ORGINAL ARTICLE

Comparison of CFT- ACT Combined Therapy with CBT on Psychological Well- Being in Diabetic Women

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Abstract

Objective: The purpose of this study was to compare the effectiveness of compassion focused (CFT) and acceptance commitment (ACT) combined therapy with cognitive-behavioral therapy (CBT), on psychological well-being in women with type 2 diabetes (T2DM).

Materials and Methods: This is quasi-experimental. This study consists of three groups (two experimental and one control groups) and three stages (pre-test, post-test, and follow up). The statistical population was all T2DM women of Shahid Shabani Diabetes Center in Isfahan, Iran in 2017. The studied sample was 47 patients who were randomly distributed in three groups. The experimental group received a combination of the package of ACT and CFT for ten weekly two-hour sessions, the CBT group received ten weekly two-hour sessions of therapeutic intervention and the control group did not receive any therapeutic interventions. Data were analyzed by analysis of variance with repeated measurements using SPSS-24 software.

Results: The results showed that the scores of experimental groups participants in the post test of compassion therapy-ACT and CBT improved significantly compared to the control group in self-acceptance, positive relationships with others, purposeful life, individual development, environmental dominance and autonomy subscales (*P*-value= 0.001) .There exist a significant difference between the experimental group of compassion focused- ACT combined therapy and CBT in self-acceptance, positive relationships with others, purposeful life and individual -development subscales (*P*-value< 0.001).

Conclusion: Based on the findings, the combination therapy of compassion focused – ACT and CBT can be used to promote psychological well-being in diabetic patients.

Keywords: Compassion focused therapy, Acceptance and commitment therapy, Cognitive behavioral therapy, Psychological well-being

Introduction

Diabetes is a heterogeneous group of metabolic diseases characterized by chronic increase in blood glucose and metabolic disorders of carbohydrates, fat and protein, resulting in insufficiency of insulin secretion or insulin action (1). Type 2diabetes

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(T2DM) is considered as a common problem for individual, family and the society (2). One of the important variables that are affected by the disease in the lives of patients is psychological well-being. In Reef's psychological well-being model, one's efforts are in the direction of growth and progress in realizing potential abilities. Diner and Lucas also argue that those who have a high level of well-being experience positive emotions and have a positive attitude towards life events, but those who has a lower level of well-being has negative evaluation about life events, and experience more negative emotions like depression , anxiety and anger (3) .

Self- compassion has three components including self-kindness against self-judgment, common human sense against isolation and balanced self-awareness of personal excitement against extreme homogenization. These three components have mutual connections and their combination leads to self-compassion in mind (4). Self-compassion is one of the ways to adapt to stressful situations in life (5). Self-compassion positively predicts optimism (6). Since ACTs emphasis is on acceptance, it seems to have advantages in the short-term treatment of diabetes. Since patients can continuously adapt to the facts and events that are a very natural part of the disease, they have more opportunities for behavioral change (7). Mohammadi Khoshui & et al, study showed that ACT can be useful for psychological functioning in patients with T2DM (8).

Melton showed that ACT can be effective in the self-efficacy of diabetic patients (9). ACT can improve the symptoms of depression and feelings of guilt and increase psychological well-being (10). Also, self-compassion training reduces depression and diabetes distress (11). The self-compassion group training can raise hope in diabetics (12). The self-compassion is effective to decrease the blood sugar in diabetic patients (13,14).

The combination therapy of compassion focused-acceptance and commitment therapy promote interpersonal forgiveness in diabetic patients (15).

In the cognitive-behavioral approach, the individual is helped to identify and correct misconceptions about him, the world and the future, and as a result prevent negative emotions and behaviors. According to the mind and body model in people with diabetes, cognitive impairment and negative automatic thoughts in diabetic patients are responsible for the occurrence of disease complications and immunological changes (16). The effect of cognitive-behavioral therapy (CBT) on improving the quality of life and reducing the stress and blood glucose levels in T2DM women has been effective (17,18).

The aim of this study was to compare the effects of the combined therapy package of compassion therapy and commitment therapy with CBT on psychological well-being in women with T2DM.

Materials and Methods

Research type was of quasi- experimental type with a three group design (a compassionate-ACT combined therapy, a cognitive-behavioral and a control group) and three stages (pre-test, post-test and follow up). Studied population consisted of all women with T2DM who were members of Shahid Shabani diabetes center in Isfahan during spring and summer of 2017. The World Health Organization (WHO) states that the prevalence of diabetes in Iran is 9.8% among men and 11.1% among women. According to this statistics, and female patients came to the center at the time of the present study, the number of diabetic women visiting the center at that time was about 7500 (19). Of these 60 females were purposefully selected considering inclusion and exclusion criteria.

After obtaining informed consents from all the participants they assigned randomly through lottery method in 3 groups including two experimental groups (CFT-ACT combined therapy and CBT) and one control group (20 in each group) Then two experimental groups (CFT- ACT & CBT) received 10 weekly 120

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minutes' sessions of CFT- ACT and CBT, control group did not receive any treatment. In the process of conducting the research, participants in each of the three research groups responded to the psychological well-being questionnaire, once before the start of the treatment (pre-test phase), once after the end of the treatment (post-test phase) and once two month after the end of the treatment (follow up phase).

Inclusion criteria include: the female patient's willingness to participate in research and giving informed consent, having minimal literacy skills, age between 30 - 60 years, and criteria for exclusion were as follows: suffering from severe psychiatric disorders or chronic diseases such as kidney, liver, cardiovascular diseases, etc., absences of more than three sessions, and parallel psychological treatment.

After conducting research, due to the absence for more than three sessions and no possibility for finding substitutes, combined treatment of compassion focused and acceptance and commitment experimental group was reduced to 18, CBT to 15 and control group to 14 individuals. As shown in figure 1, the attrition rates were 10%, 25% and 30% in combined therapy, CBT and control group respectively.

Demographic information checklist included age, education, occupation, and duration of the disease. Reef Psychological Well-Being Questionnaire (PWBQ): Developed by Carroll Reef in 1989 to measure six dimensions of psychological well-being (autonomy, environmental dominance, personal development, positive relationships with others, purposeful life, and self-acceptance) (20).

Homin reported Cronbach's alphas of 0.79 to 0.85 for its subscales. Content and structure validity of the test has been confirmed by various researches (quoted in 21). In this study, Cronbach's alpha coefficient was 0.75.

Statistical analysis

The following steps were conducted in the qualitative part of the research: searching 26

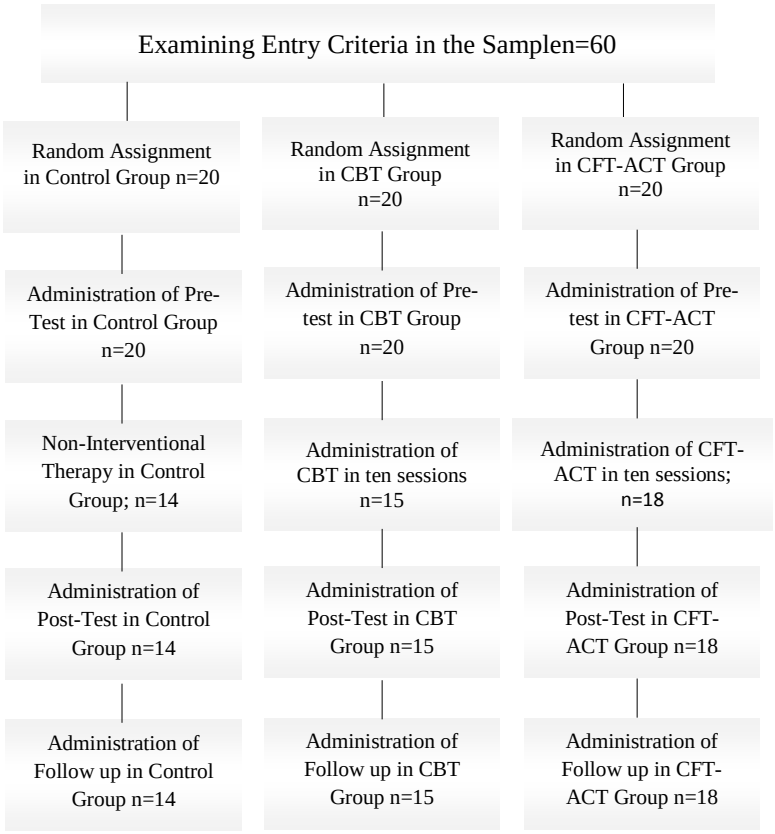

Figure 1. Consort Flowchart

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articles and 3 books with compassion focused therapy and acceptance and commitment therapy (ACT) titles and interviewing 13 diabetic patients participating in the research. Then the content classification (coding) of the collected materials in the first stage was carried out and conceptual-content subcategories focused on compassion and ACT therapies were formed, also in this specific package for type II diabetic women, their needs and conditions were investigated based on interviews with them. Evidence was found for content appropriateness via an agreement coefficient of (0.82) between rates.
These analyzes were performed using SPSS software (version 24). To determine the difference between the groups and to compare the two groups Bonferroni post hoc test was used.
A five –member expert panel with expertise in psychological treatments assessed the therapeutic package to ensure its content and structure appropriateness. The agreement coefficient of the mentioned raters was 0.82.
In this research the treatment protocol of compassion, acceptance and commitment focused combined therapy package edited and executed based on Gilbert's theory of compassion therapy (21), acceptance and commitment therapy based on the Vowels and Sorrel and Forman & Herbert (22-23) also treatment protocol of cognitive- behavioral therapy was based on the free cognitive group therapy (24).

Ethical considerations

The study was approved by the ethics committee of Isfahan (Khorasgan) Branch, Islamic Azad University, Esfahan, Iran, (IR.IAU.KHUISF.REC.1397.037) and the registration of clinical practice with the code (IRCT20180607039996N1).

Results

The demographic variables including age, education, occupation and duration of the disease is showed in table 1.
The means and standard deviation of psychological well-being were showed in table 2. Regarding the sphericity assumption (sphericity test), the results of variance analysis of repeated measures showed that based on the results of the test (three stages of pretest, post-test and follow-up) and test interaction with group membership (including three groups) there is a significant difference between the three groups in self-acceptance (*P*-value= 0.001), positive relationships with others (*P*-value= 0.001), purposeful life (*P*-value= 0.001), environmental dominance (*P*-value= 0.001), autonomy (*P*-value= 0.001) and

Table 1. Frequency of age, education, occupation and duration of the disease

Valuable		Frequency	Percentage
Age	Under 37 year	1	1.5
	38-42	4	6.6
	43-46	9	14.8
	47-51	17	27.9
	52-55	13	21.3
	56 years or more	17	27.9
	Total	61	100
Disease duration	1-5 year	20	32.8
	6-10	21	34.4
	11-15	11	18
	16-20 years	7	11.5
	21 years and more	2	3.3
	Total	61	100
Education	Elementary and less	23	37.7
	Diploma	30	49.2
	Bachelor and higher	8	13.1
	Total	61	100
Occupation	Employed	10	16.4
	House-keeper	51	83.6
	Total	61	100

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individual development (*P*-value= 0.001) in the three stages of the test (Table 3).

The results of Bonferroni test showed that there is a significant difference in self-acceptance, positive relationships with others, purposeful life and individual development between compassion focused-ACT and CBT with control group. (Table 4)

Also, there is a significant difference between the compassion focused-ACT combined therapy and CBT. In addition, there is a significant difference in the environmental dominance and autonomy between compassion focused-ACT and CBT with the control group, but there is no significant difference between the two treatments with each other (Table 4).

Discussion

The findings of the study showed that the mean score of psychological well-being has increased among the experimental groups after participating in the combined therapy sessions of the compassion-focused and ACT and CBT group with the control group, which is also significant in the follow-up study. Also the comparison of the post-test result between the two experimental groups showed that there was a significant difference between the combined therapy of compassion-focused – ACT and CBT in self-acceptance, positive relationship with others, purposefulness and individual development sub-scales.

The results are consistent with the results of

Table 2. Mean and standard deviation of psychological well-being

Well-being components	Stage	Combined therapy Mean (±SD)	Cognitive-behavior therapy Mean (±SD)	Control group Mean (±SD)
Self-acceptance	pre-test	31.22 (± 6.18)	28.53 (± 4.73)	26.42 (± 5.62)
	post-test	43.16 (± 3.46)	37.46 (± 5.89)	31.78 (± 3.28)
	Follow up	42.38 (± 3.66)	37.93 (± 6.56)	32.14 (± 3.75)
Positive relationships with others	pre-test	34.27 (± 5.63)	32.93 (± 4.23)	27.85 (± 3.48)
	post-test	43.77 (± 6.38)	37.53 (± 4.74)	30.21 (± 3.28)
	Follow up	42.77 (± 7.14)	37.66 (± 4.60)	30.50 (± 2.90)
Purposeful life	pre-test	34.11 (± 5.03)	34.93 (± 5.32)	30.07 (± 3.14)
	post-test	47.11 (± 3.00)	41.13 (± 5.48)	33.21 (± 3.46)
	Follow up	45.94 (± 3.09)	40.60 (± 5.76)	35.14 (± 3.13)
Environmental dominance	pre-test	30.66 (± 4.39)	30.13 (± 3.99)	29.92 (± 5.95)
	post-test	34.61 (± 2.91)	35.26 (± 2.84)	31.21 (± 2.63)
	Follow up	34.22 (± 2.48)	34.66 (± 2.89)	31.21 (± 2.86)
Autonomy	pre-test	30.72 (± 3.25)	29.73 (± 4.51)	27.92 (± 2.70)
	post-test	33.27 (± 4.14)	34.13 (± 2.94)	30.71 (± 3.14)
	Follow up	33.55 (± 4.25)	33.60 (± 2.99)	30.35 (± 2.34)
Individual development	pre-test	35.88 (± 4.21)	36.06 (± 3.36)	35.71 (± 5.07)
	post-test	46.27 (± 3.26)	41.73 (± 3.91)	32.85 (± 2.03)
	Follow up	45.83 (± 3.68)	41.26 (± 3.75)	34.14 (± 2.38)

Table 3. Results of repeated measurement variance analysis for psychological well-being

component	Source	F	*P*-value	Etta squar	power
Self-acceptance	Test	89.619	0.001	0.671	1.000
	Test interaction ×group	3.749	0.007	0.146	0.872
Positive relationships With others	Test	32.530	0.001	0.425	1.000
	Test interaction ×group	4.426	0.003	0.167	0.925
Purposeful life	Test	88.083	0.001	0.667	1.000
	Test interaction ×group	11.620	0.001	0.346	1.000
Environmental dominance	Test	19.745	0.001	0.310	1.000
	Test interaction ×group	1.900	0.117	0.080	0.554
Autonomy	Test	20.932	0.001	0.322	1.000
	Test interaction ×group	0.611	0.565	0.027	0.194
Individual development	Test	32.600	0.001	0.426	1.000
	Test interaction ×group	21.730	0.001	0.497	1.000

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Table 4. Bonferroni post hoc test results in psychological well-being

Variable	Control group	Comparison group	Moderated Means Diff.	SD	*P*-value
Self- acceptance	Combined therapy group	Cognitive-behavior therapy	4.281	1.380	0.010
	Combined therapy group	Control group	8.807	1.407	0.000
	Cognitive-behavior therapy	Control group	4.525	1.467	0.011
Positive relationships with others	Combined therapy group	Cognitive-behavior therapy	4.233	1.412	0.013
	Combined therapy group	Control group	10.754	1.439	0.000
	Cognitive-behavior therapy	Control group	6.521	1.501	0.000
Purposeful life	Combined therapy group	Cognitive-behavior therapy	3.500	1.209	0.018
	Combined therapy group	Control group	9.579	1.232	0.000
	Cognitive-behavior therapy	Control group	6.079	1.285	0.000
Environmental dominance	Combined therapy group	Cognitive-behavior therapy	-0.189	0.931	1.000
	Combined therapy group	Control group	2.381	0.949	0.048
	Cognitive-behavior therapy	Control group	2.570	0.990	0.038
Autonomy	Combined therapy group	Cognitive-behavior therapy	0.030	0.943	1.000
	Combined therapy group	Control group	2.852	0.961	0.015
	Cognitive-behavior therapy	Control group	2.822	1.003	0.022
Individual development	Combined therapy group	Cognitive-behavior therapy	2.978	0.920	0.007
	Combined therapy group	Control group	8.429	0.938	0.000
	Cognitive-behavior therapy	Control group	5.451	0.978	0.000

Mohammadi Khashouei & et al, Melton, Ataee Moghanlou & et al., and Anna & et al (8-11). The results of this study are in line with the results of studies conducted by Tannenbam (13), Irons and Lad (14), Khayatan & et al (15).

The results of this study are in line with the Rafiee & et al., (12) studies in the field of ACT and compassion-focused therapy.

In this research, cognitive behavioral therapy has been used for comparison purposes. The results of the effectiveness of the cognitive-behavioral approach in this study are consistent with the results of the Dadras (17) and Hermans (18).

Conclusions

The finding of the present study showed that, the combined therapy sessions of the compassion-focused and ACT and CBT group can be used to promote psychological well-being in diabetic patients.

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Conflict of Interest

The authors declare that there are no conflicts of interest.

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