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ASSESS THE EFFECTIVENESS OF PALM SUGAR COFFEE ON TYPE 2 DIABETES MELLITUS AMONG SELECTED RURAL AREA

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ABSTRACT

The word diabetes has been derived from two words, diabetes (Greek) which means 'siphon through' and mellitus (Latin)which means 'sweetened with honey'. Diabetes mellitus is a metabolic disorder, i.e. it is caused due to the malfunctioning of the pancreas, which is responsible for the production of the hormone insulin. Diabetes mellitus has the world's largest silent killer. India has been projected by WHO as the country with the fastest growing population of Diabetic patients. It is estimated that between 1995 to 2025 diabetic patients in India will increase by 195%. The problem with diabetes mellitus is that it is very difficult to diagnose in the early stages. However, a person stick to an Ayurveda preventive strategy right from the beginning can easily prevent this disease or control it if already suffering. It is a medical condition in which there is an accumulation of glucose in the urine and blood of the person. This condition is known as hyperglycaemia.

INTRODUCTION

The chronic metabolic disorder diabetes mellitus is a fast-growing global problem with huge social, health, and economic consequences. It is estimated that in 2010 there were globally 285 million people (approximately 6.4% of the adult population) suffering from this disease. This number is estimated to increase to 430 million in the absence of better control or cure. An ageing population and obesity are two main reasons for the increase. Diabetes mellitus is a heterogeneous group of diseases characterized by chronic elevation of glucose in the blood. It arises because the body is unable to produce enough insulin for its own needs, either because of impaired insulin secretion, impaired insulin action, or both. Chronic exposure to high blood glucose is a leading cause of renal failure, visual loss and a range of other types of tissue damage. Diabetes also predisposes to arterial disease, not least because it is often accompanied by hypertension, lipid disorders and obesity.

Many cases of diabetes and almost all of its unwanted long-term consequences are potentially avoidable, but this will require intervention at a societal as well as at a medical level. The problem with diabetes mellitus is that it is very difficult to diagnose in the early stages. However, a person stick on to an Ayurveda preventive strategy right from the beginning can easily prevent this disease or control it if already suffering. It is a medical condition in which there is an accumulation of glucose in the urine and blood of the person. Stroud (2004) conducted a studyamong immigrants in the United Kingdom (UK) indicates that West Indian children are more in danger of obesity than of under nutrition. Since many of their families came from communities where malnutrition was common, many of the West Indian mothers seem to have a very deep-seated desire to see their children as big, fat babies and are not satisfied with their average growth along the fiftieth centile. As these children grow up being obese, they can be at risk of developing diabetes mellitus (Helman 2004:55).

Objectives

- To assess the blood glucose level among diabetic clients in experimental group and control group.

- To determine the effectiveness of palm sugar coffee among Clients with diabetes mellitus.

MATERIALS AND METHODS

A Descriptive research design was adopted by the investigator to assess the effectiveness of palm sugar coffee among type 2 diabetes mellitus. The study was conducted at kuththambakkam, Thiruvallur district in Tamilnadu. 60 samples who met inclusion criteria were selected convenient sampling technique.

Formal permission was obtained from the village authority. The informed consent was obtained from the diabetes mellitus clients. They were assured about their confidentiality and anonymity. Assess the effectiveness of palm sugar coffee used to assess the blood glucose level among diabetes mellitus. Descriptive and inferential statistics were used for analysis. P values less than 0.001 were considered statistically significant.

Table: Frequency and percentage distribution of pre- test glucose level among diabetic peoples

Parameter	Frequency	Percentage (%)
MILD	10	16.66
MODERATE	20	33.33
SEVERE	30	50

In pre-test value out of 60 samples reveals that 30(50%) were mild, 20(33.33%) were moderate and 10(16.66%) were severe.

Table: Frequency and percentage distribution of post - test value glucose level among diabetic peoples:

| PARAMETER	FREQUENCY	PERCENTAGE (%)
MILD	32	53.33
MODERATE	14	23.33
SEVERE	14	23.33

In post-test value out of 60 samples reveals that 32(53.33%) were mild, 14(23.33%) were moderate and 10(23.33%) were severe.

Table: Frequency and percentage distribution of pre-test and post- test value glucose level among diabetic peoples

GROUP	MEAN	STANDARD DEVIATION	T-TEST
Pre-test	249.4	1899.64	p= 0.001
Post-test	176.1	1341.33	

In t-test value is effective at the range of p=0.001

Figure shows the 5(8.33%) were in 35-40 years and 10(16.66%%) were in 41-45 years and 20(33.33%) were in 46-50years and 25(41.66%%) were in 50years and above.
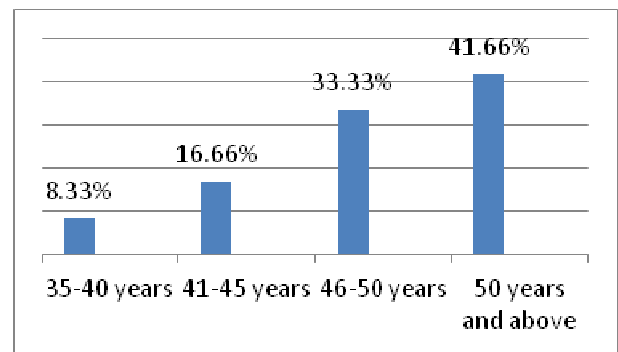
Figure 1. Frequency and percentage distribution of age in the study groups

DISCUSSION

The aim of the study was to assess the effectiveness of palm sugar coffee on type-2 diabetes mellitus among rural peoples.60 diabetes mellitus clients were selected for the study by convenient sampling technique and the random blood sugar test was assessed by using Glucometer before and after intervention.

The first objective is frequency and percentage distribution of pre-test level of blood sugar among diabetes mellitus

The pre-test level of blood sugar values are out of 60 samples reveals that 30(50%) were mild, 20(33.33%) were moderate and 10(6.66%) were severe. Most of the people were able to know the prevention of blood sugar level due to their own experience. But none of them not able to know the prevention of blood sugar level.

The second objective is frequency and percentage distribution of post-test level of blood sugar among diabetes mellitus

The palm sugar coffee was given on every day morning for the duration of 4 weeks. The investigator assessed the post-test level of values are out of 60 samples reveals that 32(53.33%) were mild, 14(23.33%) were moderate and 14(23.33%) were severe.

Association between the pretest and post test level of knowledge among diabetes mellitus:

The findings of the study showed that there was an statistically significant association between the age and the post-test level of total blood sugar level among diabetes mellitus clients at p<0.05 level

Conclusion

Diabetes mellitus is an endocrinological and/or metabolic disorder with an increasing global prevalence and incidence. High blood glucose levels are symptomatic of diabetes mellitus as a consequence of inadequate pancreatic insulin secretion or poor insulin-directed mobilization of glucose by target cells. Diabetes mellitus is aggravated by and associated with metabolic complications that can subsequently lead to premature death. This review explores diabetes mellitus in terms of its historical perspective, biochemical basis, economic burden, management interventions along with the future perspectives..

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Diagnosis and Classification of Diabetes Mellitus – Position Statement.

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