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A study to assess the lifestyle measures for primary prevention of type 2 diabetes mellitus

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Abstract
The aim of the study was to assess the lifestyle measures for primary prevention of type 2 diabetes mellitus. A quantitative approach with descriptive research design was used for the present study. 30 diabetes mellitus patients were selected by using non probability convenience sampling technique. Self structured questionnaire method was used to collect the demographic data and the level of knowledge among primary prevention of type 2 diabetes mellitus. Among 30 samples, the mean score among patients with type 2 diabetes mellitus was 12.73 with standard deviation of 2.05. The minimum score was 10.0 and the maximum score was 18.0. The level of knowledge among primary prevention of type 2 diabetes mellitus patients with 22(73.3%) had good lifestyle measures for primary prevention, 5(16.7%) had average lifestyle measures and 3(10%) had excellent lifestyle measures for primary prevention of type 2 diabetes mellitus. The study concluded that there is significant difference in the level of knowledge among primary prevention of type 2 diabetes mellitus.

Keywords: Knowledge, lifestyle measures, primary prevention, type 2 diabetes mellitus

Introduction
Diabetes mellitus (DM) is one of the most common illnesses in the world wide. Diabetes mellitus is one of the most challenging public health problems in 21st century. It currently affects over 366 million people world wide and this figure is likely to double by 2030. It is important to now about the awareness level of a disease condition in a population, which plays a vital role of in future development, early detection and prevention of disease. Prevention is a important because the burden of the diabetes and it's complications of health care and its economic implications are enormous, especially for a developing country like India. Patient education is a always considered an essential element of DM management. Study's have consistently shown that improved glycemic control and strict metabolic control can be delay or prevent the progression of complications associated with diabetes [1].

Evidence suggest that patients, who are knowledge able about DM self care, have better long term glycemic control. Thus it is indispensable to ensure that patients knowledge are adequate. According to WHO type 2 diabetes mellitus is caused by ineffective use of insulin. It often result from excess body weight and physical inactivity. Diabetes is one the most frequent chronic disease in world and is important due to health consequence it causes in people who suffer from it as well as disorders in the quality of life. Most studies report worse quality of life for people with diabetes compare to general population especially recording physical functioning and well-being [2].

To stem the rising tide of diabetes, public health policies need to move up stream toward prevention or at least a delay in the onset of types 2 diabetes. A number of recent studies offer scientific evidence and new hope for curtailing the epidemic of type 2 diabetes with support for intensive lifestyle modification and modest weight loss as effective interventions among adults at high risk for developing type 2 diabetes [3].

The transitional state in the natural history of diabetes when impaired fasting glucose tolerance, impaired fasting glucose, or both are present has recently become known as pre-diabetes, which affects 12 million overweight Americans aged 45-74 years, also raising their risk for cardiovascular disease. Detection of pre-diabetes is not a goal of most diabetes screening programs, but the lengthy developmental period of diabetes, coupled with the potential to prevent or delay the onset of type 2 diabetes, offers an opportunity for multifaceted prevention efforts [4].

Type 2 diabetes is a lifestyle disease, which can and should be prevented by intensive lifestyle interventions, characterized by changes in dietary habits and increased physical activity. Indeed, lifestyle interventions at the pre-diabetes stage have proved successful at reducing the incidence of type 2 diabetes by 28.5% to 58%, in China, India, Finland, and the United States. Weight control is key to the prevention and management of diabetes independent of dietary composition. As obesity is a major risk factor for type 2 diabetes, lifestyle interventions aimed at weight loss or control are also critical to prevent type 2 diabetes [5].

The purpose of the study is1. To assess the demographic variables among adults with type 2 diabetes mellitus 2.To assess the knowledge of primary prevention of type 2 diabetes mellitus 3.To associate quality of life and demographic variables with primary prevention of type 2 diabetes mellitus [6].

Methods and Materials

The quantitative approach with descriptive research design was used for the present study. After obtaining ethical clearance from the Institutional Ethical Committee (IEC) of Saveetha Institute of Medical and Technical Sciences and a formal permission from the urban authorities, the study was conducted. A total of 30 diabetes mellitus patients, who meet the inclusion criteria, were selected by using convenient sampling technique as the samples. The inclusion criteria for the study participants was the diabetes mellitus the age group of 40-55years who are available during the study period who were willing to participate and are able to read, write and understand Tamil and English. The exclusion criteria for the study participants were diabetes mellitus who are willing and to participate the study. The purpose of the study was explained by the investigator to each of the study participant and a written informed consent was obtained from them. The demographic data and the level of knowledge were collected by using the self structured questionnaire and the collected data were tabulated and analysed by using descriptive and inferential statistics.

Results & Discussion

Section-A: Demographic variables

Among 30 study participants, with regards to age 10(33.3%) were in the age group of above 55 years, with regards to sex 22(73.3%) were in the female, with regards to educational qualification, 12(40%) were educated upto 10th and degree respectively, with regards to occupation 15(50%) were Housewives, with regards to religion, 28(93.4%) were Hindus, with regards to mother tongue and nationality, 30(100%) were Tamilians and Indians.

Section-B: Lifestyle measures for primary prevention of type 2 diabetes mellitus among patients with type 2 diabetes mellitus.

The level of knowledge for type 2 diabetes mellitus shows that, most of them 22(73.3%) had good lifestyle measures for primary prevention, 5(16.7%) had average lifestyle measures and 3(10%) had excellent lifestyle measures for primary prevention of type 2 diabetes mellitus [Table 1 & Fig 1].

Table 1: Frequency and percentage distribution of level of lifestyle measures for primary prevention of type 2 diabetes mellitus among patients with type 2 diabetes mellitus.n = 30

Level of lifestyle measures	No.	%
Poor (0 – 4)	0	0
Average (5 – 10)	5	16.7
Good (11 – 15)	22	73.3
Excellent (16 – 20)	3	10.0

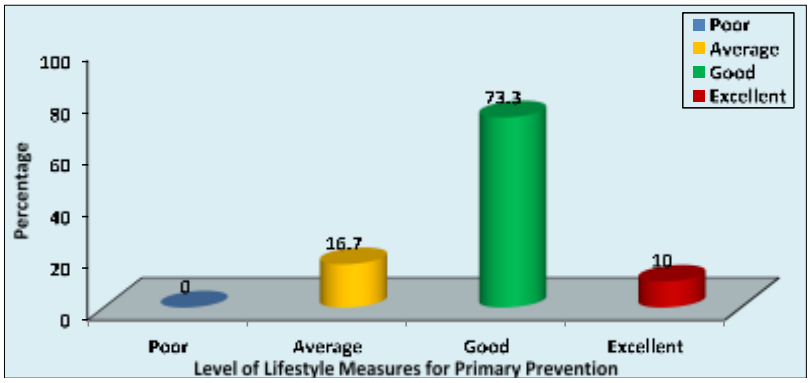

Fig 1: Percentage distribution of level of lifestyle measures for primary prevention of type 2 diabetes mellitus among patients with type 2 diabetes mellitus

In the present study, the mean score among patients with type 2 diabetes mellitus was 12.73 with standard deviation of 2.05. The minimum score was 10.0 and the maximum score was 18.0 [Table 2].

Table 2: Assessment of mean and standard deviation of lifestyle measures for primary prevention of type 2 diabetes mellitus among patients with type 2 diabetes mellitus n = 30

Level of lifestyle measures for primary prevention	Score
Minimum Score	10.0
Maximum Score	18.0
Mean	12.73
Standard Deviation	2.05

Section C: Association of level of knowledge on lifestyle measures for primary prevention among type 2 diabetes mellitus with their selected demographic variables.

None of the demographic variables had shown statistically significant association with level of knowledge on lifestyle measures for primary prevention among patients with type 2 diabetes mellitus.

Conclusion

The findings revealed that knowledge on lifestyle measures of primary prevention of type 2 diabetes mellitus was average and there is a need to improve the knowledge about

diabetes mellitus through pamphlet distribution and create awareness by conducting health education programmes.

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