



Original Article

# The effectiveness of cognitive-behavioral group therapy on divorced women's emotional regulation, meta-cognitive beliefs, and rumination

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## Abstract

**Introduction:** The aim of this study was to investigate the effectiveness of cognitive-behavioral group therapy on divorced women's emotional regulation and meta-cognitive beliefs and rumination.

**Materials and Methods:** The study population of this clinical trial includes all divorced women referred Sanjesh-e Danesh o Aramesh counseling center in Mashhad in the 2nd quarter of 2015. The sample size includes 30 divorced women who were selected through convenience sampling and then attributed randomly in two groups, 15 as control group and 15 as experimental group. The experimental group was treated with 12 sessions of cognitive-behavioral group therapy. There was no intervention for control group. Garnovski's Cognitive Emotion Regulation Questionnaire (CERQ 36), Meta-Cognitive Beliefs Questionnaire (MCBQ 30), and Ruminative Response Scale (RRS-22) were used to evaluate pretest and posttest status. Data analysis was performed through MANCOVA and univariate covariance analysis by SPSS software version 21.

**Results:** The results of MANCOVA test showed a significant difference between the study groups in dependent variables. In order to determine which dependent variable shows significant difference among groups, univariate covariance analysis was used, which showed a significant difference in all dependent variables among groups ( $P < 0.005$ ).

**Conclusion:** Based on the results, we can conclude that cognitive-behavioral group therapy influences emotional regulation, meta-cognitive beliefs, and rumination. Hence, this method is effective and useful in alleviating symptoms affecting women after divorce and to sustain and improve their mental health.

**Keywords:** Divorce, Emotional regulation, Group therapy, Meta-cognitive beliefs, Rumination

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## Introduction

Divorce phenomenon is regarded as an important social damage in various societies and following this phenomenon, there are a lot of mental pressures on people after divorce. Problems following divorce vary depending on social, familial, cultural, and even gender conditions (1). In the meantime, divorced women's problems and negative outcomes of divorce are more diverse than men. Undoubtedly, divorced women who confront with various social and cultural limitations, face more sufferings which cause mental pressure on these people (2).

Nowadays, social problems and issues in various

dimensions have caused to increase divorce number and to decrease divorce age. Undoubtedly, divorced women's problems, nowadays, which require more accountability, lead to mental pressure on these people and complicate these women's compatibility (3). Divorce is the result of the most acute and serious communicational problems of family. Unfortunately, in view of divorce to marriage ratio, Iran is one of the first seven countries in the world (4). Divorce women's psychological, emotional, social, and economical problems can be appeared very differently, compared to women who have normal life with their husbands. Because the nature of society attitude to divorce, communicational problems with ex-spouse, child and educative conflicts with partner and limitations of sexual relations and even communications in workplace for

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these women, shake them up against various life problems and challenges and make these women's personal and social adaptability challenged (5).

If divorced women adapt to divorce personally and socially, they will enjoy symptoms of higher physical and mental compatibility and dominate roles and duties of daily life including occupational, familial, and other opportunities and also development of independency from ex-spouse (6). Because of stressful situation of divorce, divorced women perceive low self-worth and their self-confidence is decreased and they feel that they cannot control situations (7). Another problem which afflicts divorced women after divorce is decrease of emotional regulation; so that Jafari Nadushan, et al. (8) demonstrated in a study that divorced women significantly differ from married women in mental health and emotional regulation. The results were based on low levels of mental health and emotional regulation among divorced women. Emotional regulation means the way of people's cognitive processing while exposure to unpleasant events of social life (7,8).

In a study, Shaghaghi (10) compared cognitive regulation of emotions and thinking style between divorced and ordinary women, in a population of 150 people, and the results indicated that there is difference between ordinary and divorced women in view of emotional-cognitive regulation and divorced women have low emotional-cognitive regulation. Individual capability for controlling emotions is one of the most important capabilities which must be learned. Emotional regulation causes the individual to be in a relaxed mode from emotional arousal and to monitor and change individual's emotional experiences (9,10).

One of the other categories which create cognitive problems in divorced women is these women's high meta-cognitive beliefs. Meta-cognitive beliefs are of effective elements in mental health condition and by changing meta-cognitions which increase incompatible ways of negative thoughts or public negative beliefs; mental health condition can be endangered. Meta-cognitive beliefs are related to uncontrollability, importance and danger of cognitive thoughts and experiences (11).

Rumination is considered as permanent involvement in an idea or subject and thinking about it. Rumination is a category of informed opinions and thoughts which revolve around a normal and specific pivot and immediate environmental demands are not dependent on them and have repetitive aspect; they concentrate on causes and outcomes of symptoms and prevent solving

incompatible problem and lead to increase negative opinions. Undesirable and annoying thoughts are major problem for anxious people, because feeling of threat and negative emotion is eternal for them (12). Rumination is defined as opinions and behaviors which passively make women's attention concentrated on depressive symptoms and meanings of these symptoms (13).

One of inventions of which effectiveness in different contexts was confirmed during various studies is cognitive-behavioral group therapy. In their studies, Oie and Dingle, quoted from Bahadori concluded that cognitive-behavioral group therapy is an effective invention. This method is reasonable because people learn that consider their opinions and thoughts as hypotheses of which reliability must be tested. This treatment has training approach in which cognitive and behavioral techniques are trained via inner-session exposure exercises, cognitive restructure, and finally homework (14,15).

Divorce is rupture, collapse, and destruction of warm and relaxing life focus which has irreparable impacts on family members. In general, divorce is a loss which dominates individual adaptability and creates undesirable outcomes in this context. It should be stated that one can influence on personal and social compatibility with these women's life problems and challenges and can play a determinant role in these women's sociability, through a proper therapeutic intervention. Considering divorced women confront with many psychic trauma and social and emotional problems that whole pressures cause stress in different dimensions, and regulating their emotions, beliefs, and opinions face problem. It is worth nothing that cognitive-behavioral inventions in an efficient group manner can be very effective for decreasing these women's problems, because this therapeutic approach leads to relieve and decrease problem-induced stresses. Therefore, by providing suitable conditions, we can control problem-induced stresses and influence on their internal positive capabilities in different dimensions and can increase and reinforce individual tolerance and adaptability to face problems and finally we can create self-efficacy and effective performance in them and regulate these women's emotions and decrease their rumination and meta-cognitive beliefs. Studies in this field confirms that effective therapeutic approaches on divorced women's problems can create useful effects on divorced women's life quality in society, hence, investigation in this regard is important and necessary. Hence, group therapy in cognitive-behavioral context which is a suitable method to decrease problem, can cause

to increase emotional regulation and to reduce meta-cognitive beliefs and rumination in order to decrease these women’s life challenges. Therefore, in the present study, this issue is considered if cognitive-behavioral group therapy is effective on divorced women’s emotional regulation and meta-cognitive beliefs and rumination.

**Materials and Methods**

In this study, a clinical trial methodology with pretest-posttest model and unequal control group was used. Because in this study we sought to created change in divorced women’s emotional regulation and meta-cognitive beliefs by implementing cognitive-behavioral group therapy, this plan was used. Also, before implementing cognitive-behavioral group therapy intervention, selected divorced women in both groups were measured by pretest of emotional regulation and meta-cognitive beliefs and rumination in both groups. The criterion of accepting people in this study was above 25 years old. Also, pretest role in this plan was controlling and comparing emotional regulation and meta-cognitive beliefs and rumination of test and control groups in pretest and posttest. Then, after cognitive-behavioral group therapy sessions on test and control groups, a posttest was done for both groups and as a result, it was determined whether created changes in divorced women’s emotional regulation, meta- cognitive beliefs and rumination were induced by treatments sessions or not. The population of the present study included divorced women referred Sanjesh-e Danesh o Aramesh counseling center in Mashhad in the 2nd quarter of 2015. This study sample consists of 30 women who were selected by convenience sampling and were randomly divided among 15 people in control group and 15 people in experimental group. In this study, experimental group was treated within 12 90-min sessions, based on a practical manual of group therapy knowledge of Michael Ferry (1999) (16). In Table 1, the applied treatment plan was reported for separated sessions. Also, no intervention was performed on control group. These therapeutic sessions were presented in Table 1.

- emotional problems
- 4 Exchanging feelings and psychological restatement and discovering negative thoughts
- 5 Teaching members about recognizing cognitive state of emotion and introducing sociability and identifying situations and opportunities of sociability
- 6 Presenting techniques related to annoying thoughts and techniques of solving problem
- 7 Pathology of personal and social stresses and introducing various meta-cognitive beliefs and presenting relaxing skill
- 8 Changing negative opinions and beliefs and attitude to personal-social condition, drawing cognitive plans
- 9 Teaching logical methodology of personal and social beliefs
- 10 Teaching principles of social and life skills
- 11 Discussing about events and providing techniques of stress control skill in personal and social problems
- 12 Reviewing sessions briefly, providing and concluding techniques and also members’ survey and feedback about group therapy program and performing posttest

**Research instruments**

- *Cognitive Emotion Regulation Questionnaire:* This questionnaire (CERQ- 36) was prepared by Garnefski, et al. (8). It is a multidimensional questionnaire which is used to identify people’s confrontational cognitive strategies after experiencing negative events or situations. This criterion has 36 items and 9 sub-criteria of cognitive strategy including self-blameful, acceptance, self-ruminative, positive re-concentration, planned re-concentration, positive re-assessment, underestimation, disaster display, and blamefulness. Criterion scores domain is 1 (almost never) to 5 (almost always). Each sub-criterion includes 4 items and total score results from total sub-criteria (17). In a study, Besharat (17) verified psychometric features of Cognitive Emotion Regulation Questionnaire. Internal consistency of sub-criteria items of Cognitive Emotion Regulation Questionnaire was computed based on Cronbach’s alpha coefficients and was confirmed. Retrial durability of questionnaire in terms of computing correlation coefficients among subjects’ scores was calculated in two periods with 2 to 4 weeks interval for sub-criteria including self-blameful, acceptance, self-ruminative, positive re-concentration, planned re-concentration, positive re-assessment, underestimation, disaster representation, and blamefulness in significance level  $p < 0.001$ . These coefficients show satisfactory retrial durability of emotional cognitive regulation questionnaire. These findings are consistent with completed studies regarding psychometric features of Cognitive Emotion Regulation Questionnaire of Garnefski, et al. (8). Content validity Cognitive Emotion Regulation Questionnaire was confirmed based on

**Table 1.** Description of steps of therapeutic sessions

Session	Session Description
1	Implementing pretest, introducing and investigating purposes and effects of group therapy
2	Reviewing last session and teaching knowledge of interactive nature of three thinking, behavioral, and physiological systems in society
3	Reviewing last session and recognizing symptoms and etiology of adaptability problems and outcomes of

experts' judgment. Convergent and diagnostic validity of Cognitive Emotion Regulation Questionnaire was calculated by concurrently implementing depression-anxiety-stress criterion and mental health criterion regarding subjects. Correlation coefficients of subjects' mean scores in 9-item sub-criteria of Cognitive Emotion Regulation Questionnaire with psychological indices of depression, anxiety, stress and helpless were significantly positive and with psychological welfare indices were significantly negative. Based on these results, emotional cognitive regulation questionnaire has sufficient validity. These findings with study results are consistent with validity of emotional cognitive regulation questionnaire of Garnefski, et al. (8, 18).

- *Meta-cognitive Beliefs Questionnaire*: This questionnaire is a self-report 30-item instrument which measures people's beliefs about their thoughts and opinions. This tool was designed to measure several featured meta-cognitive elements, some of which have a pivotal role in meta-cognitive model of psychological disorder. Responses in this criterion are computed based on 4-point Likert scale: 1=I do not agree, to 4=I agree very much. These criteria have five sub-criteria: 1) positive beliefs about worry, 2) beliefs about uncontrollability and opinion risk, 3) beliefs about cognitive confidence, 4) beliefs about need to control opinions, 5) cognitive self-awareness. In their study, Wels, et al.(2004) recorded Cronbach's alpha coefficients domain for sub-criteria as 72% to 93%, and its durability in a retriability manner for total score after 18-22-day period as 75% and for sub-criteria as 59% to 87% (19). Based on Shirin Zadeh Dastgiri, et al's study (20), factorial structure of "Meta-cognitive Questionnaire-30" was examined by basic components analysis and varimax rotation in a population of 258 people, which is similar to extracted elements in Wels and Cartwright-Hatton study (2004) (20). In addition to "factorial validity", other methods for validity, that is, sub-criteria correlation with whole criterion and with each other, concurrent validity and differential validity were also examined. Sub-criteria correlation with whole criterion was between 58.0 and 87.0 that were psychometrically favorable. Moreover, correlation among factors was between 26.0 and 62.0 that show factors are independent from each other, while they have proper correlation with whole criterion and each other. Also, examining "differential validity" of "Meta cognitive Questionnaire-30" indicated that quantity of meta-cognitive beliefs among groups is statistically significant. In order to study

"reliability" of "Meta-cognitive Questionnaire-30", three methods were used: retriability, bisection, and internal consistency coefficient. Retriability coefficient for whole criterion in 4 weeks interval was reported 73% which is favorable. This coefficient was between 59.0 and 83.0 for factors, too. The majority of reported correlation coefficients in this study are similar to those coefficients which authors had reported in basic dictionary. These findings imply easy and fluent test phrases, either in English or Farsi, and coincidence of original version with Iranian dictionary is favorably done. Also, in Zamanzadeh's study (12), questionnaire durability with Cronbach's alpha method was obtained 0.81 for entire questionnaire and for sub-criteria including positive beliefs about worry, uncontrollability and risk, cognitive confidence, need to control opinions, and cognitive self-awareness were 0.60, 72.74, 51.0, 50.0, 0.0, respectively (12). Generally, this study results indicated that students' meta-cognitive beliefs and probably other social groups of Iran society can believably be measured by "Meta-cognitive Questionnaire-30". Use of this criterion can help many studies, in which investigation of individual beliefs about processing system such as emotional disorders is of particular importance.

- *Ruminative Response Scale*: This questionnaire was prepared by Nolen-Hoeksema and Morro to evaluate rumination. This criterion has 22 items which graded on a 4-point scale from 1 (almost never) to 4 (almost always). This questionnaire was discussed by Mansoori, et al. (21) in Iran and its validity was confirmed. Total score of rumination is calculated by items addition. Evidences of content validity were submitted to respective professors and experts and it was validated. By use of Cronbach's alpha, a domain from 0.88 to 0.92 was shown which implied its high internal durability and its inner-class correlation was high with five times measurement (correlation 0.57). Also, retriability correlation for over 12 months was reported 0.67 and Cronbach's alpha equaled 0.90 in initial examination. In this study, questionnaire reliability for whole criterion was correlated with remained score addition of scale items, through the score of a scale item of which content was coordinated with criterion definition, and correlation coefficient outcome is significant ( $P=0.013$  and  $r=0.613$ ) (14). It is worthy to note that data analysis was performed by SPSS software version 21.

## Results

In this study, the majority of participants were in age range of below 30 years old and most of them

had diploma and under-diploma degrees and there was no difference between both control and experimental groups in this regard.

**Table 2.** Distribution of demographic variables of the studied population

Control		Test		Variable	
Percent	Frequency	Percent	Frequency		
47	7	60	9	Below 30	Age Category
33	5	20	3	30 to 40	
20	3	20	3	40 to 55	
60	9	80	12	Diploma and Under diploma	Education
27	4	13	2	Associate	
13	2	7	1	Undergraduate and Graduate	

The findings of demographic variables of the studied population were reported in Table 2.

Also, MANCOVA Test was applied for inferential section. Before implementing MANCOVA test, its assumptions were examined as follows.

This assumption was examined based on Levin Test for all variables as follows.

**Table 3.** Results of Levin Test

Significance Level	Freedom Degree 2	Freedom Degree 1	Levin Statistic	Stage	
0.959	28	1	0.003	Pretest	Emotional Regulation
0.986	28	1	0.000	Posttest	
0.220	28	1	1.574	Pretest	Meta-Cognitive Beliefs
0.152	28	1	2.170	Posttest	
0.758	28	1	2.97	Pretest	Rumination
0.531	28	1	4.11	Posttest	

This test was not significant for any variable. There was no significant among variances of both groups. So the assumption was met.

In order to examine the assumption of data distribution normalization, Kolmogorov-Smirnov test was used.

**Table 6.** Inter-group effects test (univariate covariance) for comparing groups by divided dependent variables

Eta Square	Significance Level	F	Mean Square	df	Total Squares	Dependent Variable	Source
0.988	0.0005	1999.511	5892.084	1	5892.084	Emotional Regulation	Inter-group
0.959	0.0005	1999.511	2308.282	1	2308.282	Meta-cognitive Beliefs	
0.466	0.0005	1999.511	1780.502	1	1780.502	Rumination	
			2.947	25	73.669	Emotional Regulation	Intra-group (error)
			3.989	25	73.669	Meta-cognitive Beliefs	
			81.606	25	2040.153	Rumination	

The results of univariate covariance test indicated that in all dependent variables, there is significant difference between groups. Descriptive findings of Table 6 show that in emotional regulation variable, the mean in posttest of experimental group was so

**Table 4.** Results of Kolmogorov–Smirnov Test

Rumination		Meta-Cognitive Beliefs		Emotional Regulation		Group
Posttest	Pretest	Posttest	Pretest	Posttest	Pretest	
0.953	0.957	0.445	0.456	0.536	0.486	Test Z
0.323	0.297	0.989	0.985	0.936	0.972	Significance Level
0.554	0.691	0.690	0.734	0.484	0.484	Control Z
0.918	0.727	0.728	0.654	0.973	0.973	Significance Level

Considering the obtained significance level, normalized data distribution of three studied variables is confirmed. In order to discuss assumption of covariance matrix equality, M-Box test was used. The results indicated F=2.159 which is significant with freedom degrees 6 and 5680/30 in level of P=0.044. So Pillai's Trace was basis of this report.

**Table 5.** Results of MANCOVA Test for examination of study assumptions

Eta Square	Significance Level	Freedom Degrees of Denominator	Freedom Degrees of Nominator	F	Quantity	Trace
0.989	0.005	23.000	3.000	703.843	0.989	Pillai's Trace
0.989	0.005	23.000	3.000	703.843	0.011	Wilks's Lambda
0.989	0.005	23.000	3.000	703.843	91.806	Hotelling's Trace
0.989	0.005	23.000	3.000	703.843	91.806	Roy's Largest Root

The results of MANCOVA Test show that there is significant difference among the studied groups in dependent variables. In order to determine which dependent variables have significant difference among groups, a univariate covariance analysis test was used.

different and significantly increased, compared to pretest, whereas the mean of pretest and posttest in control group was not much different. Also, descriptive findings of Table show that in meta-cognitive beliefs variable, the mean in posttest of

experimental group was so different and significantly increased, compared to pretest, whereas the mean of pretest and posttest in control group was not much different. And regarding rumination variable, it implies that the mean in posttest of experimental group was so different and significantly increased, compared to pretest, whereas the mean of pretest and posttest in control group was not much different.

### Discussion

The results of statistical analyses imply that experimental group received higher improvement in Garnefski Cognitive Emotion Regulation Questionnaire (CERQ-36), after cognitive-behavioral group therapy interventions, compared to control group. Hence, it can be concluded that cognitive-behavioral group therapy influences divorced women's emotional regulation. The effectiveness of cognitive-behavioral group therapy in emotional regulation is consistent with Salamat (22), Taheri, et al.(23), Shaghghi (10), Levinson (24), and Dan (25) study results.

It can be stated because cognitive-behavioral group therapy intervention in divorced women caused to enable person in subjective dimensions and increased health and improvement of mind and because group therapy was performed, members' personal and social cognitions was rather recognized together and in fact it was tested and these women recognized accuracy of problems dimensions in sociability and personal life. In this therapy, divorced women learned to promote their own cognitions, feelings, and responses with regard to emotional condition and communication with society, and their tolerance and flexibility against personal and social challenges become higher by looking at the clear side of cases and evaluating realistically and positively due to their conditions. Cognitive-behavioral group therapy in divorced women changed outcomes of negative thinking about society and these women's focus on their minds, and establishing individual calmness in personal and social situation, it caused these women to have their own high attitude, feelings and awareness and generally to have positive feelings and perceptions about themselves and society. Adler considered therapy purpose as change of incorrect aims and attitudes. Because members take over a role in which they have problem, they are active in cognitive-behavioral group therapy, and we can help these members to modify incorrect aims and beliefs and to form more social interest, through its role play, reinforcement, and feedback and providing

appropriate exercises; In general, in this study, this led to influence divorced women's emotional regulation increase and to promote personal and social interactions, acceptance, abreaction, in society and social life and divorced women find more ability to join different groups.

It can be stated that cognitive-behavioral group therapy changed divorced women's negative opinions about themselves and society, via recognizing cognitive errors, challenge with them and behavioral test, and this type of therapy modified negative emotions about themselves and society and reduced need to others' confirmation, high self-expectation, self-blamefulness because of divorce, emotional problems, worries along with anxiety and helplessness regarding changes, by discovering and correcting these people's negative and irrational thoughts through organizing opinions process and inefficient beliefs. As a result, it can be said that cognitive-behavioral group therapy intervention is effective on divorced women's emotional regulation increase.

Also, the results of statistical analyses indicated that compared to control group, experimental group was effective on meta-cognitive beliefs, after cognitive-behavioral group therapy intervention. Hence, it can be concluded that cognitive-behavioral group therapy influences divorced women's meta-cognitive beliefs. Also, the effectiveness of cognitive-behavioral group therapy on improvement of meta-cognitive beliefs scores is consistent with Wels, Fisher, Meyers, Wheatley (26) and also Sacco (27) studies.

To explain study results, it can be declared that divorced women perceive high stress due to confront with mental, social, and economical challenges, including psychic traumas facing divorced women. Transferring negative attitude of society to divorce happens in these women's beliefs and emotions. The effect of these negative opinions on divorced women is so high that its consequences in their behaviors and emotions are completely obvious.

Negative attitude to life and future, being negative, pessimism toward men, guilt-feeling, and blame themselves because of existing conditions, also worry and anxiety increase toward events of which there is no proof evidencing its approval, and generally series of negative opinions and fear of these beliefs lead to unreal worries. As it was mentioned, one of mental problems in divorced women is worry and anxiety toward their future and their children. This worry is usually problematic since it is scrutinized and evaluated constantly and

people think about it, and considering that it is required to think about it in order to treat appropriately and preparation for these worries, they provoke and extend these opinions. Based on discussions in this study, it was determined that these types of beliefs can begin faulty circle of meta-cognitive beliefs including uncontrollability, positive beliefs about worry, and predictive of negative feelings experience, such as anxiety and depression, but in this study, it was defined that cognitive-behavioral group therapy is effective on decrease of divorced women's meta-cognitive beliefs.

In cognitive-behavioral group therapy, many cognitive and behavioral techniques were applied to challenge meta-cognitive beliefs. However, basic techniques regarding meta-cognitive beliefs, including attention, disjunctive awareness, attention training techniques which were required to apply, were trained and finally this led to change processing levels and attention flexibility, and stop attentive-cognitive syndrome.

The results indicated that cognitive-behavioral group therapy was successful for meta-cognitive beliefs decrease. Based on cognitive-behavioral approach, meta-cognitive beliefs and thinking model were targeted in treatment, because meta-cognitive beliefs influence how an individual responds to negative opinions, beliefs, symptoms, and emotions. As a result, cognitive-behavioral group therapy can influence subjects' meta-cognitive beliefs, by emphasizing challenging meta-cognitive beliefs and decreasing useless cognitive processes and facilitating cognitive styles of processing.

Specially focusing on meta-cognitive beliefs, cognitive-behavioral group therapy can influence components of divorced women's attentive-cognitive syndrome. Usually divorced women consider worry as a means for predicting future issues and problems and generating confrontational methods that usually leads to inverse outcome because their effects interfere with effective self-regulation and it causes individual cognitive system to focus on perceived inner and outer threat sources and reinforces their negative beliefs and assessment. Also, study findings similar to other studies showed that subjects before treatment had worries in various domains which were significantly decreased in different domains at the end of treatment, compared to control group. In other words, it can be stated that cognitive-behavioral group therapy reduced continuous worry as a confrontational strategy by changing psychological condition. So it can be said that that cognitive-behavioral group therapy

intervention is also effective on divorced women's meta-cognitive beliefs.

In relation to effectiveness of cognitive-behavioral group therapy on divorced women's rumination, based on Table 6, because  $F(1,27)=43.619$  in significance level of (0,000) is lower than 0.005, it means that test hypothesis is admitted and it is concluded that cognitive-behavioral group therapy is effective on divorced women's rumination. Considering the resultant means (Table 4), the mean of divorced women's rumination after cognitive-behavioral group therapy decreased significantly. The results of the existing study and Ghodsi study (28) indicate that cognitive-behavioral discussions influenced rumination directly. To explain the above assumption, we can declare that in cognitive-behavioral group therapy, the clients are helped and guided to inhibit ruminative opinions regarding problems or negative mood which cause to distract, by training various skills including identifying these women's inefficient opinions and distorted beliefs and confronting and intellectual challenge through group therapy sessions for the present activities, instead of dividing attention among several activities or between the present activity and thinking about other issues.

### Conclusion

Based on the results, we can conclude that cognitive-behavioral group therapy influences emotional regulation, meta-cognitive beliefs, and rumination. Hence, this method is effective and useful in alleviating symptoms affecting women after divorce and to sustain and improve their mental health.

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## References

1. Ball JD, Henning H. Rational suggestions for pre-marital counseling. *J Marit Fam Ther* 2007; 7: 69-73.
2. Khojastemehr R, Afshari F, Rajabi Gh. [Evaluate the effectiveness of cognitive-behavioral therapy on its value, social value, resiliency and consistency divorced women]. *Social studies and psychology of women* 2012; 10(1): 37-60. (Persian)
3. Torrington K. [Stress management]. Balali R, Baezat F. (translator). Tehran: Mission; 2010. (Persian)
4. Ebrahimi A, Zinedine S, Lamentations MR. [Family relations with vulnerability associated psychopathology, cognitive]. *Journal of Faculty of Medicine* 2011; 29: 31-46. (Persian)
5. Saghaian Gh, Zamir A, Hosseini S. [The relationship between personality traits and emotional intelligence and flexibility of action drilling employees of Ahvaz]. The third National Conference on Health Psychology and Work and Education. Marvdasht: 17-18 May, Islamic Azad University of Shiraz, 2013. (Persian)
6. Kitson K, Morgan H. The relationship of happiness and social and individual adjustment with academic function of divorced. *J Pers Soc Psychol* 2012; 32: 323-34.
7. Munoz S, Eguilta DC. Gender, age and cultural differences in the individual adjustment questionnaire. *J Clin Psychol* 2007; 54(1): 67-75.
8. Garnefski N, Kraaij V. Cognitive emotion regulation questionnaire- development of a short 18-item .version (CERQ-short). *Pers Individ Diff* 2006; 41(6): 1045-53.
9. Jafari Nodoushan A, Zare H, Husseini A. [Review and compare mental health and adjustment and cognitive emotion regulation divorced women, married women in Yazd city]. *Journal of women and society* 2015; 2: 1-13. (Persian)
10. Shaghghi F, Shahfagr Z. [Comparative study of cognitive and thinking styles divorced women with normal women]. *Journal of behavioral sciences* 2010; 8: 108-27. (Persian)
11. Thompson RA. Emotion regulation: A theme in search of definition. In: Fox NA. The development of emotion regulation biological and behavioral considerations. Chicago: University of Chicago; 2007: 20-52.
12. Zamanzadeh M. [Metacognitive beliefs about the relationship between spiritual intelligence and psychological well-being of nurses in Ahvaz. MS. Dissertation. University of Khuzestan research, 2013. (Persian)
13. Asadi S, Abedini M, Poursharifi H, Nikokar M. [The relationship between intolerance of uncertainty and worry rumination student population]. *Journal of clinical psychology* 2012; 4: 4. (Persian)
14. Nolen-Hoeksema S, Wisco BE, Lyubomirsky S. Rethinking rumination. *Perspectives on Psychological Science* 2008; 3: 400-24.
15. Bahadori M. [The effectiveness of cognitive-behavioral group therapy on anxiety and perceived stress MS patients]. MS. Dissertation. University of Khuzestan research, 2014. (Persian)
16. Free M. [Cognitive therapy in groups: guidelines and resources for practice]. Mohammadi M, Farnam R. (translators). Tehran: Roshd; 2005. (Persian)
17. Besharat MA. [A preliminary study on the psychometric properties of cognitive emotion regulation questionnaire]. Research Report. University of Tehran, 2009. (Persian)
18. Frey M. [Cognitive group therapy]. Sahebi A, Hamidpour H. (translators). Mashhad: SID; 1999. (Persian)
19. Wells A. [Meta-cognitive therapy for anxiety and depression]. Akbari M, Muhammad A, Nejat Z. (translators). Tehran: Venerable; 2009.
20. Shirinzade Dastgiri S, Goudarzi MA, Genghiz Naziri Gh. [Investigate the factor structure, reliability and validity of MCQ-30]. *Journal of psychology* 2008; 45: 445-61. (Persian)
21. Mansori M. Comparison concern, obsession and rumination in patients with generalized anxiety disorder, obsessive-compulsive disorder, major depressive disorder and normal individuals. *Journal of psychological studies* 2011; 7(4): 55-74.
22. Salamat N. [The relationship between alexithymia with the emotional adjustment and quality of life of divorced women]. MS. Dissertation. Islamic Azad University of Shiraz, 2012. (Persian)
23. Taheri Kh, Mohebzadegan F, Zamapoor L. [Compare the efficacy beliefs and emotion regulation Rodhen divorced women with normal women]. *New findings in the psychology* 2011; 7: 48-37. (Persian)
24. Levinsohn JV. The effect of cognitive behavioral group therapy on the rogulation and self\_ efficiency of the divorcee. *J Educ Gift* 2014; 21: 228-309.
25. Den S. The effect of cognitive behavioral group therapy on the resilience and social adjustment of divorced woman. *J Pers Assess* 2013; 63(2): 262-74.
26. Wells A, Welford M, Fraser J, King P, Mendel E, Wisely J, et al. Chronic PTSD treated with metacognitive therapy: An open trial. *Cogn Behav Pract* 2008; 15: 85-92.
27. Sacco W. Attributional, pereceptual and affective responses to depressed and nondepressed: divorce women. *Index Psychol* 2008; 40(4): 267-79.
28. Ghosi M. [Compare cognitive distortions common with couples divorced spouses]. MA. Dissertation. University of Fars Research, 2013. (Persian)