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## Research Paper

# The Effectiveness of Group Emotional Schema Therapy in Reducing Feelings of Loneliness and Rumination in Mothers with Mentally Retarded Children



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## ABSTRACT

**Objective:** The aim of the present study was to explore the effectiveness of group emotional schema therapy in reducing feelings of loneliness and rumination of mothers with mentally retarded children.

**Methods:** This quasi-experimental study was a pre-test and post-test design with a control group. The statistical sample included 30 mothers with mentally retarded children who were randomly assigned to two experimental groups (15 people) and a control group (15 people). The experimental group was given emotional schema therapy training for 8 sessions of 2 hours every week. The Social and Emotional Loneliness Scale for Adults and the Ruminative Response Scale were used to collect data. Data were analyzed using the multivariate analysis of the covariance test.

**Results:** The results showed that group emotional schema therapy significantly reduced feelings of loneliness and rumination in the experimental group compared to the control group.

**Conclusion:** The results of this research showed that emotional schema therapy can be an effective way to reduce the feelings of loneliness and rumination of mothers with mentally retarded children.

## 1. Introduction

Mental Retardation remains a world problem, particularly in developing countries. It is estimated that the incidence of severe mental retardation is approximately 0.3 % of the total population, and nearly 3 % of the intelligence quotient (IQ) is under 70. About 0.1 % of those children require treatment, guidance, and prolonged supervision throughout their life. Mental retardation remains a dilemma, leading to anxiety for families and communities. The diagnosis, treatment, and prevention for children with mentally retarded remain indistinct (Endriyani & Yunike, 2017).

One of the most stressful experiences for any family is managing a child with a disability or chronic illness

(Cooper et al., 2009). The existence of a disabled child, his disabilities, slow growth, and special facilities that are necessary for the physical and mental care of this child, as well as the frustration of lost dreams, put parents under mental and emotional pressure and disturb their peace and interaction (Farahani, Hamidipoor & Heidari, 2021). Mental retardation or MR (current term, intellectual disability [ID]) is a label used to describe a constellation of symptoms that includes severe deficits or limitations in an individual's developmental skills in several areas or domains of function: cognitive, language, motor, auditory, psychosocial, moral judgment, and specific integrative adaptive (i.e., activities of daily living).

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The majority of youth with ID can live independent or semi-independent lives as adults if they have received the appropriate personalized support over a sustained period of their lives, especially during the formative years (Pratt & Greydanus, 2007). The birth and presence of a child with mental retardation in any family can be considered an undesirable and challenging event because it will probably lead to stress, frustration, sadness, and despair (Segerstrom & Miller, 2004). Also, having a disabled child can be accompanied by negative experiences in parents, especially their mothers (O'Connell, O'Halloran, & Doody, 2013). Negative emotions include negative feelings and emotions such as guilt, shame, sadness, anxiety, worry, and loneliness (Küçük & Alemdar, 2018).

The feeling of loneliness is a kind of uncomfortable state, and it occurs when a person has not reached the desired level of interpersonal and social relationships that he wants to have (Gerst-Emerson & Jayawardhana, 2015). It is also a negative feeling caused by an individual's understanding of the discrepancy between desired and current social relations, and it is experienced when purposive social interactions become less or disappear in individual life (Jahanbakshi, Ghalandarnejad & Keshavarz-Afshar, 2024). Considering the special conditions of their children and the high responsibility of taking care of them, these mothers see themselves as alone and helpless (Hemati Alamdarloo, Ahmadi & Teymouri Asfichi, 2018). This, in turn, doubles the feeling of loneliness of these mothers. In support of this claim, (Barbosa, Choud & Gomez, 2008) reported that mothers of children with disabilities experience more feelings of loneliness than mothers of children without disabilities. The feeling of loneliness is a hateful, disturbing, and unpleasant experience that causes people who suffer from it to experience a sense of inferiority and negative moods and emotions (Ahmadi & Hemmati Alamdarloo, 2014). A person who feels lonely begins to ruminate about the discrepancy between existing and desirable interpersonal relationships. In this regard, (2015) showed that the feeling of loneliness is an unpleasant, negative, and painful personal experience that causes people to feel bored, useless, hopeless, anxious, depressed, and brooding.

Rumination is persistent and recurrent thoughts around a common topic (Jorman, 2006). These thoughts involuntarily enter the consciousness and divert attention from the desired topics and current goals (Malehmir, Nozari, Rafeerad & Keyvandm 2021). In another definition, rumination is known as constant preoccupation with a thought or topic and thinking about it; these thoughts are repetitive, focus on causes and results, prevent adaptive problem-solving, and lead to an increase in negative thoughts (Nolen Hoeksma, 2002). According to research findings, women tend to ruminate more than men, and this can be generalized in the parents of children with disorders and disabilities (Johnson &

Whisman, 2013). The presence of a mentally retarded child in itself has many psychological consequences that threaten the mental health of all family members, especially the mother (Sukmawati, Noviati & Rahayu, 2023). However, in this situation, the cognitive errors of catastrophizing and rumination are considered two important perpetuating factors that can lead to the aggravation and continuation of psychological consequences such as depression and anxiety in the mother as the main caregiver (Arani et al., 2012).

Until now, various therapeutic methods have been used to improve the various components of mental health in mothers of mentally retarded children, which can be cognitive behavioral methods (Siahposh, Motamedi, & Sohrabi, 2021), mindfulness (Burmaoglu, 2021), positive psychotherapy (Azad & Aleyasin, 2023), dialectical behavioral therapy (Sadeghi, Aalipour, Padervand, & Padervand, 2020), expressing hope (Bakhsipoor, Shahideh & Aghdasi, 2021), and emotion regulation training (Ariapooran et al, 2022). Despite confirming the effectiveness of the mentioned approaches, emotional schema therapy is one of the approaches that has been proposed recently and claims effectiveness and treatment in the field of emotional issues and problems (Leahy, 2019). According to the emotional schema therapy model, people have different schemas about their emotions. In this approach, it is believed that all people experience difficult and painful emotions, but what distinguishes people from each other is how they interpret and react to these emotions or their emotional schemas (Salicru, 2023).

Mohammadi et al. (2019) investigated the effectiveness of group emotional schema therapy in reducing feelings of loneliness and rumination in divorced women and emphasized the effectiveness of this approach. Pirayeh et al. (2021) compared the treatment based on emotional schemas therapy and schema therapy in reducing rumination in patients with chronic depressive disorder (dysthymia) and showed the greater effectiveness of emotional schema therapy in reducing rumination in the sample group. Also, Malogiannis et al. (2014) and Leahy (2007), in two separate studies, showed the effectiveness of emotional schema therapy in reducing rumination in people with major depressive disorder.

Many theorists in the field of psychopathology have assigned a different role and position to emotions in explaining mental disorders. Today, aside from the eclectic models, many cognitive theories have also realized the strong role of emotions in the development and continuation of mental disorders, so many of them consider emotions equal to cognitions in creating mental disorders, and towards the cognitive emotion models have moved (Leahy, 2015). The central core of treatment in this research is the teaching of emotional schemas strategies based on emotion regulation, which is mentioned in Leahy's theory of emotional schema therapy, paying attention to the role of emotion and its

management in families that have a child with a disorder, it is necessary to scientifically investigate the effect of this treatment on the emotional schemas of rumination and the feeling of loneliness in mothers with mentally retarded children. Therefore, the purpose of this research is to the effectiveness of group therapy based on emotional schema therapy on incompatible emotional schemas of feelings of loneliness and rumination in mothers of mentally retarded children.

**2. Materials and Methods**

This quasi-experimental study was a pre-test and post-test design with a control group. The statistical population of this research includes all mothers with mentally retarded children under fifteen years of age living in Dezful City who were referred to the Dezful City welfare department in the first quarter of 1402. The statistical sample of this research included 30 mothers from the statistical population, who were selected by simple random sampling method and randomly replaced in experimental (n=15) and control (n=15) groups. The criteria for entering the present study include: having at least one child with mental retardation according to the criteria of the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association (DSM-5), having at least a diploma level of education, being in the age range of 20 to 50 years, consent and agreement to participate in the research and exclusion criteria include; having more than one child with mental retardation, lack of satisfaction and cooperation in research and use psychological treatment or drug therapy for mental problems in the past six months and physical illness and substance abuse. Then, the emotional schema therapy method was implemented in the experimental group during 8 2-hour sessions every week. However, the control group was placed on the waiting list and did not receive any intervention. In the end, the members of the two groups answered the questionnaires. The research data were analyzed using the covariance analysis method. Data collection tools in this research include:

**The Social and Emotional Loneliness Scale for Adults Scale** was designed and prepared by Di Tommaso, Brannen, and Best (2004). In this questionnaire, loneliness is divided into two types: social loneliness and emotional loneliness, which includes romantic and family loneliness. This scale has 15 items and is scored on a Likert scale from 1 (completely disagree) to 5 (completely agree). A lower score on the scale indicates more loneliness and vice versa. Di Tommaso et al. (2004) reported that Cronbach's alpha coefficient of this questionnaire was between 0.87 and 0.90, which indicated the appropriate reliability of the scale. Jokar and Salimi's research (2012), the validity and reliability of this questionnaire were tested. The correlation results of this scale with other scales showed the convergent validity of this questionnaire. Cronbach's alpha coefficient was also used for reliability, and the value of this coefficient was obtained for the dimensions of this questionnaire for romantic loneliness, family loneliness, and social loneliness, respectively 0.92, 0.84, 0.78. In the present study, reliability was calculated by Cronbach's alpha method for the subscales of romantic loneliness 0.86, family 0.84, and social loneliness 0.79, and for the whole questionnaire 0.81.

**Ruminative Response Scale:** This questionnaire was created by Nolen-Hoeksema, McBride, & Larson (2009). It contains 22 statements scored on a Likert scale from 1 (never) to 4 (always). A higher score on the scale indicates more rumination. In the study of Nolen-Hoeksema et al. (1991), the alpha reliability coefficient was reported as 0.92. The validity of this scale in Persian form was confirmed by Bagherinejad, Sahehi, and Tabatabaei (2010). In the Persian form of the scale, the value of the alpha coefficient was 0.88. The alpha reliability coefficient in this study was 0.81.

The therapeutic protocol of this research was given to the experimental group in 8 sessions of 90 minutes, taken from Leahy's emotional schema therapy model (2002) and the book "Emotion Regulation Techniques in Psychotherapy" (Leahy., 2015).

**Table 1. Summary of emotional schema therapy sessions**

<b>First session</b>	Mutual familiarization and explanation of each member about the purpose of participating in the group, raising the group rules by the researcher, and giving the members the opportunity to express the feelings they experience from having a disabled child. Conduct pre-tests and homework to get information about excitement.
<b>Second session</b>	Providing education about emotion to increase members' understanding of emotion, general introduction of emotional therapy schema, explanation of logic and steps of intervention, homework: naming emotions and completing the sheet for distinguishing thought from emotion.
<b>Third session</b>	Definition and explanation of emotional schemas and their impact on our feelings and behaviors, for example, homework: watching inside-out animation and interpreting it.
<b>Fourth session</b>	Explanation of ineffective coping strategies, including rumination and training, to replace adaptive coping strategies, such as cognitive restructuring, with previous ineffective strategies. Applying validation techniques to emotions with emphasis on loneliness. Homework: self-compassionate validation.
<b>Fifth session</b>	Teaching mindfulness and using cognitive-behavioral techniques to reduce rumination, homework: eat fruit with mindfulness.

<b>Sixth session</b>	Applying the emotion induction technique and self-greeting metaphor to the guest in order to strengthen the belief that emotions are transitory. Using space-making techniques for emotion, adopting a position away from judgment towards emotion, and normalizing emotions to accept difficult emotions such as feeling alone, homework: completing the pros and cons sheet to reach the belief that emotions are unstable.
<b>Seventh session</b>	Investigating the fusion between thought and action in members to reduce rumination, homework: using the diffusion technique.
<b>Eighth session</b>	Evaluating the extent to which members have achieved their goals, preparing them for the end of treatment, and helping them continue learning new things by examining possible obstacles and problems and trying to fix or reduce them. Receiving feedback from members about the quantity, quality, and effectiveness of treatment sessions. Post-test implementation.

### 3. Results

According to the self-reported information about the employment status, in the control group, 73.33% (11 people) were housewives and 26.27% (4 people) were employed, and in the experimental group, 80% (12 people) were housewives and 20% (3 people) were employed. Also, in terms of education variables, in the control group, 26.67% (4 people) had a post-graduate degree or lower, 53% (8 people) had a bachelor's degree, and 20% (3 people) had a master's degree or higher. In the experimental group, 6.67 percent (1 person) had a graduate degree or lower, 66.67 percent (10 people) had

a bachelor's degree, and 26.66 percent (4 people) had a master's degree or higher. Also, the average duration of marriage of the studied subjects was 10.62 years, and the subjects with a history of marriage of at least 6 years and a maximum period of marriage of 24 years participated in the research. The following descriptive indices of the research variables are presented in Table 2.

Table 2 shows the descriptive indices of the two variables of loneliness and rumination of the mothers of the sample group, separated into two groups in the pre-test and post-test.

**Table 1. Descriptive indicators of loneliness and rumination in the two study groups**

groups	Variables	Pre-test		Post-test	
		Mean	SD	Mean	SD
<b>Experimental</b>	Feeling of loneliness	38.89	7.63	38.32	7.41
	Rumination	56.19	4.21	38.41	7.57
<b>Control</b>	Feeling of loneliness	56.66	8.48	39.06	8.32
	Rumination	55.89	5.29	56.13	7.52

In the following, multi-variable covariance analysis was used to investigate the effectiveness of emotional schema therapy on feelings of loneliness and rumination. In order to use this test, its assumptions must be fulfilled. One of the assumptions of using this parametric test is the normality of data distribution. Shapiro-Wilk test was used to check this assumption, and the result of this test indicated the normality of data distribution ( $W=0.93$ ;  $P>0.05$ ). Another assumption of using this test is the homogeneity of the variance of the groups in the dependent variables and the homogeneity of the

variance-covariance matrix of the dependent variables in the studied groups. Levene's and M-box tests were used to check these two assumptions. The result of Levene's test showed that the variance of feelings of loneliness and rumination were homogeneous in the studied groups ( $P>0.05$ ), and the result of the M-box test also indicates that this assumption was established ( $F=6.86$ ;  $P<0.05$ ). According to the assumptions of the multivariate analysis of covariance (MANCOVA) test, it is safe to use this test. Therefore, the result of this test is presented in Table 3.

**Table 3. The results of the multivariate covariance analysis of the difference between the two control and experimental groups in the feelings of loneliness and rumination**

Source	Value	F	d.f. assumed	d.f. error	Sig.	Eta square	
<b>group</b>	Wilks Lambda	0.126	12.347	2	25	0.001	0.637

The findings in Table 3 show that the feelings of loneliness and rumination in the control and experimental groups have significant differences ( $P<0.0001$ ). In the

following, to examine the feelings of loneliness and rumination in the studied groups, the results of univariate covariance analysis are presented in Table 4.

**Table 4. The results of univariate covariance analysis of feelings of loneliness and rumination in the studied groups after control of pre-test**

Source of Changes	Variables	Sum of Squares	d.f.	Mean of Squares	F	Sig.	Eta square
<b>group</b>	Feeling of loneliness	72.86	1	72.86	9.18	0.01	0.41
	Rumination	97.03	1	97.03	11.49	0.01	0.63

The univariate analysis of the MANCOVA test shows that emotional schema therapy has reduced feelings of loneliness and rumination in the experimental group compared to the control group. In other words, there is a significant difference between the group that received emotional schema therapy intervention (experimental group) and the group that did not receive this treatment (control group). So, the research hypotheses are confirmed. This treatment had the greatest impact on rumination, with an Eta coefficient of 0.63, and the least impact on feelings of loneliness, with an Eta coefficient of 0.41.

#### 4. Discussion and Conclusion

This research was conducted to determine the effectiveness of emotional schema therapy on the reduce feelings of loneliness and rumination in mothers with mentally retarded children in Dezful. The results of this hypothesis with the findings of researchers such as Qashqai, Emadian & Ghanadzadegan (2023), Varmazyar, Makvandi & Seraj Khorrami (2021); Farahani, Hamidipoor & Heidari (2021), Mohammadi et al. (2020); Ghadiani and Hosseini (2020) and Mohammadi et al. (2016), are consistent. In explaining the finding that emotional schema therapy is effective on the feeling of loneliness of mothers with mentally retarded children, it can be said that after the therapy sessions and in the process of validating emotions and specifically practicing self-compassionate validation, they found that no one but They themselves cannot fully understand their feelings and experiences as they want, because people are not in their place and do not see the world from their eyes. Therefore, the members concluded that no one but themselves could understand the severity of their suffering and the difficulty of their problem. The members of the group realized that others were not always available, and in most cases, they did not provide the empathy they wanted. sometimes, instead of empathy, they took an advice-like attitude, so they realized that it is necessary to understand their own thoughts and feelings and empathy. provide them with the support and encouragement they need. Another effort made in these meetings to reduce the feeling of loneliness was to strengthen the belief that emotions are transitory in the members. In this regard, techniques such as emotion induction were used to experience the highs and lows of emotions so that the members, while experiencing unpleasant emotions, find out that This feeling is not stable and subsides after reaching its peak. It can be said that: due to the continuing effect of catastrophizing and mental rumination in the negative mood states of mothers of mentally retarded children, the need for treatments to correct negative cognitive

styles of emotion regulation is felt so that the terrible image of having The retarded child in the minds of people with catastrophizing thinking is diminished and the ability to deal with events in a more rational manner is developed in them. In addition to the above, mothers of disabled children with mental rumination are always in distress with repeated and disappointing thoughts about the child and issues such as the future of the sick child. Therefore, by teaching emotional schema therapy through changing maladaptive schemas, presenting cognitive and behavioral techniques, and also by emphasizing replacing adaptive and efficient behavioral and cognitive patterns instead of ineffective coping styles and strategies, there is an opportunity to improve Negative thoughts. It also helps people to use healthier coping styles instead of behavior patterns arising from schemas, and instead of considering schemas (such as mental rumination schema) as an absolute truth that they must follow, they see them as a funny truth (Mohammadi et al., 2016). In a research, it was shown that schema therapy will have a significant effect on reducing mental rumination. Also, (Ghadampour et al., 2018) and (Farahani, Hamidipoor & Heidari, 2021) reported the effect of schema therapy in promoting general health and reducing mental rumination, anxiety, depression, and meaningful rumination responses. Therefore, the presence of a child with mental retardation has negative effects on the relationships and behavioral patterns in the family system, which is necessary to provide education based on schema therapy in order to improve parent-child relationships. In the end, it can be said that in addition to the psychological pressure of having a mentally disabled child and the worries related to the child's future, mothers with a mentally disabled child spend more time with the child and have to spend more time caring for them, compared to the mothers of healthy children. feeding, taking care of the child's health and hygiene, providing therapeutic exercises, coping with the child's behavioral problems, and taking the child to different medical centers. Mothers with healthy children do not experience many problems and have more time to take care of their affairs and can participate in social, sports, and work activities. On the other hand, the presence of a mentally retarded child imposes additional costs on the family, which, despite the lack of funding for rehabilitation services from the general insurance organizations of our country, puts a lot of financial pressure on the family of a mentally retarded child. All these aspects make the mothers of this child spend and accept the most negative effects, and the quality of life of the children is at the center of these problems, which reduces the amount of time they spend with them. As a

result of providing education based on emotional schema therapy, it will be effective in increasing public health and education, informing parents on the correct way to interact with their child, and teaching positive parenting programs in order to reduce the mental stress of mothers with mentally retarded children (Arani et al., 2012). Also, this type of treatment reduces life-threatening behaviors, reduces treatment-disruptive behaviors, reduces behaviors that disrupt the quality of life, increases behavioral skills, and increases self-respect. The ultimate goal of schema therapy is to improve schemas. Since schemas are a set of memories, emotions, physical feelings, and cognitions, the improvement of schemas leads to the improvement of all of them. As a result, as they improve, people have a greater desire to improve their quality of life and will adopt more behaviors related to mental and physical health. Also, the current research was conducted in the community of mothers of mentally retarded children in Dezful City, and the generalization of its results to other areas requires caution. Therefore, it is suggested that in future research, interventions based on emotional schema therapy should be used simultaneously in the mother and child groups, and the results should be compared with the present research.

## 5. Ethical Considerations

### Compliance with ethical guidelines

All ethical principles were considered in this article. The participants were informed about the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study whenever they wished. If desired, the research results would be available to them.

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### Conflicts of interest

No potential conflict of interest was reported by the authors.

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