



Comparison of the effectiveness of hope-based therapy and Acceptance and Commitment Therapy on depression and death anxiety in patients with type 2 diabetes

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Abstract

Aim: The aim of this study was to compare the effectiveness of hope-based therapy and Acceptance and Commitment Therapy on depression and anxiety death of patients with type 2 diabetes. **Method:** This study was implemented using a pre-test and post-test quasi-experimental design with a control group. a total of 45 patients with type 2 diabetes referred to the Iranian Diabetes Association who met the inclusion criteria were selected by available sampling method and randomly assigned to the control and experimental. For the experimental group, hope-based treatment and Acceptance and commitment Therapy was performed but the control group did not receive any treatment. both groups completed the Depression Inventory (Beck et al., 1996) and the Death Anxiety Inventory (Templer, 1970) before and after the clinical intervention. Data were analyzed using mixed analysis of variance. **Results:** The results showed that the effectiveness of hope-based therapy and acceptance and commitment therapy reduced depression and death anxiety in patients with type 2 diabetes. It was more effective than hope-based treatment in patients with type 2 diabetes. **Conclusion:** The results of this study suggest that in addition to follow up medical treatments, therapy based on acceptance, commitment and hope therapy can be used to improve depression and death anxiety in patients with type 2 diabetes, thus preventing the complications of the disease.

Keywords: *Depression, Death Anxiety, Hope-Based Therapy, Acceptance and Commitment Based Therapy, Diabetes.*

Introduction

Diabetes is one of the most common diseases in Iran and the world; it is chronic, progressive, and costly and causes many complications. This disease, one of the major health challenges, widely affects patients' lives and brings much psychological pressure in itself, and people have to deal with it for the rest of their lives (Mosizadeh, Adib, and Motevali, 2009). On the other hand, determining the type of diabetes depends on the disease's conditions. Research has shown that more than ninety percent of people with diabetes are suffering from the second type. Considering that type 2 diabetes is caused by the inability of the body to produce or use insulin (Zhang, Chen, and Chen, 2008). It can be associated with long-term complications such as decreased mental health, lack of proper follow-up of drug and dietary treatments (Gonzalez & Pirot, 2008), increased mortality (Fisher, 2008), and high healthcare costs (Novasurya, Khan, & Igde, 2007).). Diabetes is a psychosomatic disease that, with its associated complications and problems, has a great impact on the quality of individual and family life and is responsible for at least ten percent of the total healthcare costs of many countries in the world (Ramesh, Sakani, and Ghazian, 2020). Among the psychological aspects associated with diabetes, negative emotions have been emphasized (Boveini, 2003). Accordingly, negative emotions caused by depression and anxiety are not only the cause of diabetes but also cause emotional responses (Lett, 2005).

The theory of existential psychology seeks the cause of human misdeeds in fundamental existential anxieties, the most important of which is death anxiety. He sees the cause of people who have psychological disorders in the fact that these people do not face their important existential issues, and by denying and not facing them, they are apparently trying to take care of themselves, while this denial turns into neurotic anxiety. It should be noted that humans protect themselves through methods to avoid facing death, but this anxiety remains in them and appears in many psychological conditions. Extensive studies have found traces of the presence of death anxiety in anxiety disorders, including specific phobia, social anxiety, separation anxiety, and generalized anxiety (Malekshahi Biranvand et al., 2019).

Hope-based therapy is one of the newest treatment approaches that can improve the quality of life in incurable and chronic patients (Snyder, 2000; Gravel & Porter, 2007). In a study, Venand (2018) emphasized the importance of hope in the well-being of patients with diabetes; Most researchers have also focused on the relationship between hope and psychological structure, and few have directly related hope to physical outcomes (Gallagher, 2018). Also, instead of focusing only on human weaknesses, hope-based therapy is based on a positive psychology approach and individual strengths (Parsakia et al., 2022). Hope is introduced as a meaningful element in life and helps people to adapt to illness, reduce pain and suffering, and increase the quality of life and mental and social health. Hope is an essential element in the life of chronic patients with high effects in adapting to the disease and plays a major role in the quality of life. Hope can influence different stages of the disease and is defined as an inner force that can enrich life and give patients hope for a more distant perspective (Abdi, Taghdisi, & Naghdi, 2009).

Another treatment that can be used for people with diabetes is treatment based on acceptance and commitment. In this therapy, clients are guided to see thoughts and emotions as separate from themselves, which allows therapists to correct relational

frameworks and negative cognitive states. This therapeutic strategy is similar to externalizing in narrative therapy (Roland, 2010). Acceptance and commitment therapy is a form of clinical behavior analysis used in psychotherapy (Hayes, Stravasali, & Wilson, 2013). Considering the multidimensional nature of diabetes and mental disorders associated with this disease, a strong and comprehensive intervention to improve psychological disorders is necessary. Since diabetes brings psychological damage, it may reduce adherence and motivation to treatment; Considering the importance of diabetes and its high prevalence, as well as the high costs of treatment, it seems that psychological interventions can keep the patient in the treatment line and on the path to recovery. Therefore, by using hope therapy and treatment based on acceptance and commitment, the individual's motivation for treatment will increase, and with the increase in motivation for treatment, the individual's self-care will increase. As a result, self-care behaviors and quality of life are improved, and death anxiety and depression are reduced.

In this research, by using two treatment methods based on acceptance and commitment and hope-based treatment, the effectiveness of the two treatment methods has been compared, and which method will be more effective?

Method

This study was implemented using a pre-test and post-test quasi-experimental design with a control group. a total of 45 patients with type 2 diabetes referred to the Iranian Diabetes Association who met the inclusion criteria were selected by available sampling method and randomly assigned to the control and experimental. For the experimental group, hope-based treatment and Acceptance and commitment Therapy was performed but the control group did not receive any treatment. both groups completed the Depression Inventory (Beck et al., 1996) and the Death Anxiety Inventory (Templer, 1970) before and after the clinical intervention. Data were analyzed using mixed analysis of variance.

Results

The degree of curvature and elongation is normal. According to Keller's studies (2015), the normal limit of elongation and skewness is between 2 and -2, and if the value of skewness and elongation is between these two, it indicates the normality of the investigated variables. In other words, it shows that the skewness and stretching in the data will not seriously disturb the results.

There is a significant difference in the depression variable both between the times (pre-test, post-test, and follow-up) and in the interaction of time and group ($F(4,84) = 3.564$ $P < 0.001$). In other words, the effect of time and the interaction of time and group in the dependent variable is significant, and there is a necessary condition to perform mixed variance analysis. Since the sphericity of the variance-covariance matrix was not accepted through the Moheli sphericity test, the assumption of sphericity is rejected. Therefore, the Greenhouse-Geisser test was used as a multivariate statistical index to test the intragroup effects of time (before, after, and follow-up).

The intergroup effect is significant ($P < 0.001 = 492.37$ $F(2,41)$). This finding shows the comparability of the depression variable among the experimental groups of hope-based treatment and treatment based on commitment and acceptance, as well as the control group. In other words, the type of intervention affected the depression variable of the study group, and this difference is significant, at least between the two study groups. The partial value of Eta also shows that almost 23% of the changes in the depression score can be explained by the treatment groups. The averages were compared according to the significance of the

difference between the groups. The sample sizes were equal in the three studied groups, and the assumption of homogeneity of variances was also applied. Therefore, Tukey's post hoc test was used to compare depression scores among groups.

There is no difference in the depression score between the experimental groups of hope-based treatment, an experimental group of treatment based on commitment and acceptance, and the control group ($P < 0.001$). However, there is a significant difference between the scores of the experimental group of treatment based on commitment and acceptance and the control group in terms of depression score, and the average score of depression in this group is almost 8 points lower than the control group ($P < 0.001$).

There is a significant difference in anxiety variables between time and in the interaction of time and group. In other words, the effect of time and the interaction of time and group in the dependent variable is significant. There is a necessary condition to perform mixed variance analysis.

The between-group effect is not significant. The obtained findings show the incomparability of the anxiety variable among the experimental groups of hope-based treatment and treatment based on commitment and acceptance and the control group. In other words, the type of intervention did not affect the anxiety variable in the studied groups. Therefore, due to the non-significance of the difference between the groups, it was optional to compare the groups' averages.

Conclusion

The present study compared the effectiveness of hope-based therapy and acceptance and commitment-based therapy on depression and death anxiety in patients with type 2 diabetes. According to the first hypothesis of the research, the difference in the effectiveness of hope-based treatment and treatment based on acceptance and commitment to the depression of patients with type 2 diabetes was investigated. The results showed that both interventions had positive results in improving the depression of patients with type 2 diabetes, and in the difference in effectiveness between the two treatment groups based on acceptance and commitment and hope-based treatment in improving the depression of patients with type 2 diabetes compared to the treatment based on acceptance and commitment in improving the treatment of depression have obtained better results and have been more effective. According to the obtained results, it can be concluded that treatment based on acceptance and commitment and hope-based treatment reduce depression in people with type 2 diabetes.

ACT is a short-term and structured intervention. Like cognitive therapy, the goal of treatment is not to change the content of thoughts but to create a different attitude or relationship with thoughts, feelings, and emotions. It includes maintaining full and moment-to-moment attention and having an accepting and non-judgmental attitude. For the first time, this research has examined acceptance and commitment therapy in improving depression in diabetic patients in Iran. According to the research results, this treatment method can be used as a selective psychotherapy method and complementary to medical treatment to reduce depression in diabetic patients. Both methods have strong theoretical and research support and use effective strategies to improve various characteristics, including the emotional characteristic of anxiety. As a result, both methods can reduce death anxiety in type 2 diabetes patients.

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