

## **Investigating the Effectiveness of Acceptance and Commitment Therapy (ACT) on Marital Conflicts of Coronary Artery Bypass Patients**

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### **Abstract**

Adequate reduction of marital conflicts in cardiovascular disease patients helps them cope better with their conditions, as well as improve their quality of life. The aim of this empirical study was to investigate the effectiveness of Acceptance and Commitment Therapy (ACT) on marital conflicts in cardiac patients with a history of coronary artery bypass. The method of this research was semi-experimental with pre- and post-test with a control group. Participants were 30 patients, who were selected through convenience sampling. Participants administered the Marital Conflict Questionnaire (Sanai, Alaghband, Falahati, & Hooman, 2009) as pre- and post-test. Finally, 30 individuals who had the highest scores in the marital conflict questionnaire were selected and randomly assigned to two groups of experimental and control (n=15). To analyze the data, the ANCOVA test was used. The findings of this study indicated that there was a statistically significant effect on the experimental group on the following sub-scales:

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decreased cooperation, dividing financial affairs and marital conflict. It could be concluded that ACT-based training intervention was effective of the above-mentioned subscales and could be used to reduce marital conflicts in patients with patients with a history of coronary artery bypass. This study indicates the importance of education, as well as psychological interventions as an essential part of the recovery process.

**Keywords:** Acceptance and Commitment Therapy (ACT), Emotional focus, Marital conflicts, Coronary artery bypass

### **Introduction**

Cardiovascular diseases (CVDs) are classified among psychosomatic disorders (Eriksson, 1988; Kaplan, 2016; Thomas, Hariharan, & Rana, 2016). These diseases are influenced by biological factors, as well as the psycho-social environment of the patients (Sol, van der Graaf, Goessens, & Visseren, 2009). Although the mortality rate among those patients with cardiovascular diseases has declined, it is still one of the leading causes of death (Onwuanyi, Clarke, & Vanderbush, 2003). This disorder is mentioned as one of the most frequent diseases among Iranian, as the prevalence is reported to be between 25 to 45 percent among causes of death (Sepanlou et al., 2015). Furthermore, this disease remains the cause of disability and decline in the quality of life for many people and imposes medical and health care cost to many nations (Griges & Loskalzo, 2005; pourroostaei ardakani, 2017). Side effects of the coronary artery bypass are among the most fatal diseases, which cause about 50 percent of mortality in the patients with cardiovascular diseases (Ridker, 2001). It is predicted that in 2030 the most prevalent disease among human being would be cardiovascular disease. Moreover, there are many consequences for this disease, including social, relational and health and medical issues (Rahiminezhad, Hushmand Chatroidi, & Ejei, 2017; Schroder & Schwarzer, 2005).

Interpersonal relations are prone to conflicts and disagreements, and family interaction is not an exception. It is inevitable for couples to experience certain degrees of marital discord during their marriage (Cummings, Faircloth, Mitchell, Cummings, & Schermerhorn, 2008). It is expected that after the physical problems caused by heart-related issues for the life of the patient, his marital life undergoes some changes (Robles, Slatcher, Trombello, & McGinn, 2014). In the previous

decade, the importance of family therapy in different groups and populations has been studied by numerous researchers (Gladding, 2014).

Marital conflict or marital discord is defined as a status in which at least one of the partners is unsatisfied with the relationship (Halford, 2001). Some of the most prominent reasons for marital discord include financial issues, sexual relationship, infidelity, communication problems, and parenting (Jackson, Miller, Oka, & Henry, 2014). Considering the importance of marital quality for the life of patients with the cardiovascular disorder and coronary artery bypass patients, it seems necessary to intervene through scientific methods in order to prevent aggravation of the situation. As the result, this study investigates the effectiveness of Acceptance and Commitment Therapy (ACT) (Hayes, Luoma, Bond, Masuda, & Lillis, 2006) on these patients. This intervention model is based on relationships of mental framework theory. The presumption behind this theory is that individuals perceive some events unpleasantly, and therefore, they are constantly trying to change these events or let go. These attempts merely help them to achieve their desired outcome, but also worsen their emotions, feelings, and thoughts (Izadi, Asgari, Neshatdust, & Abedi, 2012). During the previous decade, the effectiveness of ACT has been empirically assessed on numerous psychological disorders, including depression (Karlin et al., 2013), hospitalization of psychotic patients (Bach & Hayes, 2002), obsessive-compulsive disorder and trichotillomania (Woods, Wetterneck, & Flessner, 2006).

Considering the mortality rate among coronary artery bypass Patients, this study investigates the effectiveness of Acceptance and Commitment Therapy (ACT) on marital conflict of artery bypass patients.

### **Method**

This study represents a quasi-experimental study which explores the effectiveness of Acceptance and Commitment Therapy (ACT) on marital conflict of artery bypass patients. Using convenience sampling, the participants of this study were selected from the patients with artery bypass history and were randomly assigned to either control or experimental groups. The participants of this study were 35-55 years old and were not diagnosed with any comorbid disorders and were randomly assigned between two groups ( $N=15$ ).

Measure: Marital Conflict Questionnaire (MCQ). The Marital Conflict Questionnaire (MCQ) (Sanai et al., 2009) is a 54-item screening questionnaire, which measures the husband and wife level of marital conflicts. This questionnaire measures eight concepts, including decreased cooperation, decreased sexual relationship, increased emotional reactions; attracting children's support; increased individual relationship with relatives; decreased relation with partner's family; dividing financial affairs; and marital conflict. This questionnaire has been used in both research and counseling practice for Iranian couples. The Cronbach's Alpha for the whole scale was reported as 0.89, while for other subscales varied from 0.64 to 0.91. In addition, the reliability of the test assessed using test-retest and was reported to be 0.89, which makes it a valid questionnaire to be used in the Iranian community.

Procedure: After obtaining IRB approval from the University of Isfahan Review Board (IRB), questionnaires were copied and flyers were distributed in places where we thought we could have access to the potential participants. After the initial interview with volunteers, they were given an informed consent form, which described the complete procedure of the intervention, as well as information about the facilitator of the intervention. The facilitator of this test was the first author of this research, who is a licensed therapist, ACT trainer as well as a university lecturer.

Subsequently, participants (n=30) were randomly assigned to either experimental or control groups. Both group members administered the questionnaire provided prior to the intervention as a pre-test. Members of the experimental group were given psychotherapeutic group intervention based on ACT training, while the control group received no intervention. The participants in the experimental group were given twelve 90-minute sessions, which were held three times a week. After the final session, members in both groups administered the questionnaires again as *post*-test. It is worth mentioning that all questionnaires were kept in a safe closet provided by the University of Isfahan and only the first author had access to the data. The intervention provided for the participants was based on (Hayes et al., 2006) which is presented in Table 1.

## **Findings**

In this study, the ANCOVA test was used to compare marital conflict in two groups. At the pre-test, no significant difference was noticed in the mean age of the participants ( $p = .072$ ). Mean and standard deviation for pre- and post-tests for the two groups of control and experimental are given in table 2.

As it is demonstrated in table 2, the average marital conflict score in ACT training groups showed a significant reduction compared to the control group. Using the Bonferroni test, the results show that there is a significant reduction of the mean of marital conflict score at pre- and post-test. To investigate the statistical differences between means, ANCOVA analysis was used, the result of which is given in Table 3.

As it is demonstrated in Table 3, the ANCOVA analysis for the mean scores obtained for marital quality shows that the difference between the following subscales is statistically significant, including Decreased cooperation ( $F_{1,15} = 3.908$ ,  $P = .006$ ), dividing financial affairs ( $F_{1,15} = 1.514$ ,  $p = .211$ ) and Marital conflict ( $F_{1,15} = 3.309$ ,  $p = .013$ ). The result of ANCOVA does not reveal any statistically significant differences between the rest of the subscales, including decreased sexual relationship ( $F_{1,15} = 2.187$ ,  $p = .072$ ), increased emotional reactions ( $F_{1,15} = 1.104$ ,  $p = .399$ ), attracting children's support ( $F_{1,15} = 1.686$ ,  $p = .161$ ), increased individual relationship with relatives ( $F_{1,15} = 1.375$ ,  $p = .264$ ) and decreased relation with partner's family ( $F_{1,15} = 4.130$ ,  $p = .004$ ).

## **Discussion & conclusion**

The purpose of this study was to investigate the effectiveness of Acceptance and Commitment Therapy (ACT) on marital conflict of artery bypass patients. The result of this research indicates that ACT was effective on the following subscales of marital conflict questionnaires, including decreased cooperation, dividing financial affairs and marital conflicts. Though the difference between experimental and control group was not statistically significant on the following subscales: decreased sexual relationship, increased emotional reaction, attracting children's attention, individual relationship with relatives; decreased relation with partner's family. The findings of this study are consistent with the findings reported by

(Baruch, 2012; Christensen et al., 2004; Dousti, Mohagheghi, & Jafari, 2015; Ghasemi, Dehghan, Farnia, Tatari, & Alikhani, 2016; Kavousian, Harifi, & Karimi, 2017; Peterson, Eifert, Feingold, & Davidson, 2009; Samadi & Mohsen, 2016).

In their study, Christensen et al. (2004) stated that couples participating in Acceptance and Commitment Therapy reported higher marital satisfaction and general health compared to the control group. Moreover, consistent with the finding of this study, Peterson et al. (2009) mentioned that participants in their study experienced a higher level of marital satisfaction after participating in the ACT based educational classes.

To explain the finding of this study, it is better to investigate the components of Acceptance and Commitment Therapy thoroughly. It is believed that verifying thoughts as realities and constant attempt to change the situation are among the reasons that couples are experiencing marital discord. The purpose of ACT-based intervention is to help each partner understand his or her cognitive processes and emotional reaction in both personal and relational domains. They are demanded to understand the values that keep them in their relations with the other person. Couples usually avoid situations in which they might encounter rejection or conflicts. ACT-based intervention shows the individuals to experience their thoughts, emotions and interaction patterns in depth (Hayes et al., 2006). Act-based intervention encourages the participants to look at the values of their lives and get involved in their thoughts, emotions, and beliefs, instead of just avoiding them. Hayes and Lillis (2013) believed that Acceptance and Commitment Therapy helps the individuals to accept their thoughts and emotions, rather than get involved in a constant attempt to change the unpleasant events. The ACT is a process-oriented therapy and emphasizes improving flexibility and adjustment in patients, without taking into account what their psychological experiences might be.

To explain the result of this study, it should be noted that Acceptance and Commitment Therapy focuses on the internal experiences of people and tries to perceive undesired thoughts and anxiety as an experience to help the clients understand the malfunctioned nature of their current thoughts. These therapeutic interventions help the client to understand their values and avoid responding to undesired events (Khanjani, 2017; Naderi, Hossein Sabet, & Sohrabi, 2017). Previous studies have shown that ACT has been an

effective intervention for reducing anxiety in coronary artery bypass. In another word, ACT focuses on accepting one's feeling, rather than neglecting or avoiding them.

Declaration of interest: The authors declare no conflicts of interest. The authors alone are responsible for the content and writing of the article.

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Table 1. Summary of the ACT training sessions

Sessions	Strategies	interventions
Session 1 Intake assessment and treatment orientation	- Introduction to ACT	Introduce centering exercises
Session 2 Individual assessments	-Individual interviews -Assess for contraindications: domestic violence, ongoing extramarital affairs, untreated psychopathology	Couples planning session integrating individual and couple assessment
Session 3 Evaluating costs of ineffective relational efforts	-Examine the costs of couple avoidance -Development of creative hopelessness	-Chinese Finger Trap Metaphor -Tug of War With Partner Exercise
Session 4 Mindfulness and acceptance	- Introduce mindfulness and acceptance	Acceptance of Thoughts and Feelings Exercise
Session 5 Cognitive diffusion	- Deliteralize negative relationship thoughts for the couples	Bus Driver Exercise Thoughts on Cards Exercise
Session 6 Observing thoughts	Develop an observer perspective and compassion for one's own and one's partner's reactions	Thoughts on Leaves Exercise Acceptance of Relationship Reactions Exercise
Session 7 Choosing valued	Help clients clarify and identify life and relationship value directions	What Do I Want in My Life/Relationship to

directions		Stand For Exercise
Session 8 Identifying barriers to valued living through acceptance and the observer self	-Review values worksheets -Discuss barriers to valued living and help clients move with them rather than overcome them	Committed Action Worksheet Review of the Bus Driver Exercise
Session 9 Creating flexible patterns of relationship behavior	Introduce willingness	- Committed Action Worksheet
Session 10 Self as the context in the relationship	- Nurture choice and responsibility - Have couples experience self as context	Committed Action Worksheet Chessboard Metaphor
Session 11 Acceptance and committed action	Review emotional willingness in a committed action context	Committed Action Worksheet
Session 12 Working toward termination	- committed action - Prepare for future committed action and termination	-Take Home Committed Action Worksheets -Audio CD of mindfulness exercises for home practice

Table 2. Mean and standard deviation of marital conflict for the two groups in *pre*- and *post*-test

		<i>Pre</i> -test		<i>Post</i> -test	
		Mean	SD	mean	SD
Decreased cooperation	Ctrl.	13.47	3.39	11.53	1.8
	Exp.	12.5	4.7	8.2	3.4
Decreased sexual relationship	Ctrl.	11.6	4.03	13.4	3.7
	Exp.	11.8	5.4	9	3.2
Increased Emotional Reaction	Ctrl.	11.47	2.99	11.4	4.2
	Exp.	10.07	5.2	9.27	2.9
Attracting Children's Attention	Ctrl.	11.93	2.93	10.8	3.6
	Exp.	10.8	5.6	8.53	2.2
individual relationship with relatives	Ctrl.	12.33	4.64	10.8	3.4
	Exp.	11.73	4.9	9.33	3.2
decreased relation with partner's family	Ctrl.	11.47	3.75	12.6	3.2
	Exp.	9.6	4.6	11.07	2.7
dividing financial affairs	Ctrl.	11	2.27	11.6	3.03
	Exp.	10.33	5.1	13.07	2.3
Marital conflicts	Ctrl.	83.27	15.6	82.33	11
	Exp.	76.93	23.7	64.47	8.7

Table 3. ANCOVA results for marital conflict in *pre-* and *post-*test for the two groups

Variables	M.M	df	M.S	F	P
Decreased sexual relationship	223.946	8	27.99	2.18	.072
Decreased cooperation	174.35	8	21.79	3.90	.006
Increased Emotional Reaction	121.583	8	15.198	1.104	.399
Attracting Children's Attention	115.255	8	14.407	1.686	.161
individual relationship with relatives	145.297	8	18.162	1.375	.264
decreased relation with partner's family	164.759	8	20.595	4.130	.004
dividing financial affairs	81.571	8	10.196	1.514	.211
Marital conflict	2349.410	8	293.676	3.309	.013