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Comparison of Acceptance and Commitment-Based Therapy (ACT) and Cognitive-Behavioral Therapy in Improving Cognitive Distortion, Emotional Tolerance, and Social Welfare in Patients with Colorectal Cancer

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ABSTRACT

The aim of this study was to compare the effectiveness of treatment and commitment based on acceptance and commitment and cognitive-behavioral improvement in cognitive impairment, emotional tolerance and social well-being in patients with colorectal cancer. The experimental study and the study population were all patients with colorectal cancer in Ardabil province. The statistical population of the present study consisted of all cancer patients who referred to hospitals in Ardabil province in the second half of 2019. The sampling method of the present study was available as a sample. A sample of 48 patients with cancer was selected from patients referred to clinics and randomly assigned to three groups; (16 people were accepted for treatment based on acceptance and commitment, 16 people for cognitive-behavioral therapy, 16 people for the control group). Critical distortion questionnaires, emotional tolerance questionnaires, and social welfare questionnaires were used to measure the variables studied. And in order to analyze the hypotheses, (Manova multivariate analysis of variance) was used. The findings of this study showed that both treatment methods (treatment methods based on acceptance and commitment and cognitive-behavioral) are effective in improving cognitive distortion, emotional tolerance and social well-being of patients with colorectal cancer. However, the effectiveness of cognitive-behavioral psychotherapy is more than acceptance-based psychotherapy. Due to the improvement of cognitive impairment, emotional tolerance, and social well-being in the two experimental groups, it can be said that psychotherapy methods based on acceptance and commitment and cognitive-behavioral have been effective in patients. In other words, these two methods of psychotherapy, along with other therapies such as medication, can be used to improve the psychological state of patients with colorectal cancer.

Keywords: *Acceptance and Commitment Psychotherapy, Cognitive-Behavioral Psychotherapy, Cognitive Distortion, Emotional Tolerance, Social Welfare, Chlorectal Cancer Patients*

INTRODUCTION

Cancer is a disease in which the cells miss their ability to divide and grow normally and this in turn leads to capture, destruction and deterioration of the healthy tissues. A mass which is called tumor is formed form accumulation of the cancerous cells and destruction of the healthy tissue cells. If tumor develops and has the able to spread and surround potentially other tissues and organs it is called cancerous (Akbari, 1931). The existence of the cancer and treatments such as chemotherapy and radiotherapy leads to emotional and tolerance of psychological and behavioral stress in patients with cancer. Then it seems that patients with cancer are exposing at psychological pressures results from the disease and its treatment side effects that can make psychological and social emotions in them (Garyier, 2012). Studies regarding to cancer especially regarding pathology of this disease has a broad range. In these studies different biological, environmental and mental factors are investigated. Today it is believed that all three factors play role interactively in occurrence of this disease and nearly in 5% of the cancers environmental factors are effective (Kahrai & Falah, 1931). Cancer is not solely an event with a definite ending. But it is a permanent and vague situation which is specified by late and delayed effects results from the disease and its related psychological issues (McFarland, Andreotti, Harris, Mandeli, Tiersten & Holland, 2012).

Colorectal cancer (CRC) is a heterogeneous disease the second common cancer in the developed countries and the third common cancer among the men after lung and prostate cancer and the second common cancer after breast cancer in the women (Abdolsatar et al., 2012). CFR is a multifactor disease and both environmental (effective in most CRCs) and genetic factors (in 95% of the affected cases) are affective in its generation (Veison et al, 2013). Colorectal cancer may occur sporadic or may run in the family. Sporadic cancers are generated as the result of mutation in somatic cells and by means of expansion of a series of genetic changes in oncogenes and tumor suppressor genes (Miller & Crane, 2012). Hereditary cancers are generated from germ layer calls and form 11% of the CRC cases and include two common syndromes of HNPCC and FAP (Abdolsatar et al. 2012). Hereditary colorectal cancers are divided in two groups of with polyp and without polyp (Elis, 2012). Colorectal cancer (CRC) is of most common cancers among the humans and is considered as the most important factors of death around the world (Siegel, Miller & Jemal, 2015). The prevalence of this cancer is relatively high and it is increasing and amounted to 7 of 100000 persons of the population (Mahmudlou et al. 2012). Genes' interactions and environmental factor are involved in development of this cancer and timely diagnosis and determining the best methods of screening are of the results of the pathogenesis of this cancer (Lee & County, 2013).

Among cognitive distortions "overgeneralization " can be named which is correlated strongly with physical disability. Generally, cognitive bias causes our though and understanding to be unrealistic, hyperbolic and distorted. Thinking errors can be affected by negative views about oneself, the world and the future which is called "cognitive triad" (Puzzle & Nap, 2011). Beck also believed that these distortions are attributed to the errors or mistakes which are applied for inferential and exploratory functions in such a way that reminds the person his different ways of thought that can be even mistake. The person is encouraged by the therapist to remind or diagnose samples of thoughts (Dabestone, 2011). One of the variables which can be correlated with cancer is emotional tolerance. Emotional tolerance is defined as the ability to experience and tolerate negative psychological situations. Emotional tolerance can be resulted from physical and cognitive processes; however, its representation is in the form of emotional state which is usually specified with the tendency to function towards getting rid of the emotional experience. Persons with low emotional tolerance firstly know emotion unbearable and cannot manage their emotion and distress; secondly these persons do not accept the existence of the emotion and feel ashamed and exited about it, as they underestimate their ability to confront with the emotions. The third main feature of a persons' emotional adjustment with low emotional tolerance is the great effort are applied by these people to prevent negative emotions and immediate relieve of the experienced negative emotions. It is worth to mention that id these persons cannot relieve these emotions, their attention totally is focused on these distressful emotions and their performance decreases significantly (Simons & Gaher, 2015). Social health includes a dimension of the person's welfare that how he communicate with other persons in the society, how they behave or react to him and how he interacts with social institutions and collective procedures and ethics. It can be defined in terms of the amount of adjustability and coordination of the person with the society and in terms of social support and how he plays his normal roles in the society. Evidence indicated that the persons who are attracted better to their society or unified with it have longer life and if encounters with a disease, he can overcome better with stress and diseases which threat him as the result of social support he is taken. Having life and social skills and the quality of playing social roles is important here (Wilkinson and Marmot, 2008). On the other word, social well being includes the status of expected and normal social behaviors of the person which has known positive effects on his psychological and physical well being and causes increase in social adaptation and the person interaction with his surrounding and finally his effective role play in the excellence and prosperity of society (Hatami, 2010). One of the most important effective factors on psychological status of the patients with cancer is the manner of adjustment with the disease and the methods to face with psychological problems results from the disease. Cognitive-behavioral and meta-cognitive therapies are among psychotherapy methods which can be effective on the contractive methods.

Among treatment interventions for patients with colorectal cancer using psychotherapies has been useful. One of the treatments based on information processing is acceptance and commitment therapy (Wells, 2013). Acceptance and commitment therapy (ACT) is one of the new behavioral treatments. This treatment helps clients to access a happy, purposeful and meaningful life by combination of acceptance interventions and mindfulness in the adherence and change strategies. Contrasting to classic approaches of cognitive- behavioral therapy, ACT do not aim to change or the abundance of the annoying thoughts or feelings ; but its main purpose is to empower psychological flexibility (Twohig, 2015). Acceptance and commitment therapy (ACT) is a kind of clinical behavior analysis which is applied

in psychotherapy. This method is a psychological intervention based on observations which integrates acceptance strategies and mindfulness with commitment strategies and change in behavior in different ways. This is done with the aim of increasing psychological flexibility. This approach is called interval comprehensive assessment at first and was developed by Steven C, Hayes, Clay J. Wilson & Kirk D Strosahl late 21 century (Dabaghi, 1922). Acceptance and commitment therapy is developed as an alternative for more traditional forms of psychotherapy such as classic cognitive- behavioral therapy. This treatment is mainly focused on decreasing the intensity and abundance of annoying emotions and thoughts. Instead of direct effort on decreasing recent items, ACT is emphasized on increasing behavioral efficiency despite the existence of the unpleasing thoughts and feelings. On the other word, ACT therapist does not try to change distressful thoughts of the client or decrease his unpleasant emotions, although ironically his efforts are paid off when psychological emotion decrease (Vowles, Sowden and Ashworth, 2014). The results of the studies indicated that changing in illogical beliefs is related to decrease in psychological symptoms and acceptance of the situation in patients with cancer (Kangas, Milross & Bryant, 2014).

One another common treatments in decreasing somatic and mental symptoms in patients with colorectal cancer is to help patients to create new relationship with his beliefs and thoughts without denying them after confrontation with his body and decrease maladaptive styles of thinking which lead to experience psychological symptoms by challenging illogical thoughts and cause internal and mental process of oneself acceptance (Aminikhah, 2008).

Cognitive- behavioral therapy is a psychotherapy which is a combination of cognitive therapy technique and behavioral therapy (Balabanovic, Ayers & Hunter, 2012). In cognitive- behavioral approach it is assumed that wrong thoughts and beliefs are the basis of the problematic emotions, feelings and behaviors. Techniques and methods are considered in the therapy. The major emphasis in all techniques is on changing maladaptive cognitions and their replacement with efficient cognitions. Generally, cognitive- behavioral therapy is structured, based on cooperation and time-restricted and as focuses on the present time emphasizes on the role of wrong beliefs and cognitions in order to access adaptive thoughts and behavior (Bavadi, Pour Sharifi & Latifi Kashani, 2015). Albert Ellis who established cognitive-behavioral therapy stated in this regard that irrational thoughts are the main causes of problems in our daily life and the process of the treatment help the patients to recognize these thoughts and try to confront with them decisively and totally the new resentful philosophy will shape the life (Prochaska & Norcross, 1999).

Studies indicated that changing in the cognitions is considered as an important part for adjustment with a life threatening disease such as cancer and those who believes that are able to challenge their irrational thoughts have the higher sense of control over those who do not have this skill (Balabonic et al., 2012). According to whatever is said the current study is seeking to answer to this question that if there is a significant difference between the efficacy of acceptance and commitment therapy and cognitive- behavioral methods in improving cognitive distortion, emotional tolerance and social well-being in the patients with colorectal cancer.

Methodology

Statistical population, sample size and sampling method; this study is experimental which has been conducted as pre test-post test with control group. The effect of independent variable (acceptance and commitment therapy and cognitive- behavioral methods) on dependant variables (cognitive distortion, emotional tolerance and social well-being) was measured. Statistical population of this study includes all the patients with colorectal cancer who referred to Ardabil province in the second semester of 2019 to Ardabil's Imam Khomeini hospital. Sampling method for the current study is convenient sampling and given that in the experimental studies at least 15 people should be in each sub group (Delavar, 2015), sample size was considered as 48 patients with colorectal cancer (16 people for each group) which was categorized randomly in three groups (15 people for acceptance and commitment therapy, 16 people for cognitive- behavioral therapy, 16 people for control group). After describing the purpose of the study by the therapist, subjects in each three groups were assessed during two stages: A- pre test before doing the experiment B- post test after doing the experiment. For data analysis of the research descriptive statistical tools including frequency table, mean and standard deviation and for checking the hypothesis Multivariate analysis of variance (MANOVA) are applied.

Fallowing items were used to measure understudied variables:

Cognitive distortion scale: Abdolah Zade & Salar's cognitive distortion questionnaire was used to measure cognitive distortions. The questionnaire includes 20 statement which have been measured cognitive distortions

proposed by Ellis and two statements have been devoted to each irrational thought. Scoring for each subscale is from 1 to 5 (1- strongly agree, 2- agree, 3- no view, 4- disagree, 5- strongly disagree) and only the question no.1 is scored inversely from 5 to 1. According to the scoring the person who acquires higher score has better thinking and every one score lower has used more cognitive distortions. Total score range between 100 and 200. Alpha coefficient of the scale is 0.8 and it can be concluded that the questionnaire has suitable internal consistency (Jelokhanian & Khademi, 2013).

Emotional tolerance scale: emotional tolerance questionnaire which was developed by Simons & Gaher in 2005 is a self-measuring index for emotional tolerance which includes 16 items. Subjects answered to the questions of this questionnaire in a 5 point Likert scale respectively (with strongly agree, to some extent, at the same extant, strongly disagree). Scoring for each subscale is from 1 to 5. Alpha coefficient for this scale is 0.82. Meanwhile it is specified that this scale has a good initial criteria and convergent validity (Simons & Gaher , 2005). According to the data provided by Azizi et al., (2010) reliability coefficient/ Cronbach's alpha was estimated 0.67 for this questionnaire and for correlation of the emotional tolerance with problem- oriented, emotion -oriented, less effective, ineffective coping methods as 0.213, -0.278, 0.337 and -0.196 respectively (Azizi et al., 2010).

Social well-being questionnaire: Keyes has developed a social well-being questionnaire with 33 items based on his theoretical model from social well-being structure which is usually applied as a general scale in the psychology of the social health to measure the amount of social well-being. The score of this scale is gained as the sum of 5 subscales. Scoring of the items is done based on a 5 point Likert scale (strongly agree= 5, strongly disagree= 1. Therefore, the lowest and the highest obtained score of this questionnaire will be 33 and 165 respectively. Keyes has confirmed 5 dimensions model applied in his questionnaire experimentally by two studies on two samples with 373 and 2887 subjects in America using factor analysis. Joshan Lue et al., (2006) reported 0.16 to 0.95 alpha coefficients for its sub scales. In Iran in the study of Tadris Tabrizi (2013) the validity for social well-being questionnaire was gained as 0.85 using Cronbach's alpha coefficient based on a experiment conducted on 500 men and women in Tehran which is an indicative of its high reliability.

Acceptance and commitment therapy (ACT)

Based on this treatment, the major clinical problem is that verbal processes perpetuate a dedicate set of responses in the pathogenic tissue.

Cognitive- behavioral therapy interventions of the study's findings

Descriptive findings of the sample group are provided in the below table. As it can be seen findings indicated that the average amount of scores of the cognitive distortion, emotional tolerance and social well being variables in the experimental group at the post test stage has been decreased.

Table 1- mean and standard deviation in pre test and post test of the cognitive distortion, emotional tolerance and social well being variables

Variables		Acceptance and commitment therapy (ACT)		Cognitive-behavioral therapy		Control	
		Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
cognitive distortion	Pre test	78.6	7.33	78.66	5.85	76.66	5.08
	Post Test	88.6	7.58	87.6	15.6	75.2	6.22
emotional tolerance	Pre Test	50	8.88	52.33	5.55	51.86	3.51
	Post Test	55.50	2.50	56.73	7.86	38.73	2.05
social well being	Pre Test	73.50	7.008	75.5	5.72	73.5	5.83
	Post Test	85.80	5.26	77.83	10.72	70.33	5.75

Mean and standard deviation of the post test and pre test for the three groups of cognitive- behavioral therapy and acceptance and commitment therapy and control group of cognitive distortion, emotional tolerance and social well being control group are represented in table 1.

Table 2- Box test table about the default of equality of variances for three groups in total scores of cognitive distortion, emotional tolerance and social well being

Sig	Df2	Df1	F	Box s M
0.057	8558.615	15	6.505	87.175

Before using parametric test of multi variable analysis of variance in order to observe its hypotheses, Box test were applied. As it can be seen, according to Box test which have not been significant for none of the variables, the condition for homogeneity of the variance matrices is observed correctly.
Sig= 0.057 F = 6.505 Box s M= 87.175

Table 3- the results of the significant test of multivariable analysis of variance on the total scores of the cognitive distortion, emotional tolerance and social well being variables

Test Name	Amount	F	df	Error df	sig	Eta squared
Pillai's Trace	0.652	6.606	3	82	0.000	0.326
Wilks Lambada	0.351	8.181	3	80	0.000	0.508
Hotelling's Trace	1.855	11.887	3	78	0.000	0.580
Roy's Largest Root	1.850	25.152	3	51	0.000	0.658

According to the obtained data it can be indicated that the significance level of all tests allows the usability of multivariate analysis of variance. These results suggested that there is a significant difference at least in one of the dependant variables. (F= 8.181, P< 0.000, Partial η^2 = 0.508). Eta squared indicated that there is a totally significant difference between three groups given to dependant variables and the amount of this difference is nearly 51% based on Wilks Lambda which means that 51% of the variance of the three groups is results from the interactive effects of the dependant variables.

Table 4- the results of multivariate analysis of variance (MANOVA) in order to compare the difference between pre test- post test total score of the cognitive distortion, emotional tolerance and social well being variables in the three treatment groups of acceptance and commitment therapy and cognitive- behavioral therapy and control group.

	MANOVA	SS	df	Ms	F	P	Eta Squared
Group	cognitive distortion	3573.811	3	1736.857	23.773	0.000	0.531
	emotional tolerance	2080.178	3	1050.088	18.528	0.000	0.582
	social well being	1806.878	3	803.588	37.635	0.000	0.652
Error	cognitive distortion	3068.667	45	73.063			
	emotional tolerance	2236.833	45	53.260			
	social well being	1008.267	45	25.006			

The results of the table suggested that there is significant difference between the average scores of cognitive distortion (F= 23.773), emotional tolerance (F= 18.528) and social well-being (F= 37.635) between the group of acceptance and commitment therapy, cognitive- behavioral therapy and control group (P<0.000). On the other word, the ratio of the obtained F regarding the efficacy of the cognitive- behavioral therapy, acceptance and commitment therapy on the cognitive distortion, emotional tolerance and social well being variables were significant in the patients with colorectal cancer. This issue indicated that the group of cognitive- behavioral therapy, acceptance and

commitment therapy have improved significantly the cognitive distortion, emotional tolerance and social well being variables.

Table 5- comparison of the average scores of the study variables in cognitive- behavioral group, metacognitive therapy, and control group with Scheffe test

variables	Group	Group	Standard	Error	Statistical significance
Cognitive distortion	Cognitive-behavioral	Metacognitive therapy	15.070*	3.150	0.005
		Control Group	21.570*	3.150	0.000
	Metacognitive therapy	Cognitive-behavioral	-15.070*	3.150	0.005
		Control Group	8.5000*	3.150	0.016
	Control Group	Cognitive-behavioral	-21.570*	3.150	0.000
		Control Group	-8.5000*	3.150	0.016
Emotional tolerance	Cognitive-behavioral	Metacognitive therapy	10.0000*	2.665	0.005
		Control Group	16.550*	2.665	0.000
	Metacognitive therapy	Cognitive-behavioral	-10.0000*	2.665	0.005
		Control Group	6.550	2.665	0.060
	Control Group	Cognitive-behavioral	-16.550*	2.665	0.000
		Metacognitive therapy	-6.550	2.665	0.060
Social well being	Cognitive-behavioral	Metacognitive therapy	8.8667*	1.880	0.000
		Control Group	15.570*	1.880	0.000
	Metacognitive therapy	Cognitive-behavioral	-8.8667*	1.880	0.000
		Control Group	6.6000*	1.880	0.003
	Control Group	Cognitive-behavioral	-15.570*	1.880	0.000
		Metacognitive therapy	-6.6000*	1.880	0.003

The results of the Scheffe test indicated that cognitive distortion, emotional tolerance and social well being in two experimental groups- samples were given cognitive- behavioral therapy and acceptance and commitment therapy- were significantly higher compare to control group and given the scores improved for all three variables of cognitive distortion, emotional tolerance and social well being in the study samples then it can be said that the cognitive-behavioral method was more effective than acceptance and commitment therapy.

Discussion and conclusion

One of the targets of this part of the study is to assess the efficacy of acceptance and commitment therapy and cognitive- behavioral therapy in improvement of cognitive distortion in the patients with colorectal cancer. There is a significant difference between the average score of the post test of the cognitive distortion between the groups of cognitive- behavioral therapy, acceptance and commitment therapy and control group. This indicated that cognitive-behavioral therapy group, acceptance and commitment therapy group has improved the cognitive distortion significantly. Meanwhile, according to the comparison the results of the three improved group, cognitive distortion

is higher in cognitive- behavioral therapy group than acceptance and commitment therapy group. These results were consistence with the results of the various studies including the studies of Farahbakhsh and Shafi Abadi (2006), Noori (2009), Navabi Nejad & Malek (2010), Ebrahimi et al., (2012), Lewis & Ben Array (2004), Cordova et al. (2005), Hill (2015), Bahari et al. (2010). They indicated in their studies that generally hope and forgiveness therapy interventions and their integration were more effective than control group on the unrealistic interpersonal expectations and generally interpersonal cognitive distortions of the couples (Kaviani et al., 2008). Cognitive therapy based on mindfulness could decrease depression, automatic negative thoughts and dysfunctional attitude. It can be said that cognitive training and cognitive therapy can generally has significant effect on decreasing automatic negative thoughts and dysfunctional attitude which can be also called as cognitive distortion that in the present study these trainings were effective too (Lotfi Kashani, 2008). It is indicate in a study that the scores of dysfunctional attitude of the members' group by repeated measure and fallowing up the amount of dysfunctional attitude of the members two months after ending the treatment indicated that cognitive- behavioral therapy group has been effective in decreasing dysfunctional attitudes. In a study the efficacy of two intervention methods of the training based cognitive therapy and cognitive group therapy on cognitive distortion of the women who have the symptoms of depression after starting the cancer treatments were assessed and the results of this study indicated that the average of cognitive distortion were not significantly different in two kinds of interventions of training based cognitive therapy and cognitive group therapy but it has been higher than control group.

The second purpose of the study is to assess the efficacy of the acceptance and commitment therapy and cognitive- behavioral therapy in improving emotional tolerance in the patients with colorectal cancer. The results of the study stated that there is a significant difference between the groups of the cognitive- behavioral therapy, acceptance and commitment therapy and the control group. This indicated that cognitive- behavioral therapy group, acceptance and commitment therapy group improved emotional tolerance significantly compare to control group. Meanwhile, according to the comparison of the results of the three groups improvement of the emotional tolerance is higher in cognitive- behavioral group than acceptance and commitment therapy group. This finding is consistent with different studies including the study of Gorier et al. (2008) who believed that the existence of the cancer and treatments such as chemotherapy and radiotherapy lead to psychological and behavioral emotions in the patients with cancer. Then it seems that patients with cancer are exposed to mental pressures result from the disease and the complications of the treatments which can create mental and social emotions in them. Abolghasemi et al. (2007) studied the efficacy of the cognitive- behavioral interventions in decreasing distress and the findings indicated that there was significant difference between cognitive- behavioral, placebo and control groups from the fear, anger, pain and pulse rate's point of view. Meanwhile, Tukey range test indicated that cognitive- behavioral intervention methods decrease significantly the fear, anger, pain and pulse rate of the children during dental treatments compare to placebo. The results of the study suggested that cognitive- behavioral psychotherapy and meta cognitive therapy can decrease emotional stresses created fallowing to diagnosis and common treatments of the cancer disease and play a valuable role in the process of the treatment and better adjustment of the patients and leads to increased emotional tolerance results from the disease.

The third purpose of this part of the study is to assess the efficacy of the acceptance and commitment therapy and cognitive- behavioral therapy on improving social well being of the patients with colorectal cancer. The results of the current study suggested that there is a significant difference between the average scores of the social well being among the cognitive- behavioral therapy group , acceptance and commitment therapy group and control group. This indicated that cognitive- behavioral therapy group, acceptance and commitment therapy group improved social well being significantly compare to control group. Meanwhile, according to the comparison of the results of the three groups improvement of the social well being is higher in cognitive- behavioral group than acceptance and commitment therapy group. This finding is consistent with different studies including the studies of Barghi Irani et al. (2015), Karamozian et al. (2015), Elzami (2013) and Pedram et al. (2011) which is an indicative of the coping styles on adjustability of the patients with cancer. Appropriate coping styles have positive effect on the amount of adaptability, life expectancy and decreasing emotions results from chemotherapy of the patients. Bavadi et al. (2015) studied the efficacy of the cognitive- behavioral therapy on the improvement of the psychological well being of the women with breast cancer and the results indicate that cognitive- behavioral therapy has statistically significant effect on improvement of the psychological well being at post test stage and its effects remain up to the fallow up stage. It seems that using psychotherapy interventions are useful intervention in relation to social well being of the patients

with cancer as the cancer has psychological dimensions and productions. In this regard, cognitive-behavioral approach and meta cognitive therapy are among the approaches in the psychology which attracted the attentions of the researchers and psychologists during the last decades. Cognitive behavioral therapy not only is effective in treatment of so many chronic diseases but also help patients to minimize negative mental effects of their disease. Therefore decreasing psychological symptoms not only is effective in effective and advanced ongoing treatments but is also important in improving support and social well being, coping programs and rehabilitation measure.

This study, like many other studies were accompanied with its limitations and problems which certainly faced it with shortcomings. Some of its limitations are seen in many other studies and some others are related to the researcher himself and may be specific to this study. Anyway, the main limitations of the present study are as fallow: being specific to Ardabil province which limits its generalization to other provinces. Existence of the halo effect in the current study as the researcher and the therapist are the same. Convenient sampling was another limitation of the current study. Given to time restriction in the present study fallow up stage has not been conducted and this makes difficult to comment definitely regarding the continuity of the treatment method efficacy on the samples' study. Self-reporting questionnaires have been the sole tools for data collection which makes them susceptible to bias. Therefore it is proposed that intervention methods are imposed by the different experts to increase validity. Similar studies are done on other provinces and among different cultures. If possible, larger sample sizes were used. The efficacy of the acceptance and commitment therapy (ACT) is compared with other treatment programs such as medication. Therefore, it is recommended that this method of treatment is conducted on the patients with other psychological disorders. It is suggested that sample are fallowed up in the future studies. It is recommended that random sampling is used in the future studies.

REFERENCES

Abdelsattar ZM, Wong SL, Regenbogen SE, Jomaa DM, Hardiman KM, Hendren S. Colorectal cancer outcomes and treatment patterns in patients too young for average-risk screening. Cancer 2016; 122(6): 929-34.

Aboulghasemi, A. (2007). Swimming and religious swimming with the failures of swimming in Mia Nessa la n Vesa Lemanda. The Ministry of Science and Technology has been thoroughly researched.

Akbari, M. (2001). In the treatment of patients with cerebral palsy Breast augmentation was performed on the chest, legs, and ankles. Search for the reason.

Al Bandar MH, Kim NK. Current status and future perspectives on treatment of liver metastasis in colorectal cancer (Review). Oncol Rep 2017; 37(5): 2553-2564.

Aminikhah, M. (2008). The study and comparison of the effectiveness of the therapeutic narrative and the behavioral - behavioral therapy on the image of the person and the self - esteem of women with breast cancer. Allameh Tabtabaei Tehran University.

Azizi A, Mirzaei A and Shams J. (2009). Examination of the relationship between emotional and emotional tolerance with the degree to which students ' dependence on cigarettes. Hakim Research Journal 13 (1): 11 - 18.

Bahari F, Fatehizadeh M, Ahmadi A, Molavi H and Bahrami F. (2009). The impact of marital counseling is based on hope, forgiveness, and a combination of these two on the level of cognitive dissonance between individual couples seeking divorce. Journal of behavioral Sciences, Period VIII, No. 1, pp. 25-35.

Barghi-Irani Z, Bakhti M, Begian kolemarz MJ. (2006). The effectiveness of social skills training is based on cognitive processing on social, emotional, psychological well - being and reducing the symptoms of children. Two scientific, scholarly, social cognition, 5 (1): 157 - 177

Bavadi B, Poursharifi H and Lotfi-kashani F. (2006). The effectiveness of cognitive - behavioral therapy is based on an 8 - stage pattern to improve the psychological well - being of women with breast cancer. The Quarterly Journal of Breast Diseases, 8 (5): 51 - 62.

Balabanovic J, Ayers B, Hunter MS.(2015).*Women's experiences of Group Cognitive Behaviour Therapy for hot flushes and night sweats following breast cancer treatment*: An interpretative phenomenological analysis. Maturities; 72(3):236-52

Cordova, J. V., Gaee, C. B., and Warren, L.Z. (2005). *Emotional skillfulness in marriage: Intimacy as a mediator of the relationship between emotional skillfulness and marital satisfaction*. Journal Of social And Clinical Psychology, 25(2): 218-135.

Dabbaghi P, Asgharnezhad F, Atef-vahid K and Bolhari J. (2007). The effectiveness of group therapy is based on thinking and activation of spiritual awareness in preventing recurrence of opiates use, the Journal of Psychiatry and Clinical Psychology of Iran, Number 5, p. 5, p. 366 - 375

Delaware, Ali. (2011). Theoretical and practical bases of research in humanities and social sciences. Printing of Sixth, Tehran: Growth Publishing.

Dobson, K.S. (2010).*Handbook of Cognitive-behavioral Therapies*. New York, London: The Guilford Press, 3rd ed., p. 278.

Elzami, M. (2003). The effectiveness of the treatment - based cure and commitment to reduce the depression of women infected with breast cancer. PhD in the Ministry of Science, Research and Technology, University of Sciences and Rehabilitation, Faculty of Psychology and Education.

Etemadi, F, Navabinezhad, Sh, Ahmadi, A and Farzaneh, V (2006). Examining the effect of cognitive - behavioral Couple therapy on the intimacy of couples attached to counselling centers in the province of Isfahan. Psychological studies, Faculty of Education and Psychology, Alzahra University, Second Round, Number 1, 2, pp. 68 - 87

Ebrahimi, A, Zeinodin, S, Merasi, M. (2002). Relationship is the psychological pathology of family relationships with cognitive vulnerability (dysfunctional attitudes and interpersonal cognitive attitudes). School of Medicine in Isfahan, a research article on the twenty ninth, number 167.

Ellis CN. Inherited Colorectal Cancer Syndromes. Clinics in Colon and Rectal Surgery 2005; 18(3): 150- 62.

Farahbakhsh K and Shafiabadi A. (2006). Comparison of marital counseling effectiveness to Alice's cognitive style, Glaser"s therapeutic reality, and the mingling of the two are in reducing the conflicts of marital conflicts. تازه‌ها and Counseling Research, 5th, No. 18, pp. 33 - 58.

Greer J, Pril WF, Park ER, Lynch TJ, Temel JS.(2008).*Behavioral and psychological predictors of chemotherapy adherence in patients with advanced non-small cell lung cancer*. J of Psychoso Res; 23(1): 1-5.

Hill, J. (2015). *Acceptance in behavior therapy: Understanding the process of change*. The Behavior Analyst, 25, 213-226.

Joushanlo M, Rostami R and Nosratabadi M. (2006). The study of the functional structure of the holistic well - being. Journal of Psychology (Persian Psychology), 5, 35 - 52

Jelokhanian M and Khademi A. (2003). Examining the effect of cognitive on marital satisfaction in women clients of tehran's welfare counselling centers in 2001. Quarterly Review of Modern Studies, Eight, Number 28, pp. 83 - 115.

Karamoozian M, Bagheri M, Darekordi A and Amizinizadeh M. (2006). The effectiveness of the cognitive therapeutic group - behavioral management behaviour on mental health and coping strategies with breast cancer patients. Quarterly Journal of Breast Diseases, 7 (2): 57 - 61

Kahraei, Danesh and Azadfallah. (2001). The effectiveness of the cognitive healing behavior in improving the cognitive distortion of patients with cancer. Journal of Applied Psychology, 5 (2): 7 - 23.

Kaviani H, Hatami N and Shafiabadi A. (2008). The effect of therapeutic recognition based on the cognitive distortion of depressed (non - clinical) people, the Journal of Scientific Sciences, No. 21: 65

Kangas M, Milross C, Bryant RA.(2015).*A brief, early cognitive-behavioral program for cancer-related PTSD, anxiety, and comorbid depression*. Cognitive and Behavioral Practice; 21(5):516-31.

Lotfi kashani F. (2008). Impact of group counseling based on behavioral - cognitive approach in reducing dysfunctional attitudes. Quarterly Review of Thought and Behavior, Second Round, No. 8, pp. 67 - 78.

Miller N, Kerin MJ. Molecular biology of colorectal cancer: Review of the literature. American Journal of Molecular Biology 2018; 3: 72-80.

Roper J, Hung KE. Molecular pathogenesis of colorectal cancer. chapter 2 molecular mechanisms of colorectal carcinogenesis. Springer Science 2013; 138(6):2059–2072

Siegel RL, Miller KD, Jemal A. Cancer statistics, 2015. CA Cancer J Clin 2015; 65(1): 5-29.

Twohig, S. (2015). *Prevalence and risk factors for domestic violence against infertile women in an Iranian setting* .International Journal of Gynecology and Obstetrics 112; 15–17.

Li D, Conti DV. Detecting gene-environment interactions using a combined case-only and case-control approach. Am J Epidemiol 2009; 169(4): 497-504.

Lavee, Y., and Ben-Ari, A.(2005). *Emotional expressiveness and neuroticism: do they predict marital quality.* Journal Of Family Psychology, vol. 1, No. 5, 620-627.

Possel, P., Knopf, K. (2011). *Bridging the Gaps: An Attempt to Integrate Three Major Cognitive Depression Models*. Cogn Ther Res, 35, 352-358.

McFarland, DC; Andreotti, C; Harris, K;Mandeli,J; Tiersten, A & Holland, J.(2016). *Early Chidhood Adversity and its Associations With Anxity, Depression, and Distress in Women With Breast Cancer.* Psychosomatics. (2) 57: 175-185.

Mahmodlou R, Mohammadi P, Sepehrvand N. Colorectal cancer in northwestern iran. ISRN Gastroenterol 2012; 2012: 968560.

Nuri, N. (2009). The relationship between optimism and pessimism, optimism and pessimism from the perspective of Islam and satisfaction with life. MS's thesis, The Imam Khomeini Educational Institute and the Imam Khomeini Research Institute.

Padashian A. (2004). An adoption of the ACT based on acceptance and commitment (ACT) in improving the symptoms of individuals with post - traumatic stress disorder. MSc thesis, clinical psychology, Islamic Azad University of science and Ardabil research.

Pedram M, Mohammadi M, Naziri Q and Aeinparast N. (2001). Effects of Cognitive behavioral therapy on the treatment of anxiety disorder, depression, and hope for women with breast cancer. Scientific and Society Quarterly, Research of Women and Society: Islamic Azad University of Marvdasht, 1 (5): 66-85

Twohig, S. (2015). *Prevalence and risk factors for domestic violence against infertile women in an Iranian setting* .International Journal of Gynecology and Obstetrics 115; 15–17.

Tabrizi M. (2003). Evaluation and normalization of social welfare questionnaire and women of tehran province. MSc thesis of Ardabil Peyam nour University.

Vowles, H; Sowden,F & Ashworth, D., (2014). *Bio behavioral intervention for cancer stress :conceptualization components and intervention strategies*. Cognitive and behavioral practice, 16, 253-265.

Vossen RH, Aten E, Roos A, Dunnen JT. High-resolution melting analysis (HRMA): more than just sequence variant screening. Hum Mutat 2009; 30: 6-860.

Wells A. (2008). Metacognitive therapy for anxiety and depression. New York: Guilford,1-22.