

## Effect of Group Cognitive-Behavioral Training on Reducing Cognitive Dissonance and Increasing Self-esteem in Middle-aged Women

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### Abstract:

*The purpose of this study was to determine effect of group cognitive-behavioral training on reducing cognitive dissonance and increasing Self-esteem of middle-aged women. The present study was a quasi experimental with pre-test and post test analysis and control group. Research population (N=55) of current study is middle-aged women which were members of women Association of city Health Office in Area 2 Tehran. 30 middle-aged women with low self-esteem referred to health home in 2 Tehran municipality were selected and were randomly assigned to one experimental (n=15) and one control group (n=15). Subjects were chosen by objective sampling method. Experimental group received group cognitive-behavioral training for 1 months (8 sessions of 2 hours), while control group received no training at all. Data were collected by DARQ Harmon – Jones Questionnaire and Cooper Smith self-esteem questionnaire. Results showed a significant difference between reducing cognitive dissonance of those who were taught cognitive-behavioral training and those who were not. Also study demonstrated that group cognitive-behavioral training had positive effects on self-esteem improvement in experimental groups who received interventions in comparison to control group ( $P<0.001$ ). Group*

*cognitive behavioral training can reduce level of cognitive imbalance and also can lead to increase self-esteem in middle-aged women.*

**Key words:** Cognitive behavioral training, Self- esteem, middle-aged women

## **Introduction**

Transition from middle age is transition from youth to old age and developmental stage, which is largest segment of adult life (Keys, 2009).

Middle years of life is the most important period of life which maximum yield of psycho- social and biological changes, key changes, such as changes in health status, loss of strength, change in appearance, loss of family members or friends, career changes, changing attitudes and different menopausal transitions such as leaving with children and usually can be seen combination of complex emotions and different patterns of response to changes in these years (Blake, 2006).

Boher (1967) considers midlife as periodic review and evaluation of past and future review also Wailent (1977) knows midlife as evaluation of behavior and review of them (quoted by Mansour, 1999). Berk (2001) indicates midlife crisis inner turmoil, doubts about themselves and rebuild whole character of transition to midlife. This crisis could be in our thoughts; attitudes and beliefs affect people, especially women and may cause cognitive dissonance. Cognitive dissonance aware as stress caused by mismatch of ideas, attitudes and perceptions of behavior that can cause a person to become spontaneously of two inconsistent cognitions (Myers, 2010; quoted Murray, 2012).

Festinger's theory of cognitive dissonance, the most famous and perhaps the most influential theory of cognitive consistency model in social psychology. Fundamental

assumption of theory of cognitive dissonance is inconsistency, cause stress and discomfort and person attempts to reduce this dissonance by reducing or reducing significance of incompatible elements and incompatible elements, to reduce dissonance (Safarinia,2010).

According to Festinger, with increased physiological arousal, internal conflict is played out. Whatever understandings involved significant deviation from each other, more dissonance and unpleasantness equally larger and need to recover as much greater internal coordination. Disharmony created depends on two factors: a) proportion of dissonant cognitions, cognitions, coordinate, b) importance of each cognitive (Karimi, 2007).

Recognizing also includes thoughts, beliefs, attitudes and values that represent individual's own consciousness, behavior and surroundings is (Lester and Yang, 2009). Recognition of person may be coordinated, uncoordinated, or is irrelevant. Studies have shown that cognitive dissonance due to increased arousal may lead to reduction in performance (Franken, 2010).

Recent research indicates position of opinion that there is inconsistency in working memory plays an important role in reducing dissonance (Stone & Cooper, 2003). In other words, knowledge and focus their important role in reducing mismatches. In this regard, Mansouri, Bagherian and Heideri (2010) after induction of dissonance put various attributes available to 150 students and rate of change of attitude that makes accessible ideas of high and low self-esteem participants different in a way to change attitudes.

Murray, Wood and Lilienfeld (2012) showed that some aspects of cognitive dissonance, which depends on individual differences and personality traits. Population compared with general population, conflict, lack of emotional reactions in response to fear, guilt, anxiety and mild dissonance is induced in them.

In terms of new view, people who have hurt themselves or others, negative emotions such as guilt, shame, regret and sadness experience, resulting in a change in response to negative emotions and attitudes, cognitive dissonance be (Cooper, 2007). In another study it was found that cognitive dissonance plays an important role in contradictions implicit and explicit attitudes, and processing information (Riddle, Mac Kvnln and Maki, 2008).

Another important structure in mid-life, self-esteem is maintained. Esteem of main factors determining formation of emotional and behavioral patterns and attitudes to outside world is talking. Esteem affects all aspects of life, and also has an effect on their attitudes to their abilities. People, who feel good about their conflicts behind easily, can resist negative pressure and well they can enjoy life. Self-esteem is a psychological phenomenon that decisive impact on emotional and cognitive aspects of human and a strong predictor of life satisfaction and fulfillment. Evidence suggests that low self-esteem dramatically with many related mental health problems. Most people with mental health problems are suffering from low self-esteem (Silverstone and Salsali, 2003).

Need for self-esteem or self respect, one that satisfies psychological needs in human and realistic, it just leads to positive outcomes and effectiveness of such self-confidence, esteem, and feelings of power, strength and sense of competence; On other hand, lack of attention to this need leads to feelings of inferiority, worthlessness, powerlessness and helplessness of individual performance will be reduced. Findings suggest that high self-esteem and positive character traits in people are related. According to research, people who have high self-esteem, psychological characteristics such as maturity, stability, realism, relax and have a high ability to tolerate failure, whereas those with low self-esteem do not have such characteristics. In addition, self-esteem has a significant impact on their cognitive abilities (Abedi, 2005).

Also, moderator effect of self-esteem in dissonance processes were identified, effects of self-esteem in dissonance reduction, which occurs when people are self-centered. Therefore provide guidelines dealing with dissonance and conflicts caused by need to comply with self-esteem and be accompanied by highlighting its role (Mansouri Sepehr, Khodapanahi and Haideri, 2012).

According to importance of this period of life that causes changes in all aspects of physical, psychological, social and family. Performing interventions to reduce dissonance and maintain self-esteem in middle-aged women seem necessary. One of psychological interventions for treatment is cognitive - behavior. An intervention program, is successful that based on theory and research has to be supported. In relation to middle-aged women, this type of intervention can be proposed based on cognitive-behavioral approach. Backed by strong research, structured approach, ability to teach techniques of cognitive - behavioral and learning at same time, and multi-component cognitive - emotional, behavioral and social advantages that led to this approach, choice of prevention and promotion of researchers mental health is (Hollon ,2006).

Thus techniques of cognitive - behavioral therapy, which means that learners can have their knowledge, attitudes and skills equipped and better adapted to changing world have a lot of research about efficacy of cognitive-behavioral techniques on anxiety, depression and other mental disorders have been but its effectiveness research has been done on cognitive dissonance. Studies have shown that psychotherapy has an important role in dissonance, so that people can get through dissonance awareness, consciousness and cognitive restructuring to change (Aksom and Cooper, 1985; Murray quoted et, 2,012). According to self-esteem and insecurity have changed almost all mental disorders and is associated with pathological signs and besides cognitive factors such as thoughts and irrational beliefs are associated, It seems to be

caused by cognitive and behavioral changes to improve it. Therefore, present study effect of training techniques, cognitive - behavioral therapy on reduction of dissonance and self-esteem in middle-aged women has been conducted.

## **Method**

**Methods:** Method used in this study was semi-experimental pre-test - post-test control group. Sampling was availability. Study population included all women aged 45 to 55 years old is middle aged woman member of Municipal Health Office District 2 of Tehran. Information in these areas, middle-aged women was invited to participate in educational programs. Of women aged between 55 and 30, lowest self-esteem scores were selected and randomly divided into two experimental groups (n = 15) and controls (n = 15) were replaced. Mean age was 50 years in both experimental and control groups in terms of socioeconomic status on average, and a private residence, was married with a diploma in education.

**Measure:** inventory of dissonance (DARQ Inventory DARQ test by Harmon - Jones and Newman (2008) has made to arousal and reduction of dissonance. Questionnaire contained 28 items, which consists of arousal and reduction of dissonance in three positions is provocative. 5-point Likert scale graded on this scale is done. testing of paper and pencil self-reporting that a team runs and questionnaire has two subscales that measure excitation subscale consists of 13 items and 15 items is dissonance reduction, but validity of questionnaire was conducted in Iran on (Safarinia and Zandi, 2010), three items were removed from ocean and reduce number of questions to 25 questions found, in form of 25 questions was used in this study., in this version, arousal subscale includes 12 items and subscale includes 13 items that dissonance reduction. Safarinia and Zandi's study (2010) validity and reliability of scale was

confirmed. Arousal and reduction of dissonance in subscale reliability coefficient Cranach's alpha, respectively are reported, 0.74 and 0.84.

**Self Esteem Questionnaire:** This questionnaire has 58 items, 8 items of lie detector. Response options of yes and no. Scoring scale is way to 0-1. Therefore, excluding items included lying type, minimum score of zero and maximum of fifty.

Those who take this test more than average score so they have high self-esteem. Validity in many cases have been reviewed and approved. Coppersmith et al (1990) reported 0.88 reliability of this questionnaire by retest using. Reliability of questionnaire was obtained by Shahn Yeilaghi, Shokrkon, Michaeli and Haghghi(2007) 0.73 and 0.91.

**Methods:** After sampling both experimental and control groups at pre-test questionnaire to reduce dissonance and self-esteem were assessed. Participants in experimental group during 8 sessions a week, each session lasting 2 hours of training techniques and group cognitive - behavioral groups. Health education sessions at office of District 2 District 2 of Tehran municipality were held for trial. During this period, control group did not receive any special psychological treatment. Then both groups were assessed post-test questionnaires. It should be noted that after implementation of class of research techniques, cognitive - behavioral therapy will be provided for members of control group. Content of intervention sessions, highlighting techniques taken from Leahy (2003), translated by Hamidpour and Andoz (2009) which is provided below.

**Session One:** Introduction to group, define thoughts, feelings, emotions, naming, identifying relationship between thoughts and feelings.

**Session Two:** Stress-induced imbalances in our thoughts, attitudes and perception, motivation and behavior and creates an inner conflict, cognitive arousal and anxiety, cognition, physical symptoms, mental and behavioral problems during arousal associated with anxiety, arousal caused by wrong choice.

**Session Three:** Adaptive coping with stress and arousal; characteristics Stressful situations to identify signs and symptoms of stress, personal characteristics, coping strategies, relaxation and proper breathing, raising public can cope.

**Session Four:** Concept of solving a variety of problem-focused and emotion-focused coping, adaptive and maladaptive emotion-focused coping, problem-focused coping default constructor step problem-focused coping.

**Session Five to Seven:** deal with negative emotions and cognitive restructuring, concept of negative mood, cognitive error detection techniques to challenge negative thoughts, beliefs and their relationship to emotional changes.

**Session Eight:** generalized knowledge; review meetings, presentations and training sessions given six scenarios, challenging use of adaptive coping evaluate negative thoughts and challenge them to evaluate their own accomplishments to change attitudes and controlling its excitation.

## **Results**

Descriptive statistics of study variables for each type of test and control group are presented in Table 1.

**Table 1. Descriptive statistics of variables for each type of test and group**

Variable	Group	pre-test		post-test	
		mean	Standard deviation	Mean	Standard deviation
Cognitive Dissonance	Experiment	48.92	7.26	43.01	4.88
	Control	49.01	6.62	49.48	5.69
Arousal	Experiment	38.95	3.69	32.95	3.69
	Control	39.37	4.01	38.52	3.85
Self-esteem	Experiment	22.27	7.95	31.87	5.69
	Control	19.50	3,81	19.75	3.61

For review effect of training techniques of cognitive - behavioral group on reduction of dissonance and self-esteem in experimental group were analyzed using ANCOVA can be seen in Table 2. Default normal distribution of scores dissonance and self esteem was investigated by Shapiro -Wilk test. Significance level in group 38.7 in control group and 41.7 were calculated as greater than significance level of 0.05 is default normal distribution of variables in both groups is confirmed. Levine's test of equality of variances of two groups was evaluated using a significance level of 0.22 this assumption was confirmed.

**Table 2. Results of covariance analysis Effect of training techniques of cognitive - behavioral group therapy in reducing cognitive dissonance and arousal in women**

Variables	Sources of variation	sum of Square	df	mean of Square	F	Sig.	Eta
Inconsistency	Pretest	75.82	1	75.82	2.821	0.09	0.38
Cognitive	Intervention	159.14	1	159.14	4.156	0.04	0.52
Excitation	Pretest	155.50	1	155.50	3.720	0.06	0.68
Cognitive	Intervention	305.14	1	305.14	6.146	0.01	0.72

According to results, which are shown in Table 2, training techniques of cognitive - behavioral therapy is effective in reducing dissonance, middle-aged women.

Efficacy of this intervention 0.52, it means 52% of total variance of scores is related effect of intervention.

Results in Table indicate that techniques of cognitive - behavioral therapy also has been effective in reducing arousal in aged women.

Effectiveness of this intervention is 0,72 it means 72% of total variance of scores is related effect of intervention To evaluate effectiveness of intervention on self-esteem Of covariance was used as follows.

**Table 3. Results of covariance analysis of training on techniques of cognitive - behavioral group therapy on women's self-esteem**

Variables	Sources of variation	Square	df	Mean square	F	Sig.	Eta
Self-esteem	Pretest	210.50	1	210.50	8.440	0.09	<b>0.85</b>
	Intervention	415.68	1	415.68	16.680	0.001	<b>0.96</b>

As presented in above table, results indicate that techniques of cognitive - behavioral therapy is effective in increasing women's self-esteem. Effect of this intervention on the self-esteem of women and 0.96, it means 96% of total variance of scores is related effect of intervention.

## **Discussion and Conclusion**

This study examined effectiveness of cognitive-behavioral group sessions on dissonance reduction (and arousal) and cognitive self-promotion was middle-aged women. Results showed that participants in CBT group sessions, a significant difference between dissonance and self-esteem in middle-aged women compared to pre-test is created; cognitive-behavioral techniques significantly reduce cognitive dissonance and subsequent reduction of arousal and increases self-esteem in experimental group in post test. Results of this research study is consistent with Lim et al (2010),this study showed that CBT had a positive impact on job attitudes and decision-making and self-

esteem has had nursing. This results also is consistent with results of Leichsenring et al (2010), Linden et al (2005), Warner et al(2009), Heby et al (2006), Ghahari et al (2012), Beikmohammadi, Tarkhan and Akbari (2012), Hasanvand and Aghili(2013), Khaje et al (2013) Banaei and Asgari (2012). In their study, researchers concluded that cognitive-behavioral techniques to significantly reduce symptoms of anxiety, and depression in people.

Since dissonance and irritation caused by interaction of components of physiological, cognitive and behavior, comprehensive training and cognitive behavioral therapy can be highly effective.

Reasons for effectiveness of cognitive-behavioral techniques can be used to reduce arousal component of this training. Techniques that target physiologic components include training or deep diaphragmatic breathing, progressive relaxation training and education for mental relaxation. These techniques are elements of physical and physiological arousal on target.

Cognitive techniques, participants will learn to identify thoughts associated with their cognitive dissonance and they are objectively tested. In this method, subjects are confronted with new information that they previously ignored. These techniques will help participants that incorrect interpretation of environmental events and new perspectives to create adjustments and corrections. Thereby altering subjects' perception, processing styles also vary.

Therefore, changes in arousal and reduction of dissonance caused a significant change in experimental group was dysfunctional thought in sense that group interventions were effective cognitive restructuring dysfunctional thoughts. We can say that changes in dysfunctional beliefs as a mediator is to reduce dissonance arousal and participants. Participants of training are realizing that life may in some situations be skeptical, therefore, it is necessary to have more flexibility in

terms of cognitive and these techniques were applied as coping responses against stressful events.

According to root of mental health disorders including depression and anxiety, especially a prominent component, cognitive therapists believe lies distortions and misconceptions. Thus, assumptions underlying method of cognitive restructuring in correcting distortions and irrational beliefs that threatening of dissonance has been effective. Also trained to deal with stress and negative emotional arousal, relaxation training involved in reducing individuals.

According to these findings, participants trained in cognitive behavioral therapy significantly improved self-esteem than those who were not under tutorials have shown. This research study is consistent with Neacsu (2013), Chen et al (2006), Waite and colleagues (2012) and Forghani et al (2012). This study showed that CBT is a problem-oriented approach. Cognitive distortions, false attribution and take into consideration that low self-esteem and increased self-efficacy is a person.

In explaining how behavioral effects of training on self-esteem should be noted that main sources affecting appearance and increase self-esteem, cognitive factors, and response are compared with others. In other words, in this view, cognitive factors are the most important factor influencing self-esteem. Moreover, underlying assumption of this approach is that knowledge leads to changes in behavior and emotional well being. So regarding of emotional and affective self-evaluation, this approach is modification of dysfunctional cognitive components of self-esteem is reduced; it can cause emotional and behavioral changes and increased self-esteem. As in theoretical basis of this research is cited to be one of variables increase self-esteem, cognition, emotion, behavior and biological factors create change.

Since mid-life crisis, emotional state of doubt, hesitation and anxiety, and may be compared to life, career or his past life

to feel boredom, thus suffering from dissonance to create change in these cases cannot develop. Therefore, cognitive-behavioral techniques to deal with crisis and improve mental health of middle-aged women may be useful. Limited research on cognitive dissonance of limitations of this study is that it has trouble citing sources. Its recommended research performed on impact of behavioral interventions to reduce dissonance, middle-aged men and women taking steps to be followed up.

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