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A STUDY TO ASSESS THE EFFECTIVENESS OF DRUMSTICK LEAVES POWDER ON BLOOD GLUCOSE LEVELS AMONG DIABETIC CLIENTS

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ABSTRACT

AIM:*The present study aims toassess the effectiveness of drumstick leaves powder on blood glucose levels among diabetic clients in selected UPHC.*

METHODS AND MATERIALS*:*

A quantitative research design was used for the present study.A total 30 samples were collected using non probability purposive sampling technique.The demographic variable and prevalence of blood glucose level among diabetes clients was assessed using structured questioner and visual assessment, followed by that data was gathered and analysed.

RESULTS*: The results the study revealed that there is a significant association between level of prevalence with selected demographic at the level of p<0.01*

CONCLUSION*: Thus, the present despites that factors associated with level of prevalence with selected demographic.*

KEY WORDS: *Blood glucose level*

INTRODUCTION

Metabolic and neurological conditions have a high incidence in the general population and frequently develop into chronic complications, which severely limit quality of life. The present rise in the prevalence of diabetes, metabolic syndrome, and associated disorders (obesity and cardiovascular pathologies) prompts the need for better strategies aimed at improvement of life styles and nutrition, together with the development of more efficient therapeutic alternatives. A major component Nutrients of metabolic syndrome, hyperglycemia, is a critical factor in the development of diabetes mellitus (DM) and has been related to serious progressive damage in different organs (retina, kidneys, and nerves), as well as to the development of neurodegenerative diseases such as Alzheimer's disease .DM can cause many different types of peripheral nerve injuries, the most common being a bilateral and symmetric, distal-to-proximal damage to sensory nerves in the feet (in "stockingglove" pattern), and commonly referred to as diabetic neuropathy. It has been estimated that almost 316 million and 387 million people are affected by pre-diabetes and diabetes, respectively, worldwide, and of these people approximately 200 million develop neuropathy. Drumstick leaves is used for treating hyperglycemia. It contains about 73% of mono unsaturated oil that has the ability to regulate blood sugar levels and as a result can reduce the harmful built up of sugar in the blood. In addition drumstick leaves also have a stabilizing effect on blood pressure and control of glucose levels. It has been naturallyboost the immune system which usually becomes compromised in those who suffer hyperglycemia. Hyperglycemia often causes circulatory problems which can be managed through anti-inflammatory supplements and Drumstick leaves have more than 36 natural anti-inflammatory components.

MATERIALS AND METHODS

After obtaining and ethical clearance from the institutional ethical committee of Saveetha Institute of Medical and Technical Science and formal permission letter obtained from the head of the SMCH, present study was conducted. For the present study quantitative approach with descriptive research design was adopted. The samples were collected using a non-probability random sampling technique from sixty samples. The inclusion criteria for the study, participants, who are available during the study period and who are cooperative and who understand both Tamil and English. Exclusion criteria for the study are, samples who are not willing to participate in the study.The purpose of the study was explained by the investigator to each of the study participants and a written informed consent was obtained from them. The demographic and the prevalence of diabetic foot ulcer data was collected from the samples using semi structured questionnaire.The data were analyzed by biostatistics. The sample characteristics were described using frequency and percentage. Chi- square was used to associate the level of prevalence with their selected demographic variables .

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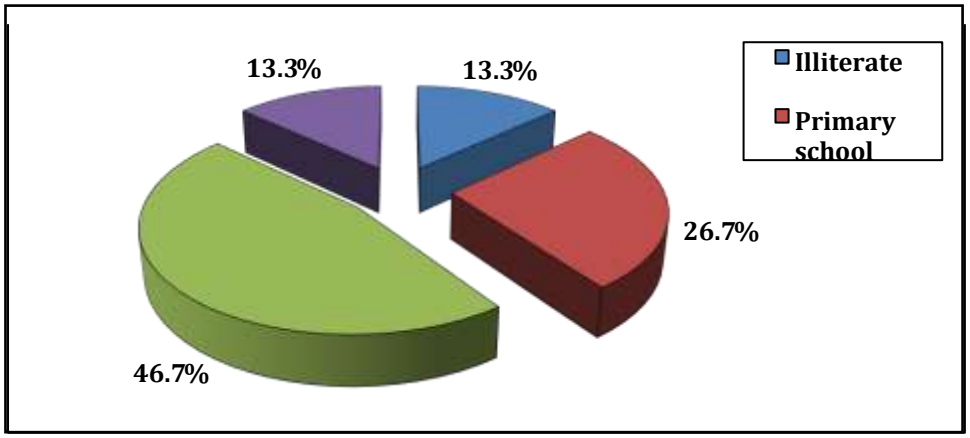
RESULTS AND DISCUSSION

SECTION A: DESCRIPTION OF THE DEMOGRAPHIC VARIABLES OF DIABETIC CLIENTS

The result shows that most of the diabetic clients, 9(30%) were aged above 60 years, 14(46.7%) had higher secondary education, 25(83.3%) were marred, 22(73.3%) were Hindus, 16(53.3%) were private employees, 22(73.3%) belonged to nuclear family, 14(46.7%) had an income of above 20,000, 14946.7%) had no co-morbidities, 27(90%) were non-vegetarian and 20(66.7%) were living in urban

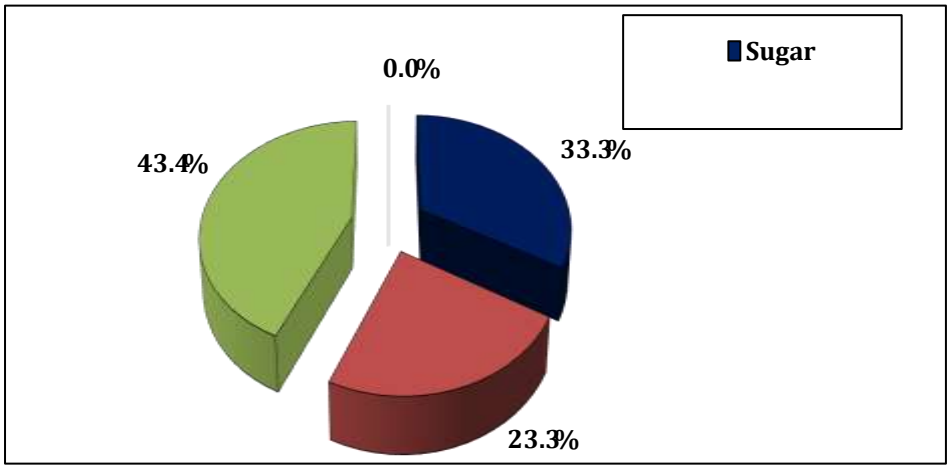
Figure:1



Percentage distribution of educational status of diabetic clients

The result shows that most of the diabetic clients, 24(80%) had no past medical history, 12(40%) had moderate level of physical activity, 15(50%) had physical history of 1 km, 14(46.7%) had regular clinical visits 6 months once, 19(63.3%) had no habits, 13(43.4%) had dietary restriction of sugar and dietary products, 13(43.4%) had diabetes mellitus for 3 – 5 years, 18(60%) had type 1 diabetes mellitus, 30(100%) were having diabetes drugs regularly and 14(46.6%) were taking oral hypoglycemic drugs.

FIGURE: 2



Percentage distribution of type of family of diabetic clients

SECTION B: ASSESSMENT OF LEVEL OF BLOOD GLUCOSE AMONG DIABETIC CLIENTS.

The above table 3 shows that in the pre-test, 28(93.33%) had diabetes and 2(6.67%) had pre-diabetes. Whereas in the post test, 19(63.33%) had pre-diabetes, 6(20%) had diabetes and 5(16.67%) were normal.

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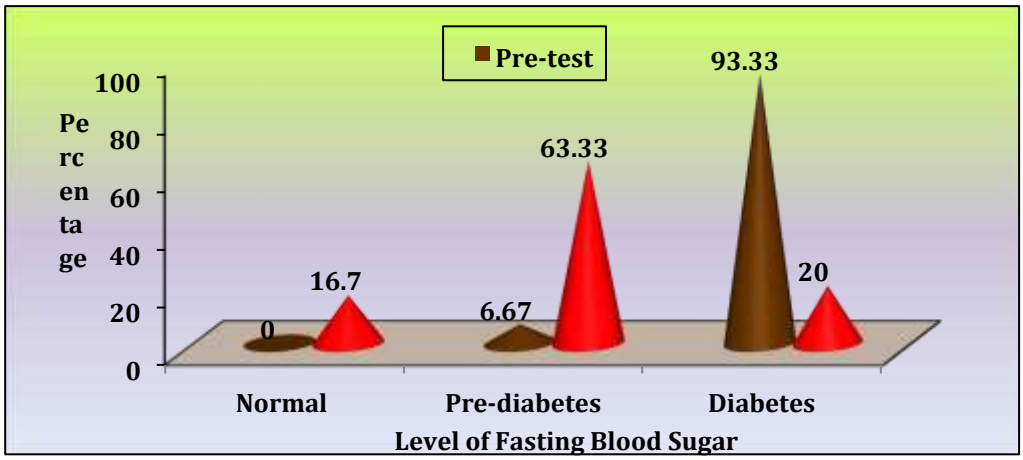

Percentage distribution of level of Fasting blood sugar among diabetic clients

SECTION C: EFFECTIVENESS OF DRUMSTICK LEAVES POWDER ON BLOOD GLUCOSE LEVELS AMONG DIABETIC CLIENTS.

Table 5: Comparison of pretest and post test level of blood glucose levels among diabetic clients. n = 30

Group	Test	Mean	S.D	Paired 't' test Value
FBS	Pretest	181.33	21.88	**t = 13.933 p = 0.0001 S*** **
	Post Test	125.43	20.74	
PPBS	Pretest	309.37	72.19	**t = 11.698 p = 0.0001 S*** **
	Post Test	207.63	55.03	

***p<0.001, S – Significant

The result shows that the pre-test mean score of FBS was 181.33±21.88 and the post test mean score of FBS was 125.43±20.74. The calculated paired 't' test value of t=13.933 was found to be statistically highly significant at p<0.001 level. This clearly infers that administration of drumstick leaves on blood glucose level among diabetic clients was found to be effective in lowering of FBS in the post test.

SECTION D: ASSOCIATION OF LEVEL OF BLOOD GLUCOSE AMONG DIABETIC CLIENTS WITH SELECTED DEMOGRAPHIC VARIABLES.

The result shows that the clinical variable type of diabetes mellitus **(χ^2=6.645, p=0.036)** had shown statistically significant association with post-test level of PPBS among diabetic clients at p<0.05 level. The other demographic variables had not shown statistically significant association with post-test level of PPBS among diabetic clients.

CONCLUSION

From the results of the present study shows significant improvement for researcher.

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