



Research paper

## The effect of Acceptance and Commitment Therapy on Experiential Avoidance, Alexithymia and Emotion Regulation in Patients with Type One Diabetes, (Case Study)

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### Abstract

This study was to investigate the effect of acceptance and commitment therapy (ACT) on experiential avoidance, alexithymia and emotion regulation in patients with type 1 diabetes. The statistical population was patients with type one diabetes that referred to Shariati hospitals from February to June 2022. Six participants were selected voluntarily according to research entry criteria. Data were collected using the Avoidance Questionnaire, Toronto Alexithymia Scale, Emotion Regulation, and Glucometer. Participants underwent eight one-hour protocol sessions after baseline, and two follow-ups were performed at one and three months after the end of treatment. The results showed that the treatment was effective in reducing the level of avoidance, alexithymia and emotion regulation. This treatment was also effective in lowering blood sugar. Findings represented acceptance and commitment therapy provides the necessary conditions for adaptation and acceptance and increases the rate of self-care behaviors in individuals

**Keywords:** ACT, emotion regulation, experiential avoidance, alexithymia, type one diabetes

### Introduction

Diabetes is one of the most common metabolic diseases, which affects the body and mind of the affected person. One of the basic problems in the field of diabetes treatment is paying too much attention to biological treatments and not paying attention to psychological treatments (Matthew, 2020). Among the important psychological factors in patients with diabetes are avoidance of experience, dyslexia and lack of emotion regulation. Experiential avoidance is the reluctance and inattention to relate to personal experiences such as bodily sensitivities, recalling memories, emotions, and struggling to avoid unpleasant experiences (Bremner, 2021). Avoiding mental emotions, physical sensations, etc. through negative reinforcement in a short period of time causes relaxation, which subsequently leads to maintaining avoidance throughout life. Alexithymia is related to the lack of description and recognition of emotions in people with diabetes and creates the necessary preparation for the occurrence of emotional and mood problems. Acceptance and commitment therapy means embracing all of life's experiences, all of which people with diabetes avoid moving toward a quality and desirable life. It teaches people to stop fighting life's sufferings and not limit their focus to unpleasant experiences. The important problem of diabetic patients is not acting according to self-care practices or avoiding the experience. However, the purpose of the present study regarding the effect of treatment based on acceptance and commitment on alexithymia, avoidance of experience, emotion regulation and simultaneous reduction of blood sugar in diabetic patients

has not been addressed. Therefore, it is hoped that it will be possible to create changes in the treatment protocols of patients with diabetes. The hypothesis was that the acceptance and commitment therapy reduces the avoidance of experience, alexithymia, and emotion regulation of type one diabetes patients.

## **Method**

This experimental single sample method study consisted of six outpatients aged 40 to 60 years with type one diabetes in 1401 that voluntarily participated. Type one 1 diabetes, under a blood sugar therapy, high score in alexithymia and avoidance of experience were as entry criteria. In the baseline we measured twice with an interval of one week and then acceptance and commitment therapy was implemented for 8 sessions of 60 minutes individually. Then the blood sugar levels were measured in the fasting. Finally, the evaluation was carried out in two follow up. All ethical considerations, including the consent of the participants, protection of personal privacy, keeping information confidential and the possibility of withdrawing from the experiment at any time, were observed. The data were analyzed through formulas of percent improvement, effect size, stability compartment and visual analyses.

**Multidimensional Experience Avoidance Questionnaire**, (Gamez et al., 1998) with 62 items has a Likert scale of 0-5 and the cutoff score is 150. The alpha coefficient according to Cronbach's method is 0.95, and the cross-correlation of this questionnaire with the acceptance and action test is 0.74. Abasi, et al., (2011) reported a reliability of 0.85 using Cronbach's alpha method.

**Toronto Alexithymia Questionnaire** (Bugby, et al., 1994) with 20 items has a Likert scale of 0-5 and the cut-off score is 32 with reliability by Cronbach's alpha method, 0.87 and significant content validity. Besharat, (2012) reported a reliability coefficient of 0.87 using Cronbach's alpha method.

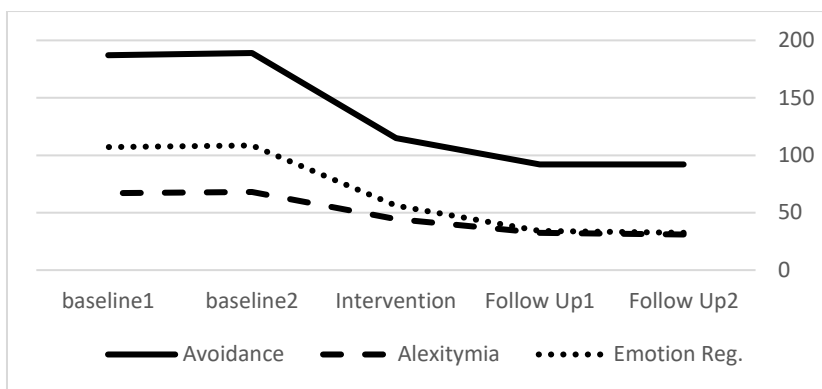
**Garnofsky Emotional Cognitive Regulation Questionnaire** (Garnofsky and Kraij, 2016) has 36 items with a 0-5 Likert scale and the cutoff score is 108. with reliability by Cronbach's alpha coefficient is 0.81 and concurrent validity with DASS-21 scale is 0.89. Besharat, (2015) reported a reliability coefficient of 0.89 using Cronbach's alpha method.

**GCM Glucometer** measures fasting blood sugar above 130 in the morning.

**Protocol of acceptance and commitment Therapy** Steven Hayes (2019) has been recently edited in 8 sessions by purposes, contents and exercises.

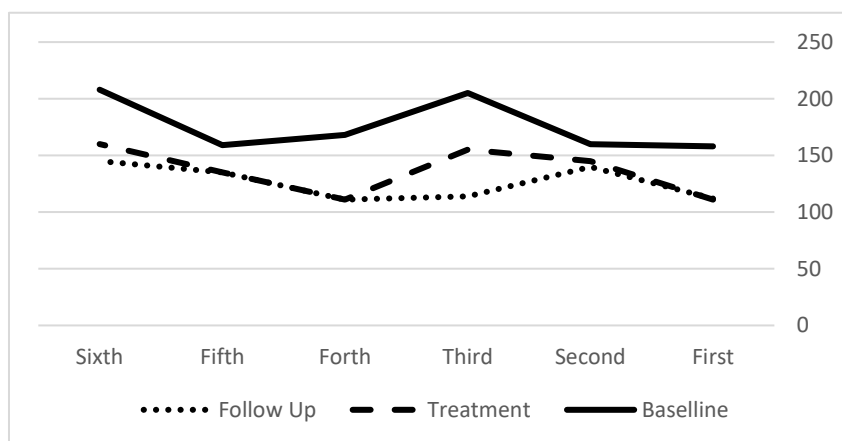
## **Results**

In Figur(1) the percentage of data inside the stability chamber (between 60 and 100%) shows effectiveness in treatment. Effect size index based on non-overlapping data (PND) means the number of points below the baseline.



**Figure 1: Changes in experience avoidance, dyslexia and emotion regulation over time**

As can be seen in figure 2), blood sugar has changed significantly during the follow-up stages. According to the effect size index based on non-overlapping data (PND), the points in the follow-up phase are lower to the measurement.



**Figure 2: Blood sugar changes of participants from baseline to follow-up**

## Discussion and Conclusion

Findings represented acceptance and commitment therapy was effective on the avoidance of experience, alexithymia and emotion regulation of type one diabetes. Meanwhile, repeated measurements of blood sugar also showed the correction of psychological components correctly can take an important step in controlling metabolic diseases. Through the results of this study, we can see that psychological factors are much more effective in the treatment of physiological diseases than we thought so far, and by treating them, the recovery of physiological diseases can be accelerated. The limitations of the present study were the absence of a control group and the possibility of generalization to large groups. It is suggested that experimental designs with peer groups should be observed in examining the effect of the above treatment on psychological characteristics.

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#### **Conflicts of interest**

Author found no conflict of interests.



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