance were compared with the results of preceding studies is consistent with Zettle and Hayes (1999), Leary and Beach (1990) and the study results show the effectiveness of the acceptance and commitment therapy.

Also Zettle and Rains (2003) have examined Acceptance and commitment therapy and cognitive-behavioral therapy approaches on 54 women with a diagnosis of depression. Results showed a reduction in depressive symptoms in the treatment group of commitment and acceptance. The results obtained in this study were consistent with the results Foreman, Herbert and Moitra (2009) that compared Acceptance and commitment therapy and cognitive therapy for heterogeneous outpatients with moderate to severe anxiety and depression that the results represent a more effective acceptance and commitment therapy cognitive therapy.

Roemer & Orsillo (2007) also used acceptance and commitment to the treatment of generalized anxiety disorder that reports of symptoms of anxiety, depression, fear and avoidance and patrons had showed a significant decrease in the severity of clinical symptoms of generalized anxiety disorder. Peterson (2007) in a research evaluated the Acceptance and Commitment Therapy with current treatments focused on weak avoidance behavior as a potential factor in the process of role traumatic disorders and showed that people who get Acceptance and commitment therapy have less depression (Peterson and Eifert, 2011).

Branstetter, Wilson, Hilde brand & Mutch(2004) had compared individuals who were in the last stage of cancer in both groups of Acceptance and commitment therapy and cognitive and behavioral therapies in conjunction with chemotherapy, the researchers reported that patients in the treatment acceptance and commitment group showed a significant reduction in anxiety, depression, grief and distress cognitive and behavioral therapies and the results obtained in this study are consistent with the results of their research. Also in the study of Rajabi et al (2014; quoted in Dashti, 2015) have conducted a study on the effectiveness of acceptance and
commitment therapy on anxiety and depression in women with MS, results showed that in step after the test, anxiety and depression and avoidance of the experimental group compared to the control group was significantly reduced and this reduction has not been a significant change in one month follow-up period. Therefore, acceptance and commitment therapy was effective in the treatment of anxiety and depression in women with MS that is consistent with the results of this research.

The present study results are consistent with the results of Molavi et al (2014). The efficacy of the treatment was investigated based on acceptance and commitment on reducing anxiety and depression with panic population. The results showed that acceptance and commitment based therapy, anxiety, depression and social phobia students were significantly reduced in the experimental group compared with the control group. This study showed that treatment based on acceptance and commitment can be used as a psychological intervention along with other intervention mechanisms. In a study of Horre et al. (2013; quoted in Dashti, 2015) the effect of treatment based on acceptance and commitment therapy on depression had conducted in charity Diabetes hospitals of Isfahan on 30 patients with type 2 diabetes, and results approved the commitment and acceptance based therapy in reducing depression in diabetic patients.

The treatment effect was maintained during follow up. The results are aligned with the study. It can be said that acceptance and commitment based therapy, is a behavioral therapy that has used the skills of mindfulness, acceptance and faulting cognitive psychological resiliency. Cognitive flexibility is the ability of clients to communicate with their experience that is possible for them at the time of treatment, they want to act in accordance with the values of methods of their choice.

The treatment with behavioral training techniques of faulting and acceptance and commitment as well as detailed discussions about the value and necessity of specifying individual goals and values, all lead to a decrease in severity of depression and anxiety in mothers of children with mental retardation and physical restraint. In this treatment, the emphasis was very much on people's willingness to inner experienced help their nagging thoughts just as a thought experiment, and being aware of the ineffective nature of their current programs, and instead of responding to it, important to them in life and in order to do what their value is. Here, by substituting themselves as the field of managed clients simply can experience the unpleasant events within time and separate their reactions, memories and unpleasant thoughts.

In fact, the aim was increasing the people’s psychological flexibility. The results showed that this approach leads to a significant reduction in depression and the anxiety of motherhood. In fact, we teach people how to be rid of disturbing thoughts; in its place is conceptualized, strengthen their own observer, internal events into control rather than accept their values explicit to them. In this treatment, people learn to accept their feelings and thoughts that take away from them by the mind and thinking process toward greater awareness and link goal-oriented activities (Dashti, 2015).

In brief, Acceptance and Commitment Therapy tries to teach people to experience the thoughts and feelings, rather than try to stop them, people are asked to work towards their goals and values and experience their thoughts and feelings. Using this treatment, they can very well reduce the psychological problems such as depression and anxiety in mothers of children with autism and
avoided for the reduction in the individual's experience, which ultimately results in increased life expectancy, for adoption and better relationships with others and reduced depression and anxiety-related problems including suicide, guilt, and so on. Unwillingness of some participants to engage in research in the study was due to the limitations of the present study’s follow-up period.

It is suggested that similar research should also be used in other cities and on fathers to compare the results of this study and future researchers should use a larger sample size. In order to evaluate the effect of time on maintaining the health gains, the researchers are recommended that in future studies consider follow-up periods. Therefore, the use of therapeutic interventions can improve acceptance and commitment therapy greatly on psychological distress and psychological state of this vulnerable group of mothers of children with autism.
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