Knowledge and awareness the risk factor of diabetes mellitus and the association between obesity and family history of diabetes among South Indian population

R. Deepika, Karthik Ganesh Mohanraj*

ABSTRACT

Introduction: Diabetes is a metabolic disorder in which there is a high blood sugar levels over a prolonged period. Diabetes is due to either the pancreas not producing enough insulin or cells of the body not responding properly to the insulin produced. People who are obese have a high risk of developing Type-2 diabetes. The obesity has added pressure on their body's ability to use insulin to properly control blood sugar level. The aim of the study is to create awareness about the risk factor of diabetes mellitus and to find the association between obesity and family history of diabetes. **Materials and Methods:** A twenty-approved standard questionnaire was prepared for diabetic patients in relation to their obese condition and family history. The participants were selected based on their age, sex, and diabetic severity. The collected data will be categorized, analyzed, and represented graphically. **Results:** To find whether there is any association between diabetes and food habits, 33% responded "yes," 14% responded "no," and 3% responded "not aware of." To analyze the major risk factor of diabetes mellitus, 3% responded lack of exercise, 24% responded heredity, 8% responded lifestyle, 6% responded obesity, 7% responded all the above, and 2% responded none of the above. **Conclusion:** Awareness about diabetes mellitus is required so as to avoid various health issues. Now that we came to know the different ways through which one can get diabetes easily. It is important for each of them affected by diabetes to do some physical activities everyday to improve their health and have a constant control on their daily diet.

KEY WORDS: Awareness, Diabetes mellitus, Family history, Obesity, Risk factors

INTRODUCTION

Diabetic mellitus is a non-communicable disease in our South Indian population, which has set a major health burden among people. It is estimated that in 2025, in developing countries, the extent of diabetes will be turned to around 75%.[1] About 3.2 million people are facing death due to diabetes mellitus every year.[2] Some evidence quote that people are not aware of the diseases, and the effects of diabetes, which may lead to cardiovascular disease, kidney failure, and stroke.[3]

Diabetes mellitus referred to as diabetes, is a group of metabolic disorders in which there are high blood sugar levels over a prolonged period. Diabetes is due to either the pancreas not producing enough insulin

or cells of the body not responding properly to the insulin produced. People who are obese have a high risk of developing Type-2 diabetes. The obesity has added pressure on their body's ability to use insulin to properly control blood sugar level. Body mass index (BMI) is another method in detecting whether a person has obesity or not. BMI greater than or equal to 30 is condition for obesity. Normal health people will have BMI greater than or equal to 25.[4] According to earlier researches, it is found that local population has less prevalence of diabetes and obesity as they are used to do manual.[5]

The present population is primarily affected due to that the floating population is relatively associated with manual work.[6] In many studies, it has been shown that the effect of diabetes affects both the sexes.[7,8] As per Yine *et al.*, diabetes is more common in males than in females.[9] Oneself consideration practices of people are affected by their insight about diabetes; the

Department of Anatomy, Saveetha Dental College, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India

*Corresponding author: Karthik Ganesh Mohanraj, Department of Anatomy, Saveetha Dental College, Saveetha Institute of Medical and Technical Sciences, Saveetha University, 162, Poonamallee High Road, Chennai - 600 077, Tamil Nadu, India. Phone: +91-9940545168. E-mail: karthikganesh.0446@gmail.com

more they know about their disease, more they would have self-administration abilities.[10] Many research works distributed have appeared that the diabetic populace needs more familiarity with diabetes, the best possible utilization of meds, lifestyle changes, dietary plans, legends related with insulin, and other training programs on medical problem.[11] The aim of the study is to create awareness about the risk factor of diabetes mellitus and to find the association between obesity and family history of diabetes.

MATERIALS AND METHODS

The survey was conducted among fifty diabetic people in a questionnaire manner consisting of twenty questions based on the awareness on risk factor of diabetes mellitus and its association with obesity and family history. Thus, the survey was provided to the people having diabetes mellitus in the South Indian population. The participants were selected based on their age, sex, and diabetic severity. The collected data will be categorized, analyzed, and represented graphically.

RESULTS

To find whether there is any association between diabetes and food habits, 33% responded "yes," 14% responded "no," and 3% responded "not aware of" [Figure 1]. To analyze the major risk factor of diabetes mellitus, 3% responded lack of exercise, 24% responded heredity, 8% responded lifestyle, 6% responded obesity, 7% responded all the above, and 2% responded none of the above [Figure 2].
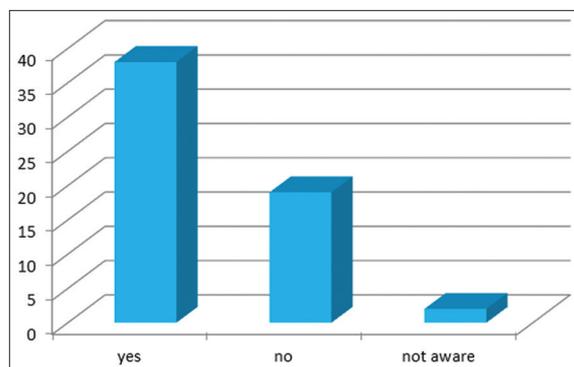

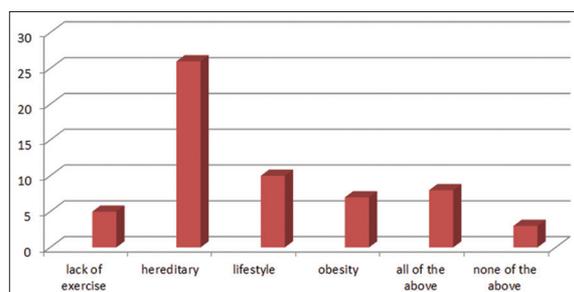**Figure 1:** Association of diabetes to food habits

Figure 2: Risk factor of diabetes mellitus

DISCUSSION

From Figures 1 and 2, it was concluded that diabetes is related to obesity and family history. The risk factor of diabetes majorly contributes to family history.[12] The result data obtained are similar to the results of other similar researches.[13] In Sichuan province, awareness on the risk factors of diabetes was found to be 27.8% in the floating population. In 2012, the treatment rate is 81.3%, and 40.6% of self-reported diabetes patients participated in local disease management.[14] At the same time, the disease control rate is 6.5%.[15] The results finally conclude that diabetes is associated with obesity and family history, and for most of the people, diabetes is due to the genetic relation cause.

CONCLUSION

Awareness about diabetes mellitus is required so as to avoid various health issues. Now that we came to know the different ways through which one can get diabetes easily. It is important for each of them affected by diabetes to do some physical activities everyday to improve their health and have a constant control on their daily diet.

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