



“EFFECTIVENESS OF DURATION OF SITTING BREATHING EXERCISE ON GLYCEMIC EFFECT AMONG TYPE 2 DIABETES MELLITUS PARTICIPANTS”

Nursing

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ABSTRACT

The aim of the study was to assess the effectiveness of duration of sitting breathing meditation exercise with usual management for the type 2 diabetes mellitus participants. True experimental design -2 interventional group and control group was selected for the study. The participants were 30 type 2 diabetes mellitus clients selected at Munichalai, Sellur and Thathaneri at Madurai. Based on cluster random sampling method community area were divided into I,II and III and Group I, Group II and control group respectively. Baseline variables and blood glucose level fasting and post prandial were assessed after obtaining informed consent from each participant. Intervention group were taught and instructed to practice the same for 10 minutes per day and control group was instructed to follow the routine (treatment) prescribed medications. The post test was assessed for all the three groups. The results found that the intervention group 1 who practiced the sitting breathing meditation exercise for 20 minutes a day achieved good glycemic control that group II who practiced sitting breathing meditation exercise for 10 minutes and then control group who do not practice sitting breathing meditation exercise.(P<0.05).

The study concludes that practicing sitting breathing meditation exercise 20 minutes a day has the beneficial effect on blood glucose level.

KEYWORDS:

Type II Diabetes mellitus, sitting Breathing Meditation exercise, glycemic effect.

INTRODUCTION

Happiness is nothing more than good health. Diabetes mellitus is a chronic medical condition which means it can last a life time (WHO) Diabetes mellitus is predicted to become the leading cause of morbidity and death in the coming decade. India has a high prevalence of Diabetes mellitus and the numbers are increasing at an alarming rate. Health care workers have more responsibility to create awareness regarding Diabetes mellitus and control its prevalence. Diabetes mellitus (DM) seems to be known since the evolution of civilization. Sushruta (500 BC) an ancient Indian physician had described it as 'Madhumeha' (excretion of sweet urine). Changes in diet, life style, increased stress are the increase prevalence of DM in Indians and people of developed countries. These studies indicated that the maintenance of traditional dietary and living pattern should get high priority in a national health care programme of developing countries. It has been estimated that worldwide, approximately 285,000,000 persons have diabetes mellitus (DM) and this number is expected to rise to 439,000,000 by 2030. This sharp increase in prevalence is partly due to the ageing of the population and the increase in the number of people having overweight and who are physical in active. Research has found that, meditation, diaphragmatic breathing meditation exercise reduces oxidative stress, reduces glycemia and increases insulin sensitivity, while it can be incorporated as an add on therapy to standard care in glycemic parameters in type 2 diabetes.

MATERIALS AND METHODS

Research design for this study was true experimental pre test post test control group design. The study was conducted among type 2 diabetes mellitus clients residing at Munichalai, Sellur and Narimedu community area after Institutional Ethical Committee approval and necessary permission from the authorities to conduct the study. The total samples consist of 30 who have been diagnosed as type 2 diabetes mellitus. Based on cluster random sampling method the samples were divided into interventional group I, group II and control group (10 in each group). The inclusion criteria for the samples were the patients those who are diagnosed as type 2 diabetes mellitus both male and female having post Prandial blood glucose level > 140 mg/dl taking regular medications as prescribed. The tools used for the study as follows:- Section I- Demographic and baseline variables, Section II- Biophysiological measurements variables such as Fasting blood

glucose, post Prandial blood glucose, systolic and diastolic blood pressure. The sitting breathing meditation exercise were taught and instructed to follow 20 mins per day by the group I type 2 diabetes mellitus participants and 10 mins per day by the group II type 2 diabetes mellitus participants for twelve weeks and control group were instructed to follow the routine management. Post test assessment Fasting blood glucose, post Prandial blood glucose, systolic and diastolic blood pressure using glucometer and sphygmomanometer, hours of sleep, appetite was assessed by semistructured interview method.

RESULTS

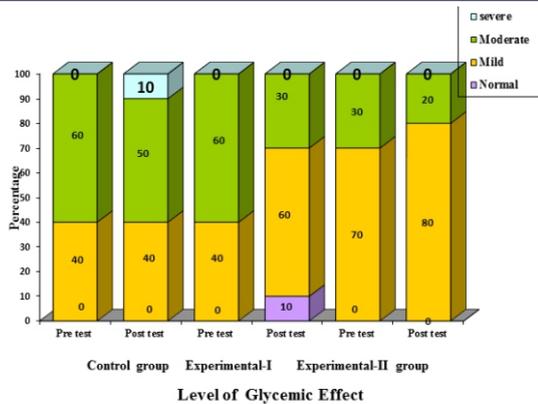
During the period of the study data were collected from 30 subjects. Among them 20% were males and 80% were females. The result of the study revealed that there was a significant reduction in blood glucose level among intervention group I than the intervention group II and control group. Glycemic level among type 2 diabetes mellitus group I participants who practiced 20 minutes sitting breathing meditation exercise mean blood glucose level were 225.5 and 174.10 in pretest and post test respectively. This statically significant difference was confirmed using student paired t- test (P=0.01).

DISCUSSION

The results of the study revealed the significant reduction of blood glucose level after practicing sitting breathing meditation exercise for 20 minutes daily after the breakfast than those who practiced only 10 minutes of the same.

Table-1. Frequency and percentage wise distribution to assess the level of Glycemic Effect.

Level of	Control group		Experimental-I group				Experimental-II group					
	Pre test		Post test		Pre test		Post test		Pre test		Post test	
	f	%	f	%	f	%	f	%	f	%	f	%
Normal	-	-	-	-	-	-	1	10	-	-	-	-
Mild	4	40	4	40	4	40	6	60	7	70	8	80
Moderate	6	60	5	50	6	60	3	30	3	30	2	20
Severe	-	-	1	10	-	-	-	-	-	-	-	-
Total	10	100	10	100	10	100	10	100	10	100	10	100



CONCLUSION

A considerable portion of the patients with diabetes (20 – 40%) experience emotional problem which vary from disease specific worries such as fear of diabetes mellitus and worries about compliances to more general symptoms of distress, anxiety and depression. These problems are not only unpleasant for the person's experiencing that, studies shows that co-morbid emotional distress in patients with diabetes mellitus is associated with reduced quality of life, reduced glycemic control and subsequent adverse cardiovascular outcomes and even mortality. From the result of the present study we conclude that the sitting breathing meditation exercise program was found to be effective as a complementary therapy in reducing the blood sugar level and systolic and diastolic blood pressure among patients with type 2 diabetes mellitus who are following the regular prescribed medications, thereby co-morbid distress also can be reduced.

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CONFLICT OF INTEREST

Conflict of interest declared none.

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