

The Effectiveness of Strategic Solution-Oriented Therapy, the Meditation Technique and Metacognitive Therapy on Mind Wandering and Rumination among Mothers of Children with an Autism Spectrum Disorder

Marjan Pavandi¹, *Farah Naderi², Alireza Heidari³, Parvin Ehtesham Zadeh⁴

¹ Ph.D. student of Psychology, Department of Psychology, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran.

² Full Professor, Department of Psychology, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran.

³ Associate Professor, Department of Psychology, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran.

⁴ Assistant Professor, Department of Psychology, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran.

Abstract

Background: The aim of this study was to investigate the effectiveness of strategic solution oriented therapy, the meditation technique and metacognitive therapy on mind wandering and rumination among mothers of children with an autism spectrum disorder.

Methods: The method of the research was quasi-experimental and it used a pretest-posttest design with a control group. The statistical sample included all mothers of children with ASD who were studying at special children's training centers in the south of Tehran during 2019. They were selected through purposive sampling and randomly divided into three experimental groups ((strategic solution oriented therapy (n=14), the meditation technique (n=14), metacognitive therapy (n=14)), and one control group. Each of the experimental groups was under treatment for 1.30 hour while the control group did not receive any therapy. The subjects were assessed before and after the treatment using Mind-Wandering Questionnaire (MWQ), and Rumination Response Scale (RRS). All statistical analyses were performed using SPSS ver. 25.

Results: The majority of mothers (32.1%) were between 25 and 30 years of age and concerning the educational degrees, the mothers with a diploma comprised the biggest percentage (44.6%). The results showed that all of the solution-oriented strategic methods, meditation, and metacognitive therapies can significantly decrease the mind wandering and rumination in the mothers of children with an autism spectrum disorder ($P < 0.05$), while solution-oriented strategies showed higher effects than meditation and metacognitive approach.

Conclusion: According to the test results, the solution-oriented strategic method, meditation method, and metacognitive method were respectively effective in reducing mind wandering, with the first one having the most impacts, and the last method being the least influential one.

Key Words: Autism spectrum disorder, Meditation technique, Metacognitive therapy, Mind wandering, Rumination, Strategic solution-oriented therapy.

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* Corresponding Author:

Farah Naderi, Associate Professor, Department of Psychology, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran. Email: nmafra@yahoo.com

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1- INTRODUCTION

Autism spectrum disorder (ASD) is characterized by difficulties in social communication and interaction, and repetitive and restrictive behavior patterns, interests, or activities, which affects daily living tremendously. Individuals diagnosed with ASD encounter difficulties in understanding and using nonverbal communication, sharing emotions, and building social relationships, as well as difficulties with switching in activities and handling changes (1). ASD affects more than 5 million Americans, with an estimated prevalence of approximately 1.7% in children (2). The care needs of children with ASD significantly affect their parents and siblings, and require substantial community resources. Direct and indirect costs of caring for children and adults with ASD in the United States in 2015 were estimated to be \$268 billion, more than the cost of stroke and hypertension combined (3). The lifetime cost of education, health, and other service needs for an individual with ASD ranges from \$1.4 to \$2.4 million dollars, depending on whether he or she has any co-occurring intellectual disabilities (4). Delivering timely and effective medical, behavioral, educational, and social services across the lifespan means that primary care providers must understand the needs of individuals with ASD and their families (5). The multiple developmental, health, interactional, and behavioral difficulties associated with an ASD are not only challenging for the affected children in growing up but also for their caregivers in parenting (6).

Increasing evidence indicates that the parents of children with ASD experience higher levels of mind wandering and rumination (7-8). Mind wandering (MW) occurs when the mother's mind drifts away from the primary task and focuses on internal, task-unrelated thoughts and images. Spontaneous uncontrolled

thoughts that interfere with tasks make a detrimental form of mind wandering (7). As time passes from a traumatic event like an autistic child's birth, the level of anxiety decreases, and the process of coping begins so that intrusive rumination is progressively replaced by deliberate behavior (8). Rumination precipitated by a highly traumatic occurrence requires multiple forms of repetitive thought. It contains sometimes undesired distracting thinking, including distracting ruminations. It may also involve more focused thinking about making sense of the event, problem-solving, reminiscence, and anticipation, including deliberate rumination (9). Studies indicate that the response of rumination to boring experiences may make periods of depressed mood longer and more severe. In addition, rumination makes individuals' thoughts negatively oriented and these individuals have weaker capabilities for solving problems (10).

As noted above, there is an increasingly growing need to provide recovery services for individuals with ASD and family members (11). It has been stated that the efficacy of the child's behavioral therapy services would diminish if the mental health needs of the parents are not met (12). One of the therapies that have been considered by therapists in recent years to help the psychological problems of the parents of children with autism is strategic solution-oriented therapy. A meta-analysis of mixed outcomes of solution-focused brief therapy reported an effect size of 0.26 for internalizing problems (including anxiety) compared to 0.52 in feasibility work using guided parent-delivered CBT (13). Lee et al. (14) showed that the sleep problems of children with ASD might influence their mothers' sleep. Strategic solution-oriented therapy is based on a social-constructionist mechanism of change, in which the co-constructed dialogue between the clients and therapists

offers the opportunity to construct new meanings of perceived reality. Nevertheless, strategic solution-oriented therapy is an adaptable solution to the behavioral process of transition in order to address the needs of families impacted by ASD (15).

A review study analyzed evidence of its efficacy in all available controlled outcome trials of solution-focused short therapy. 32 (74%) of the 43 research studies reported major positive effects of this therapy, and 10 (23%) reported positive patterns. The strongest evidence of the efficacy of solution-focused short therapy was observed in adult depression care, where four separate trials found solution-focused short therapy comparable to well-established traditional therapies (16-17). According to theorists, Mindfulness can be practiced with mindfulness meditation, originating from Buddhist traditions. Mindfulness meditation is designed to foster awareness of the present-moment experiences by redirecting people's attention to an object, such as their breathing, while taking a nonjudgmental stance toward distractions. These practices are incorporated in a variety of training programs, the most well-known being mindfulness-based stress reduction (18). It has been confirmed that mindfulness-based training reduces aggressive and destructive behaviors (19). For example, mindfulness-based training reduces intrusive and deliberate ruminations (8).

In this regard, Wells and Matthews investigated the role of trans-diagnostic processes such as CAS in creating and persistence of psychological disorders, and managed to design therapeutic intervention entitled metacognitive therapy (MCT) to achieve the significant short time improvement in such underlying mechanisms (20). Khorrami et al (2020) showed a significance in the variables of subjective well-being and mental vitality

in the experimental groups of metacognitive therapy and mindfulness-based cognitive therapy as compared to the control group. However, this increase was not significant in the resilience variable. Moreover, comparing the two treatments of mindfulness and metacognition on the present research variables, showed no significant difference between the two groups (21). Thus, although several treatment approaches have been investigated, the limited evidence, side effects, lack of generalization, or focus on a specific comorbid disorder of these treatments imply a need for further research on the new treatment approaches that have the potential to reduce the negative impact of ASD for children and their parents (22). It is plausible that the stressors of having a child with ASD affect the couple's relationship; however, few researchers have focused on this dynamic within these families. Therefore, since the mothers' participation plays a key role in such children's treatment and care programs. There is a need to pay attention to maternal issues and psychological disorders to help strengthen the recovery program for ASD children. Thus, we aimed to investigate the effectiveness of strategic solution-oriented therapy, the meditation technique and metacognitive therapy on mind wandering and rumination among the mothers of children with an autism spectrum disorder.

2- MATERIALS AND METHODS

2-1. Study design and population

The research method was quasi-experimental and used a pretest-posttest design with a control group. The statistical sample included all mothers of children with autism spectrum disorder who were studying at special children's training centers in the South of Tehran, Iran, during the first half of 2019.

2-2. Methods

The purposeful sampling approach was used in this analysis. Thus, after announcing the call from candidates who wished to participate in the treatment program and were qualified to participate in the meetings, 56 mothers having the requirements were randomly assigned to the three experimental (14 mothers each), and control (14 mothers) groups. The researchers explained to the participants that the treatment sessions were designed to help them to improve their mental health and to conduct research. The experimental group held seven 90-min sessions from October to December 2019. After conducting the pretest, the strategic solution-oriented therapy, meditation technique, and metacognitive therapy were presented through weekly tasks and daily activities to the 3 intervention groups by a therapist (the first author of this report); but, no therapeutic intervention was provided for the control group until the end of the research. The four groups were reassessed at the end of the sessions by the use of the Mind-Wandering Questionnaire (MWQ) (23), and Rumination Response Scale (RRS) (24).

2-3. Measuring tools: validity and reliability

2-3-1. The Mind-Wandering Questionnaire (MWQ) (23)

Developed by Salavera et al. in 2017, is a self-report 5-item questionnaire that evaluates the levels of the mind-wandering trait. It is a 6-point Likert-type scale that goes from 1 (almost never) to 6 (almost always). Some item examples are “I have difficulty maintaining focus on simple or repetitive work” or “I do things without paying full attention”. The total MWQ score is the sum of the five items within a 5–30 range. After obtaining permission from the author, MWQ was translated into Persian by Aliloo et al. They have reported the Cronbach's alpha reliability of this

questionnaire as 0.79 for intentional mental confusion subscale and 0.81 for unintentional mental confusion (24).

2-3-2. Rumination Response Scale (RRS)

Developed by Nolen-Hoeksema & Morrow, 1991 (cited in 25) includes 22 possible responses to sad mood which are focused upon the self, and one's symptoms, as well as possible causes and consequences of the mood state. Examples are as follows: “Thinking about why I have problems that other people don't”, “Thinking about how hard it is to concentrate”, and “Thinking about why I can't get going”. The participants rate the responses on a scale of 1 (almost never respond in this way) to 4 (almost always respond in this way) and the yielding scores are from 22 to 88. Previous studies have reported acceptable validity and reliability for the RRS (25). It has been translated into Persian by Bagherinejad et al. (26); and they have calculated its test-retest reliability as 0.67, and validity from 0.88 to 0.92; and the alpha Cronbach coefficient was 0.88. The Cronbach α coefficient of this scale in the pilot phase of the study was 0.90; and the internal consistency of the Persian version was reported as 0.90.

2-4. Interventions

The study was conducted in Tehran by two master clinical psychologists who were familiar enough with the intervention (they have the certification for implementing this treatment), with a consideration of the ethical standards of research such as informed consent and maintaining secrets of participants. The participants were examined in two stages, at the baseline before the interventions and after the interventions. The first intervention in this study included the strategic solution-oriented therapy sessions based on the protocol of the Lethem's treatment model (27). The second intervention was based

on mindfulness-based stress reduction (28). And the third intervention used in this study was the metacognition treatment that was implemented based on “step by step guide”, a practical guide of

metacognition treatment (29). A summary of implementation instructions of the treatment sessions is shown in **Table 1, 2, and 3.**

Table-1: Description of the strategic solution-oriented Therapy sessions (27)

Session	Content	Place	Time
First session	The therapeutic introduction; Introducing the group leaders, and getting to know each other. Presenting community guidelines, such as timely and regular attendance at meetings and the need for empathy and doing the assignments in line with the principle of confidentiality, community participation, and involvement in group discussions.	special children's training centers	90 mins
Second session	Asking the participants to think of the things that they do in a troubled situation. Defining the issue. Inviting them to tell the problem in one word, and turn that one word into a sentence; and turn the issue to achievable goals. Debating on the issue.	special children's training centers	90 mins
Third session	Reviewing the assignment and the previous session, goal setting; Reviewing the complaint’s solution; Formulation of problem solving rings	special children's training centers	90 mins
Fourth Session	Review the assignment and the previous session; ask the clients to talk about the future, imagine a time in the future where they don't have the question that you currently have. Using the art of exceptions and miracle questions. Finding a positive story. Homework: Practice the session’s exercise.	special children's training centers	90 mins
Fifth Session	Reviewing the assignments and the previous session; Explaining the art of the key switch and using it, along with the use of the scale technique. Homework: Do one of the exercises practiced in this session.	special children's training centers	1.5-hour
Sixth Session	Reviewing the assignment and the previous session, Continuing the art of the key switch and using it. Using the demonstration techniques to raise solution-oriented questions. Using a misguided argument and contradictory betting. Homework: Do one of the exercises introduced in this session.	special children's training centers	90 mins
Seventh Session	Reviewing the assignments and the previous session, Using graded questions. Determining whether the clients have achieved treatment goals	special children's training centers	90 mins

Table-2: Description of the Meditation technique sessions (28)

Session	Content	Place	Time
Session 1	The introduction of automatic guidance system/ knowing how to use present moment awareness of body sensations, thoughts and emotions in reducing stress/ practicing eating raisins (Object attention training), giving feedback and discussion about the practice/ three - minute breathing/ giving assignment for the next week and distributing leaflets of the first session and CDs of meditations.	special children's training centers	90 mins
Session 2	Re-practicing the body examination/ giving feedback and discussion about body examination practice/practicing breathing mindfulness meditation/yoga stretching exercise/distributing leaflets of the second session and CDs of meditation.	special children's training centers	90 mins
Session 3	Having conscious sitting with awareness of breathing (the sitting meditation)/practicing yoga exercises/practicing three -minute breathing /distributing leaflets of the third session and video tape of yoga practices.	special children's training centers	90 mins
Session 4	Re-practicing the body examination/ practicing exercises related to conscious yoga /5-minute practicing of “seeing or hearing”/re-practicing conscious sitting with awareness of breathing and body/distributing leaflets of the fourth session and CDs of meditation.	special children's training centers	90 mins
Session 5	Practicing breathing/re-practicing conscious sitting (awareness of breathing, body, sounds and thoughts)/explaining the stress and identifying the participants’ reactions to it/examining the awareness of pleasant and unpleasant events on feeling, thoughts and body sensations/practicing conscious yoga exercises/practicing 3-minute breathing/distributing leaflets.	special children's training centers	90 mins
Session 6	Practicing conscious yoga/doing sitting meditation (mindfulness of sounds and thoughts)/distributing leaflets of the sixth session and the video tape to participants.	special children's training centers	90 mins
Session 7	Doing mountain meditation/ sleep hygiene/repeating the exercises of the previous session/making a list of enjoyable activities/ distributing leaflets of the seventh session.	special children's training centers	90 mins
Session 8	Practicing the body examination/ overview of the whole program/examining and discussing programs/doing stone, beads and marbles meditation.	special children's training centers	90 mins

Table-3: Description of the Metacognitive Therapy sessions (29)

Session	Content	Place	Time
Session 1	General formulation of the client/ introducing the model/identifying rumination periods (metacognition enhancement)/practicing techniques of increasing attention/completing the Attention Training Technique (ATT) form/homework (practicing techniques of increasing attention twice a day and making notes of the ATT task).	special children's training centers	90 mins
Session 2:	Checking homework, identifying the rumination time and uncontrollable thoughts/introducing and practicing Detached Mindfulness (DM)/showing the postponing of rumination in an experimental way for modifying uncontrollable beliefs/practicing ATT/homework, practicing ATT, applying DM/practicing and postponing the rumination.	special children's training centers	90 mins
Session 3:	Checking homework/identifying rumination time and in time of thinking about uncontrollable thoughts/identifying the rumination triggers of DM practice/examining active rumination and practicing it/ practicing postponing of rumination in the session/challenging with uncontrollable metacognitions/identifying activity levels and coping/ practicing ATT at home, applying postponing rumination and DM.	special children's training centers	90 mins
Session 4:	Checking homework, examining the rumination and uncontrollable thoughts, examining activity levels and useless coping methods/ examining whether postponing the rumination is used in at least 75% of triggers and rumination periods or not/challenging with positive beliefs about rumination/practicing ATT/homework, practicing ATT, extensive use of DM and postponing the rumination.	special children's training centers	90 mins
Session 5:	Checking homework, examining the rumination, examining positive thoughts and activity level/examining and extensive application of DM/ continuing the challenge with positive thoughts about rumination/examining activity levels and increasing the time of contemplation to reaction (sinking in thought), identifying and preventing harmful coping behavior (for example sleep or drinking alcohol)/practicing ATT/homework, practicing ATT, postponing the rumination, increasing the activity.	special children's training centers	90 mins
Session 6:	Checking homework, examining the rumination, positive thoughts and activity level/ identifying negative beliefs and challenging them about excitement and depression/ homework, practicing ATT/practicing rumination and maintaining the activities.	special children's training centers	90 mins
Session 7:	Checking homework, examining ruminations and useless coping beliefs and strategies/starting to write new designs of identifying and modifying recurrent fears/practicing ATT/ homework/ practicing ATT.	special children's training centers	90 mins
Session 8:	Checking homework and examining the rumination/prevention of recurrence (completing overall treatment design), work on the remaining cognitive beliefs/anticipating future incentives and discussion about the way of using the new program.	special children's training centers	90 mins

2.5-Ethical consideration

For ethical reasons, the strategic solution oriented therapy, the meditation technique and the metacognitive therapy workshops were held for the control group in one day, after the study. It should be noted that this article is the result of the first author's dissertation for the Ph.D. degree in Psychology approved by the Vice-Chancellor of Research, Islamic Azad University of Ahvaz, Branch of Science and Research No. 2599561.

2-6. Inclusion and exclusion criteria

The criteria for joining the group included being married and the mother of a child with autism, the commitment to attend all meetings until the end of the contract, and in particular the admission of individual counseling services. The individuals consuming psychiatric and psychotropic drugs, the sedatives, alcohol, and narcotics, and those having frequent histories in psychiatric hospitals were considered as cases of withdrawal from the study. In addition, if a mother did not attend more than two training sessions, she was to be excluded from the study.

2-7. Data Analyses

The data was analyzed using SPSS version 25.0. The data was described as mean (\pm standard deviation) and percentage. Multivariate analysis of variances (MANOVA) was used to test the study variables. $P < 0.05$ has been considered statistically significant. Before examining the results of multivariate analysis of variance, the assumptions of multivariate analysis of variance, i.e. Box and Levin tests were examined, based on which the possibility of performing the multivariate analysis was confirmed.

3- RESULTS

In this study, as presented in **Table 4**, the majority of mothers (32.1%) were between 25 and 30 years of age and concerning the educational degrees, the

mothers with a diploma comprised the biggest percentage (44.6%).

As shown in **Table 5**, when compared to the pretest mean scores, the posttest mean scores of mind-wandering and rumination significantly decreased in all the three experimental groups of strategic solution-oriented therapy, and the mediation technique and metacognitive therapy. The results obtained from the covariance analysis showed a significant difference between the mind wandering and rumination post-test mean scores of the three groups. Before using the covariance test, Box and Levin tests were examined, the results of which confirmed the normal distribution of the data. Moreover, Levin's test results were not statistically significant for all of the variables tested (significance above 0.05), and the assumption of homogeneity of the variances was also confirmed. At the factor level, the interaction between covariates (pretest) and dependent variables (posttest) was not significant. Hence, it was concluded that the regression slopes were homogeneous.

In **Table 6**, the results of the posttest with the removal of the pretest effect and the intergroup effects are reported in mind-wandering ($F = 28.305$; $\eta^2 = 0.563$), and rumination ($F = 225.802$; $\eta^2 = 0.540$). The differences created as a result of the implementation of the solution-oriented strategic intervention were significant in both variables of mind -wandering and rumination at the significance level of $p < 0.01$. Moreover, the difference created by performing the meditation intervention in the variables of mind-wandering ($F = 94.789$; $\eta^2 = 0.812$) and rumination ($F = 48.775$; $\eta^2 = 0.689$), were significant at the level of $p < 0.01$. In addition, there is a significant difference between the mean scores of the metacognitive intervention and the control group in mind-wandering ($F = 107.206$; $\eta^2 = 0.830$) and rumination ($F = 73.013$; $\eta^2 = 0.768$). The difference was significant at the level of $P < 0.01$.

Table-4: Describing demographic characteristics of sample individuals, n=14

Demographic variable		Frequency	Percent
Age	25 to 30 years	18	32.1
	30 to 35 years	15	26.8
	35 to 40 years	9	16.1
	40 to 46 years	14	25.0
Education	Lower than diploma	5	8.9
	Diploma	25	44.6
	Associate diploma	16	28.6
	M.A. and above	10	17.9

Table-5: Descriptive results of the Interventions in the pretest and posttest

Groups	Stage	Variable	Mean \pm SD	Min	Max	Skewness	Kurtosis
Strategic Solution Oriented Therapy, n=14	pre-test	Mind wandering	\pm 0.825 5.71	1.5	-2.02	6.00	3.00
		Rumination	\pm 0.4922 3.4	-2.01	-0.031	4.00	2.86
	Post-test	Mind wandering	\pm 0.534 3.85	1.15	-0.216	5.00	3.00
		Rumination	\pm 0.330 2.20	0.77	1.44	2.95	2.00
The Meditation Technique n=14	pre-test	Mind wandering	\pm 1.089 5.42	1.90	1.87-	6.00	3.00
		Rumination	\pm 0.42 3.23	-1.32	0.963	3.91	2.91
	Post-test	Mind wandering	\pm 0.759 2.500	0.158	1.22	4.00	2.00
		Rumination	\pm 0.58 1.78	0.178	-0.04	3.00	1.00
and Meta Cognitive Therapy n=14	pre-test	Mind wandering	\pm 0.54 5.61	-1.327	-0.801	6	4.60
		Rumination	\pm 0.52 3.19	-1.373	0.545	4	2.55
	Post-test	Mind wandering	\pm 1.26 2.07	0.729	1.16	5	1
		Rumination	\pm 0.53 1.86	1.119	0.234-	3	1

SD: Standard Deviation

According to the results, there is a significant difference between the effectiveness of the intervention approaches in the variable of mind wandering among the mothers of children with autism ($P < 0.05$).

The solution-oriented strategic method with the mean of 2.75 has the most impact in reducing mind wandering compared to the other two methods, the meditation method with the mean of 1.79 and the metacognitive method with the mean of

1.46 are in the next ranks, respectively. According to the results, there is no significant difference between the effectiveness of intervention approaches in the rumination variable among the mothers of children with autism ($P > 0.05$). Although the solution-oriented strategic method with the mean of 2.39 had the highest mean score compared to those of the metacognitive method (1.86) and the meditation method (1.75) the differences were not significant.

Table-6: Covariance analysis of mind wandering and rumination in different treatment groups

Groups	variable	SS	df	MS	F	P-value	Eta			
Strategic Solution-Oriented Therapy	Mind wandering	3.761	1	3.761	28.305	0.001	0.563			
	Rumination	1.313	1	1.313	25.802	0.001	0.540			
Error	Mind wandering	2.923	22	0.133						
	Rumination	1.1119	22	0.051						
Total	Mind wandering	716,000	28							
	Rumination	264,038	28							
The Meditation Technique	Mind wandering	26.826	1	26.826				94.789	0.001	0.812
	Rumination	7.153	22	7.153				48.775	0.001	0.689
Error	Mind wandering	0.283	22	6.226						
	Rumination	0.147	22	3.226						
Total	Mind wandering	599.000	28							
	Rumination	246,680	28							
and Meta Cognitive Therapy	Mind wandering	60.011	1	60.011				107.206	0.001	0.830
	Rumination	10.787	22	10.787				73.013	0.001	0.768
Error	Mind wandering	0.560	22	12.315						
	Rumination	0.148	22	3.250						
Total	Mind wandering	28	574.000							
	Rumination	28	246.680							

P-value: $p < 0.05$, SS: Sum of Square, df: Degree of freedom, MS: Mean of Square

Table-7: Friedman's Test to compare the effect of intervention methods on the variables

groups	variable	Mean rank	df	Statistical test	P-value
Strategic Solution Oriented Therapy	Mind wandering	2.75	2	4.650	0.001
	Rumination	2.39			
The Meditation Technique	Mind wandering	1.79			
	Rumination	1.75			
and Meta Cognitive Therapy	Mind wandering	1.46			
	Rumination	1.86			

4- DISCUSSION

The aim of this study was to investigate the effectiveness of strategic solution-oriented therapy, the meditation technique and metacognitive therapy on mind wandering and rumination among the mothers of children with an autism spectrum disorder. The results revealed that the meditation, metacognitive, and solution-oriented strategic methods can

significantly decrease the mind wandering and rumination in the mothers of children with an autism spectrum disorder. There was a significant difference between their effects on mind wandering, so that the solution-oriented strategic method showed stronger effects than meditation and metacognitive approaches. However, no significant difference was observed between the effects of the three approaches on the rumination.

The findings are consistent with the results reported by Lee et al. (14), Gingerich and Peterson. (16), and Jordan and Turns (17). Furthermore, the results of a previous study indicated that Caregivers (often parents) of children with an ASD have been shown to have an elevated risk of experiencing physical health problems and mental health problems, such as stress, anxiety, and depression, compared to caregivers of children without an ASD or the general population (31). The mother's particular distress relates mainly to practical problems (e.g., disrupted family relationships; social, leisure and job constraints; financial difficulties), and the subjective burden, which refers to caregivers' psychological reactions (e.g., loss of hope, dreams, and expectations; depression; anxiety; embarrassment in social situations) (32-33).

Given the longitudinal design of some studies, there is evidence to indicate that child behavior problems function as a risk factor for parental negative outcomes (34). A recent study also showed that psychiatric disorders are more common in parents of children with autism; higher risk of autism among children was associated with diagnosis of schizophrenia in both parents, depression in mothers, and neurotic and personality disorder and other nonpsychotic disorders (35). The effect of strategic solution-oriented therapy can be attributed to its focus on the abilities people bring to the change process, and how they can be implemented. The assessment seeks to help people imagine how they want their lives to be, recognize moments when the solution (or part of it) has already happened, and find out what's needed to make the solution work and keep it working. Clients are encouraged to pursue approaches in solution-focused counseling that fit their own mindset. The importance of meaning as an effect on individual behavior, rather than a disorder within the individual is stressed. Furthermore, solution-focused counseling

explores how subtle shifts in transactional ways impact the system (11).

Furthermore, in line with our results, showing the significant effect of meditation therapy on mind-wandering and rumination of ASD mothers, the body of research highlighting the efficacy of mindfulness in enhancing cognition, attention, neural processes and broad psychological well-being has resulted in a spread of mindfulness-based interventions being implemented in clinical practice with a wide variety of populations (9-20-23). Interestingly, in the previous pilot study by De Bruin et al. (2015), no decrease in parental over reactivity was found, while other parenting styles did improve. This discrepancy might be explained by the inclusion of younger children in the present study (36). Decrease in parenting stress is previously shown by multiple studies investigating mindfulness-based programs for the parents of children with ASD (36). Mindfulness interventions for parents are associated with equally beneficial outcomes for children and adolescents. Meta-regressions were conducted to check whether change in parenting stress predicted youth outcomes. Greater reductions in parenting stress did predict greater improvements in youth externalizing and cognitive outcomes (1). Therefore, reductions in parenting stress may improve externalizing and cognitive outcomes.

The other finding of the study was that the metacognitive therapeutic approaches were effective in reducing rumination in ASD mothers, which was consistent with the results of the previous studies (21, 30). The metacognitive approach conceptualizes the rumination according to a three-level model of self-regulating executive function (S-REF). In this model, rumination is related to self-regulation and emotional dysfunction; and is considered a type of coping style with depressed mood.

Thus, eliminating rumination is one of the major goals in metacognitive therapy of depression. This occurs through reduction and alteration in both positive and negative metacognitive beliefs about rumination and the administration of strategies such as attention control (37). Rumination causes the individuals to have feelings of minimal control over their lives and these feelings are related to the increase in anxiety because rumination affects not only the mood but also leads to cognitive biases, and consequently leads to selective attention of the patients to worrisome issues (38).

4-1. Study limitations

Numerous study limitations should be noted. The variety of contexts affecting the evaluation results of the quantitative measures is one of the limitations of the research design. The time of the school year and the semester in which the intervention was presented may have an impact on employment, student understanding of stress and health, attractiveness, and the lasting impact of the intervention. Also, this study was conducted in Tehran, so in generalizing its results to other areas caution should be considered; and it is recommended to re-conduct the study in other cities.

5- CONCLUSION

The results of this study support the conclusion that the strategic solution-oriented therapy in seven sessions was more effective than the two other therapeutic approaches in decreasing the mothers' mind wandering and rumination among the mothers of children with an autism spectrum disorder. It has been then confirmed that strategic solution-oriented therapy is an important treatment option for parents.

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