

## Investigation on Emotional-Freedom Technique Effectiveness in Diabetic Patients' Blood Sugar Control

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### Abstract

Chronic diseases are a major cause of death and illness in the world and diabetics is in sixth rank. As Harati (2009) noted the prevalence of 2nd type diabetes in Iran has accelerated so that more than 1 percent of Iranians over age 20 are affected by it each year. The present study is done in order to improve glycemic control in diabetic patients, reducing the need for costly medical services and enhance their mental health and remove the burdens of the patients and the community. The research method selected 30 diabetic patients of Imam Hossein in Tehran with testing (pretest - posttest of control group) and sampling method in 2012 and randomly classified them into two groups : group1 (treated with EFT- method by Gary Craig , 1995) and the control group . Testing of blood glucose, HbA1C was used as a tool for gathering information for one - way analysis of covariance univariate. The results ( $F_{ob}:7.24 > F_{cr}:4.22$ ) showed that EFT method was effective in controlling blood glucose levels in diabetic patients.

**Keywords:** diabetes – HbA1C test – Emotional freedom Technique(EFT)

### 1. Introduction

Chronic diseases are considered as major causes of death in the world, diabetes is a chronic and complex disease, which is ranked sixth in this respect (Samari, 2012). Diabetes is a disorder of metabolism so that your body is not able to make full use of sugar. In many cases clinical protests of diabetes remains secret even if the inherited characteristics are detectable by laboratory tests. Clinical signs include:

1. Inability to metabolize carbohydrates
2. Significant increase in blood glucose (hyperglycemia)
3. Excretion of varying amounts of glucose in the urine (glycosury)

The cause of diabetes is not known, but it is almost known that all of the endocrine system, especially pancreas is involved in this disease. The pancreas is a collection of microscopic cells called Langerhans islets. The cell islets secrete a hormone called insulin, which is essential for the body's use of carbohydrates. (Aminpour, Salar Kia, and Sediq,2001).

Each type of disorder that causes complete cessation of insulin production in the pancreas is insulin dependent diabetes (IDDM) or first type which was previously known as juvenile diabetes, because the signs and protests may appear in childhood or adolescence.

If you have any serious disorder of the pancreas to produce enough insulin or hyperglycemia appears and insulin resistance is created at the cellular level, it is called non-insulin dependent diabetes mellitus (NIDDM) or diabetes mellitus and its symptoms appear later in life. (Aminpour, Salarkia, and Sediq, 2001).

Insulin production in Type II diabetes is different. The differences are in additional production of insulin which usually results in hyperinsulinemia.

This is related to insulin resistance at the cellular level. Another difference is the lack of sufficient insulin production which is sometimes normal and sometimes lower than normal. (Aminpour, Salarkia, and Sediq, 2001). The prevalence of diabetes in the age group 64-25 years was reported in two million Iranians (Esteghamaty, Gouya, Delavari, Alikhani, Alaedini, Safaie, Forouzanfar, and Craig, 2008).

### 1.1 Method of Therapy

But how can we help those who suffer from diabetes? One way to get rid of (EFT) is to reduce stress and increase mastery over emotions and, consequently. When one gets stress and excitement, the body thinks you're exposed to danger and glucose quickly increases in the bloodstream for supplying energy. (Church & Abel, 2012).

EFT technique is a combination of ancient Chinese and modern psychology. This method was introduced by Roger Callahan in 1980 and was modified and described by Gary Craig, American Psychologist (1995), (Look and Wilkes, 2005). EFT is one form of a counseling intervention that results from the theory of alternative medicine such as acupuncture. (Cali, 2011).

This method is a powerful transformation of self-help tools that hundreds of thousands of people around the world have used it. The self-healing technique helps improve unique physical and emotional problems such as diabetes. (Solomon, 2011)

EFT is actually a very simple method that anyone can easily learn it and apply it for himself. This method often works where other methods do not work or are not used as often and has very fast and lasting effects and is authentic. (Solomon, 2011). It is also one of the most efficient and most genuine therapeutic techniques. (Masbaum and Nyberg, 2000). Fisher's study in 2012 showed that the method is effective and the results of EFT on glycemic control often remain stable in diabetic patients.

Negative emotions and thoughts block the flow of energy in the body's energy Meridian –Meridians; the ways or canals that energy of human's body flows into - ( Masbaum and Nyberg , 2000). In this method, any biologic excitement block are cleared from biological system of body and, mind and body are in balance. So the patient gets rid of the disease (Solomon, 2011). In this method nine parts of the body should be tapped:

1. over the head
2. Beginning of eyebrow (left or right)
3. End of eyebrows (left or right)
4. under eye circles
5. below Forecasts
6. Chin
7. beneath the collar bone (left or right)
8. Parallel to Nipples Armpit (left or right)
9. Wrist (Pandey, 2011)

One must also slowly repeat positive imperative phrases to himself. (Campbell, 2009).

### 1.2 Topic and question of research

Research topic includes: Effectiveness of emotional – freedom technique on glycemic control in diabetic patients

The main question of the research include:

1. Can EFT treatment method for getting rid of excitement be effective in controlling blood sugar in diabetics?

Since the review of Harati (2009) showed that more than 1 percent of Iranians have type 2 diabetes per year over 20 years, it is needed to investigate this disease. But how can we help those who suffer from diabetes? (Church & Abel, 2012).

Using psychotherapy approaches to effective, medication and chronic disease in general and diabetes in particular are important. (Shapiro, Astin, Bishop and Cordova, 2005).

### 1.3 Purpose

The aim of the present research is to find new ways of treatment in diabetes since diabetes has been increasing in recent years in Iran and have heavy, psychological, social and physical consequences, the importance of this study is clear. (Hamid, 2011 ; Van Derven, Weinger, Snoek, 2002)

The purpose of the present study is to improve or modify the symptoms of diabetic patients and thus reduce or prevent secondary illnesses such as depression and anxiety due to the disease in patients. If these methods are successful, this research can also be a major step towards reducing the burden of patients and the society.

The main objective of the study was to:

Determine the effect of Emotional – freedom technique on glycemic control in diabetic patients the main hypothesis of this study was:

1 – Emotional – freedom technique to reduce blood sugar levels in diabetics.

## 2. Method

Considering that the aim of the study was to determine the efficacy of emotional freedom technique on glycemic control in diabetic patients, research was done by semi experimental method with pre -test - post-test of control group.

The population of the study consisted of all patients with type II diabetes who referred to endocrine department of Imam Hossein Hospital in October and November 2012 in Tehran.

The study sample included 30 patients with type II diabetes admitted to hospital Imam Hussein in Tehran in October 2012, and all of them were on full dose of insulin before and were selected the sampling method as follows :

Researcher selected 30 people who have suffered from diabetes type II, and then they randomly classified in the two groups (Group 1: treated using EFT) and the control group hire.

Generally members of the sample were 27 female and 3 male diabetic patients in the age range of 40 to 65 years. All of them are married in terms of marital status and have a degree of diploma of education and were from middle class.

The researcher acted as follows to collect required data:

First, she visited the endocrine department of Imam Hossein Hospital in Tehran in October 2012 and the officials promised to assist clients to improve the diabetic condition. Patient were introduced to the researcher by confirming their disease by an endocrinologists doctor. 30 of total 125 who had high blood sugar and HbA1c > 6 were selected (before using insulin) by the sampling method.

Then they prepared a list of the names and then a number from 1 to 30 was assigned each name listed.

Then, the numbers were written on a separate small sheet of paper, folded and thrown into a plastic bag. The researcher stirred the papers and one of them was accidentally removed. This was repeated several times until all 30 papers inside the plastic bag were removed. (Simple random sampling). The names of the selected numbers were in fact the names of individuals in the study sample. The first 15 became members of the experimental Group - 1 (treated with EFT), and second 15 were in Group - 2 (Control group), respectively. All members of the sample were selected based on access but the assignment of them in the experiment and control was done randomly.

Then all members of the sample group, before treatment meeting, took blood glucose, HbA1C tests by the medical oncologist of Imam Hossein Hospital in December 2012 (As a pre-test) and then at the end, the researcher did the same tests by help of the endocrinologist at the end of the 12 sessions of the sample members in March 2012 (as a test). Members of the control group were assessed by blood glucose, HbA1C test, at the same time.

### 2.1 Variables

The variables in this study included: therapeutic method of Emotional freedom technique (Independent variable), blood sugar levels (Dependent variable) and education (Control variable). The instrument used in this study was chosen with respect to the original variables, glycosylated hemoglobin (HbA1c), respectively.

## 3. Glycosylated Hemoglobin (HbA1C) Test

Diabetes A1C test is for assessing the patients' condition. This test measures the sugar attached to red blood cells. Life span of red blood cells is three months, so this test should be performed once every 3 to 6 months to assess glycemic control. Target is A1C levels between 5/6 % to 7%. (Diabetes Research & wellness foundation, 2013).

### 3.1 Method and assessment of Glycosylated hemoglobin test

Hemoglobin is a combination, which is involved in transporting of oxygen in the body. Hemoglobin A1C, is a part of hemoglobin binds to glucose. Changes of A1C Diabetes to information is important, because it is a sign of hyperglycemia and hypoglycemia is increased and decreased. (Saber and Milanibonab , 2004).

HbA1c changes are important for diabetes. Its amount does not change by carbohydrate diet and insulin injections and is a proper factor for caring the blood sugar level (Aminpour, Salarkia and Sediq, 2001).

When hemoglobin and other proteins are exposed to high concentrations of glucose, glucose will bind to these proteins in a slow and non-enzymatic process.

Glycosylated hemoglobin, or HbA1C, depends on the blood glucose concentration during the 120-day life span of red blood cells. So, the amount of HbA1c levels is an index of average blood glucose, over 2 to 3 months before. Although red blood cells have been exposed to a higher concentration of blood glucose, HbA1C level would be higher. Therefore, a useful indicator for assessing how much HbA1C blood glucose control over the long term.

Such a meal before or stress tests , no effect on glycosylated hemoglobin levels , hence at any time of day without the need for prior preparation by taking a blood sample can be determined by the amount . (Nasrollah Zadeh, 2003).

At the beginning of the study intervention on the testing of all experimental group and a control group of blood glucose (A1C) were taken in December 2012 (pre-test).

After 12 sessions of intervention on the experimental group again (three months after pre-test) of all experimental group and the control group in March 2012, blood glucose (A1C) were performed by specialist glands (post-test).

## 4. Results

Data was analyzed statistically using one – way analysis of covariance univariate.

**Table 1.** The results of one – way analysis of covariance univariate(EFT therapy)

Source	Sum of squares	df	Mean square	F	Partial Eta squared
Covariate (Pre Test)	0.87	1	0.87		
Independent variable (Experimental Group-Control Group)	5.87	1	5.87	7.24	0.21
Error	21.06	26	0.81		
Corrected Total	28.01	28			

Taking into consideration calculated index(F:7.24) is greater than F inded with 1 and 26(4.22) freedom degrees(df) therefore null hypotheses on the bases of equivalence between after test markes gained by both experimental group and the witness group (control) after pre test markes effects deletion with 0.95 confidence are rejected. After test adjusted markes average (after pre test effects deletion) are shown in table 2.

**Table 2.** Mean Post test scores of HbA1C (EFT therapy)

Research group	Mean post test	
	Without removed pre test effect	With removed pre test effect
Experiment	7.87	7.88
control	8.79	8.78

In other words, blood sugar tests average (HbA1C) after excitement release treatment in two tested groups (after pre – test mark I.E,7.88,deletion) in the meaning full words would be lesser than witness group (control group)(after pre test markes average effects deletion:8.78) which Emotional freedom technique for them have not been operated / examined . therefore, it would be assumed that excitement release treatment method would cause to degrees (control)blood sugar in diabetic patients.

## 5. Discussion and Conclusions

Now, in order to draw conclusions from the findings, the research questions posed and the results of related research

hypotheses and research the answers to these questions will be discussed:

The research question was if Emotional freedom technique lowers (can be effective in controlling) blood glucose levels in diabetic patients?

A hypothesis was put forward based on this question and the resulted in:

1 – Emotional freedom technique causes reduction of blood sugar levels in diabetic patients.

These results were consistent with the findings of Budwig (2007), Abel (2012), Church (2012), Look and Wilkes (2005) and Clarke and Goosen (2009), Solomon (2011), Pauling (2007), Masbaum and Nyberg (2000) and Fisher (2012) as reported in the excitement of getting rid of therapies to reduce blood glucose levels in people with diabetes is effective coordination. Present findings probably indicates that EFT method In Craig opinion, would the release blocked Meridians or body energetic canals, would lead to body and psyc to equilibrium and finally would cause normal / would spirit and lead to release of patients.

## 6. Suggestions

- It is recommended that this study be replicated by other researchers for diabetic population in other cities.
- conducting research in other physical, metabolic and glandular disorders.
- conducting research on samples with more participants.

## 7. Recommendations

- It is recommended that this research be conducted in the diabetic population and the results be compared with the results of this study .
- It is recommended that research be conducted in patients with type I diabetes and the results be compared with the results of this study
- It is recommended that another research is done related to blood glucose in diabetic.
- It is recommended that another research is done events related to blood sugar two hours ( two hours after a meal ) diabetes and the results are compared with recent research findings .
- It is recommended that another research is done in relation to comparison subjects age.
- It is recommended that another research is done related with comparing experience background of having diabetics.
- It is recommended that another research is done in relation to gender (male and female ) in diabetics.
- It is recommended that further research is done with respect to other disorders like anxiety and depression.

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