

“THE SYSTEMIC IMPACT OF LIFE STYLE MODIFICATION ON DIABETES MELLITUS: A REVIEW OF RECENT EVIDENCE”

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ABSTRACT

The prevalence of diabetes mellitus growing rapidly worldwide and reach epidemic proportions. It estimated that there are currently 285 million people with diabetes worldwide and this number is set to increase to 438 million by the year 2030. The major proportion of this increase will occur in developing countries of the world where the disorder predominantly affects younger adults in the economically productive age group. Lifestyle related risk factors play an important role in the development of type 2 diabetes mellitus. If these factors, effectively controlled, can lead to reduction in the risk of developing further complications. The study undertaken to assess the effectiveness of structured education program on knowledge attitude and practice regarding lifestyle modifications to improve the quality of life after this non-curable disease.

Keywords: Diabetes mellitus, effectiveness, lifestyle modifications, epidemic

INTRODUCTION

Health is the most precious asset of a person. Good health allows participating in work and social activities. Our abilities become severely impaired when disease enters the life. Today increasing emphasis placed on health promotion, wellness and self-care. Health is a result of lifestyle that orient toward wellness.¹ Health promotion concepts in the new era use behavioural changes in individuals in order to get healthy lifestyle and create supportive environment for improving the quality of life after chronic non-communicable diseases like diabetes².

Diabetes mellitus is not a modern disease; it has now become a global pandemic. World Health Organization has already issued a warning that India is going to be the diabetic capital of the world.³

During the last twenty years, the prevalence of diabetes has increased dramatically in many parts of the world and the disease is now a worldwide public health problem⁴. India, at present facing an epidemiological transition with more urbanization. This has led to a shift in health burden from communicable disease to non-communicable diseases, particularly diabetes. India the world's second most populous country now has more people with type 2 diabetes (more than 50 million) than any other nation. The reasons behind the diabetes epidemic are; urbanization, a rise in living standards and the spread of fast foods cheaply available in cities to rich and poor alike. Another is the increased sedentariness that has resulted from the replacement of manual labour by service jobs, and from the advent of video games, television and computers that keep people seated lethargically watching screens for hours every day. Prevalence of the disease is higher among affluent, educated, urban Indians than among poor, uneducated, rural people: exactly the opposite of trends in the West.⁴⁻⁵

Lifestyle modification can be a very effective way to keep diabetes in control. Multiple small changes can lead to improvements in diabetes control, including a decreased need for medication. Diabetes requires a lifelong management plan, and persons with diabetes have a central role in this plan. They should keep some healthy behaviour to keep the diabetic under control like right attitude, healthy eating and adherence to medications.⁶

The main justification for emphasis on self-care management of type 2 diabetes is the supposed concurrent prevention or postponement of complications related to type 2 diabetes. This reduces human suffering and the economic burden related to diabetes in the community. Type 2 diabetes characterized by the development of micro- and macro vascular complications give rise to excessive rates of cardiovascular disease. These complications account for the majority of morbidity and mortality associated with diabetes⁷.

Need for the Study

World is currently experiencing an epidemic of Type 2 diabetes mellitus and has the largest number of diabetic patients. It referred to as the diabetes capital of the world³. International Diabetes Federation -IDF ON 2009 report reveals that the total number of diabetic subjects in India is 50.8 million.⁸ A study conducted as a part of the National non-communicable diseases risk factor surveillance, in different geographical locations where major risk factors were studied using modified WHO approach and diabetes diagnosed based on self-reported⁹

Prevalence of diabetes mellitus growing rapidly worldwide and reaching epidemic proportions. It estimated the major proportion of this increase would occur in developing countries of the world where the disorder predominantly affects younger adults in the economically productive age group. There is also consensus that the South Asia region will include three of the top ten countries in the world. Many epidemiological studies carried out in different parts of the world reported that Indian migrants settled abroad had a high prevalence of NIDDM was believed to be due to a more sedentary Lifestyle as compared to the native Indian population.¹¹

The importance of self-management also acknowledged by International Diabetic Federation in their theme for 2009-2013. this campaign calls for all diabetic patients to understand diabetic and take control of their life. It had 4 goals¹² They are;

1. Every government should implement effective strategies and policies for prevention and management diabetes.
2. Every person with diabetes should receive better care.
3. All the diabetic patients should know the warning sign, how to delay or avoid complications
4. Every country should celebrate diabetic day

Keeping this in mind the International Diabetic Federation initiated a diabetic self-management program. The exposure to diabetes education session can ensure significant patient empowerment irrespective of age, gender, and literacy and language skills. As the diabetic patient is the core caretaker of his condition, the education plays an important role. Diabetes self-management program (DSME); has considered an important part of clinical management of diabetes. Keeping in view that a National Diabetes Educator Program Was started to educate and train people in India¹³

Diabetes is a silent disease -many sufferers, become aware that they have diabetes, only when they develop one of its life-threatening complications. Knowledge of diabetes mellitus can assist in early detection of the disease and reduce the incidence of complications. An understanding of the level of public awareness is helpful for health educators to plan for future programmes⁴.

MATERIALS AND METHODS

The methodology selected to evaluate the effectiveness regarding lifestyle modification among type 2 diabetes mellitus patients. In this study, the sampling technique adopted is random sampling. Random sampling is a probability sampling method in which every member of the population has an equal chance for selected as subject.

The analysis and interpretation of results of the data collected from samples in the experimental and control group using a questionnaire to find the effectiveness of structured teaching programme regarding lifestyle modifications for type 2 diabetes mellitus patients. Keeping in view the objectives and the ecological isomorphic nature of the samples of the study. The data was then organized, tabulated, analysed and interpreted using descriptive and inferential statistics.

Knowledge	Frequency	Percentage
Poor	2	6.66%
Average	26	86.66%
Good	2	6.66%
Very good	-	-
Total	30	100%

During Study, the control group 86.66% have average knowledge, and 6.66 % have good knowledge regarding lifestyle modifications.

Knowledge	Frequency	Percentage
Poor	nil	-
Average	nil	-
Good	3	10%
Very good	27	90%
Total	30	100%

90% have very knowledge and 10% have good knowledge score regarding lifestyle modifications after structured teaching programme

RESULTS OF THE STUDY

The findings of the study in demographic variables the majority of the samples were in the age group of 45-55 yrs (38.33%). 41% of samples had developed complications associated with diabetes. 64% of subjects belonged had 1-5 yrs of duration of diabetes. The findings of the post test knowledge shows that the majority of the samples had very good (93.33%) knowledge scores, 6.66% % had good knowledge scores regarding lifestyle modifications.

The findings of the diabetic patient's attitude in the experimental group towards lifestyle modifications revealed that majority of the samples (100%) had positive attitude towards lifestyle modifications. While the diabetic patients in the control group, only 56.6% had positive attitude towards lifestyle modifications.

The findings of the study for self-reported practice towards lifestyle modification that majority (93.33%) of the diabetic patients in the experimental group had very good practice of lifestyle modifications. While in the control group the majority (97%) of the diabetic patients had only average scores of self-reported practices of lifestyle modifications.

DISCUSSION

Diabetes mellitus is a chronic non-communicable disease but people with diabetes can lead a quality life if provided they keep their diabetes under control. Life style modifications are an essential component of any diabetes management plan. Life style modification can be a very effective way to keep diabetes in control. Improved blood glucose control can slow the progression of long-term complications. Small changes can lead to improvements in diabetes control, including a decrease in need for medication.

SUMMARY

Diabetes Mellitus is a growing public health problem worldwide and considered as one of the main threats to human health in the 21st century. Most of the dramatic increase in type 2 diabetes occurred within populations that witnessed rapid and major life style changes. There is robust evidence regarding the protective effect of lifestyle modifications in the prevention of complications of type 2 diabetes. In the field of caring science and philosophy of health care there is high demand in exploration and investigation of successful self-care ability of chronic diseases particularly in type 2 diabetes. The study intended to evaluate the effectiveness on lifestyle modifications to improve the quality of life after this crippling disease.

CONCLUSION

Based on the findings of the study the following conclusions are, There was lack of knowledge, positive attitude and inadequate practice among control group who have not received intervention and Structured teaching programme is an effective strategy in improving the knowledge, attitude and practice of the clients with type 2 diabetes mellitus.

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