

Knowledge Regarding Long Term Complication of Diabetes Mellitus among Type –II Diabetes Patients

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Abstract

A descriptive study was undertaken in medicine ward and surgical ward in Saveetha Medical College and Hospital Thandalam, Kanchipuram district. 60 patients with type 2 diabetes mellitus were selected for this study. The interview schedule had 23 items on knowledge which was assessed in four domains including general awareness of diabetes mellitus, its risk factors, complications, and lifestyle modifications. Each item was given a score. Maximum possible score was 23. Knowledge score of <9 was considered as poor, 9-17 as average and above 17 was taken as good. Data were analyzed using SPSS version 11. Descriptive analysis was done for socio demographic variables, and inferential statistics were used to ascertain the level of significance of predictors of knowledge regarding long term complication of diabetes mellitus. The study findings shows that out of 60 samples, 20 (33.33%) samples were in the age group of 41-50 years, 32(53.33%) samples were females, 34(56.66%) samples had residence in rural area, 40(66.66%) samples were educated at higher secondary level, 28(46.66%) samples were daily wages, 36(60%) samples had income at 10,000-18,000, 42 (70%) samples had family history of diabetes mellitus, 34(56.66%) samples had duration of illness at 1-5 years. Out of 60 samples, 10(16.66%) samples had adequate knowledge, 18(30%) samples had moderate knowledge and 32(53.33%) samples had inadequate knowledge on complication of diabetes mellitus. The study findings suggest that majority of population had inadequate knowledge on complication of diabetes mellitus; health education is needed to be given to them in order to prevent the complication of diabetes mellitus.

Key word: Long-term complication, diabetes mellitus, Type-II Diabetes mellitus

1. INTRODUCTION

Diabetes mellitus is a metabolic disorder that is characterized by increased levels of glucose in the blood resulting from defects in insulin secretion, insulin action or both. This high blood sugar produced the classical symptoms of polyuria, polyphagia and polydipsia.

There are three main types of diabetes mellitus: type 1 diabetes mellitus results from the pancreas failure to produce enough insulin. This form was previously referred to as insulin dependent diabetes mellitus (IDDM) or “juvenile diabetes”¹. Type 2 diabetes mellitus begins with insulin resistance, a condition in which cells fail to respond to insulin properly. As the disease progresses a lack of insulin may also develop. This form was referred to as **non-insulin** dependent diabetes mellitus² (NIDDM) or “adult onset diabetes”. Gestational diabetes is the third main form and occurs when pregnant women without a previous history of diabetes develop high blood sugar level.

Type-2 diabetes is a very common disease characterized by an asymptomatic phase between the actual onset of diabetes hyperglycemia and clinical diagnosis³. This phase has been estimated to last at least 4-7 years and 30-50% cases of type 2 diabetic patient remained undiagnosed. This leads problem is diabetic care and which remain the chief problem is diabetic care and which cause a lack of fitness to work, disability and premature death.

Globally an estimated 422 million⁴ adults are living with diabetic mellitus according to the latest 2016 data from world health organization (WHO) diabetes prevalence is increasing rapidly previous 2013 estimate from the international diabetes federation put the number at 381

million people leaving diabetes the number is projected to almost double by number is 2030. type 2 diabetes makes up about 85% to 90% of all cases. Increase in the overall diabetes prevalence rate largely a reflex increase risk factor for type 2 not ably greater longevity and being overweight or obese. The aim of the study is to determine prevalence and relationship between different complications of diabetes in patient with diabetes mellitus. Diabetes mellitus is a metabolic disorder that is characterized by increased levels of glucose in the blood resulting from defects in insulin secretion, insulin action or both. This high blood sugar produced the classical symptoms of polyuria; polyphagia and polydipsia there are three main types of diabetes mellitus: type 1 diabetes mellitus results from the pancreas failure to produce enough insulin. This form was previously referred to as insulin dependent diabetes mellitus (IDDM)⁵ or “juvenile diabetes”. Type 2 diabetes mellitus begins with insulin resistance, a condition in which cells fail to respond to insulin properly. As the disease progresses a lack of insulin may also develop. This form was referred to as non-insulin dependent diabetes mellitus (NIDDM) or “adult onset diabetes”. Gestational diabetes is the third main form and occurs when pregnant women without a previous history of diabetes develop high blood sugar level.

Diabetes mellitus (DM) appears to be a global epidemic and increasingly a major non-communicable disease threatening both affluent and non-affluent society. More than 170 million people worldwide have diabetes, and this figure is projected to more than double by the year 2030, if the current trend is allowed to continue further. The

potential severity of increasing prevalence rate of diabetes on the Asian continent⁶ may be translated into severe economic burden, high morbidity and mortality rates that will surpass the ravages. Diabetes prevalence studies in India have recorded a steady increase. The earliest studies in the 1960s recorded 0.2 % prevalence in a population of Indian Men. The crude prevalence of diabetes in general population was 6.3 % in the late 1990s in Tamilnadu, India and the age adjusted prevalence of diabetes and impaired glucose tolerance (IGT) was 6.1 and 10.7 % respectively. Individual diagnosed with diabetes tend to have an increased risk of stroke and heart diseases compared to the problems. General population and increased incidence of retinopathy, peripheral nerve damage and renal

Adequate knowledge of diabetes is a key component of diabetic care. Many studies have shown that increasing patient knowledge regarding disease and its complications have significant benefits with regard to patient compliance to treatment and to decreasing complications associated with disease .Some research have been done into the knowledge and management including health education of the disease but the prevalence of the disease still keeps rising in India .⁷In spite of these researches and health education done on diabetes, most Indians are still less knowledgeable about the complications associated with the disease according to the International Diabetes Federation report.

2. OBJECTIVES

- 1 Assess the frequency and distribution of demographic variables among type-II Diabetes patient
2. Assess the knowledge of diabetes complication.
3. Associate the level of knowledge about complication of diabetes among diabetes patient with demographical variables.

3. MATERIALS METHODS:

Descriptive research design used was to assess the knowledge on long term complication in patients with diabetes mellitus. The study was conducted among patients with type II diabetes mellitus in medicine ward and surgical ward in Saveetha Medical College and Hospital, Thandalam, Kanchipuram district.60 patients with type II diabetes mellitus were selected for this study. Convenient sampling technique was adopted for this study. Sixty samples were selected for the study, each day six samples were selected and they were comfortably seated age group of 21 years to 50 years and above were identified, after introduction the investigator explained the purpose of the study, written consent was obtained from the subjects and questionnaires were given and it was completed by samples in 10-15 minutes. Data was collected using structured interview schedule to assess demographic variable and the long term complication of diabetes mellitus. The ethical consideration has obtained from the Ethical committee of Saveetha medical college and hospital (Thandalam). Diabetes patients with illness like neurological problem, and physical disorders were excluded in this study.

4. RESULT

Section -I

The study findings shows that out of 60 samples, 20 (33.33%) samples were in the age group of 41-50 years, 32(53.33%) samples were females , 34(56.66%) samples had residence in rural area, 40(66.66%) samples were educated at higher secondary level , 28(46.66%) samples were daily wages, 36(60%)samples had income at 10,000-18,000, 42 (70%)samples had family history of diabetes mellitus, 34(56.66%)samples had duration of illness at 1-5years .

Table: 1: Frequency and percentage distribution of demographical variables of diabetes patients.

| Demographic Variable | Frequency | Percentage |
|--|-----------|------------|
| Age | | |
| 21-30 | 4 | 13.33% |
| 31-40 | 10 | 33.33% |
| 41-30 | 10 | 33.33% |
| 50above | 5 | 20% |
| Gender | | |
| Male | 14 | 46.66% |
| Female | 16 | 53.33% |
| Residence | | |
| Rural | 17 | 56.66% |
| Urban | 13 | 43.33% |
| Education | | |
| Primary | 5 | 16.66% |
| Higher Secondary | 20 | 66.66% |
| College | 5 | 16.66% |
| Second Degree | 0 | 0% |
| Occupation | | |
| Employee | 7 | 23.33% |
| Unemployed | 1 | 3.33% |
| Agriculture | 4 | 13.33% |
| Daily Worker | 14 | 46.66% |
| Business | 4 | 13.33% |
| Income | | |
| 5,000-15,000 | 7 | 23.333% |
| 10,000-18,000 | 18 | 60% |
| 18,000-20,000 | 5 | 16.66% |
| 20,000and Above | 0 | 0% |
| Family History of diabetes mellitus | | |
| Yes | 9 | 3% |
| No | 21 | 70% |
| Duration Of Illness | | |
| >1year | 3 | 10% |
| 1-5year | 17 | 56.66% |
| 6-10year | 9 | 30% |
| >10year | 1 | 3.33% |

Section-II

Out of 60samples, 10(16.66%) samples had adequate knowledge, 18(30%) samples had moderate knowledge and 32(53.33%) samples had inadequate knowledge on complication of diabetes mellitus. The study findings suggest that majority of population had inadequate

knowledge on complication of diabetes mellitus; health education is needed to be given to them in order to prevent the complication of diabetes mellitus

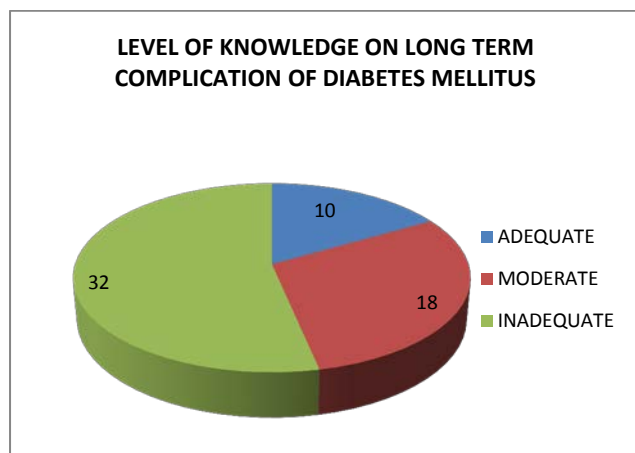


Figure 1- Knowledge on Long Term Complication of Diabetes Mellitus

5. DISCUSSION

This study examines knowledge on diabetic complications in the diabetic patients in Saveetha medical college and hospital. It is highlighted that diabetic complications are common in the Ward in which the majority were among type II patients and around 10(16.66%) samples had adequate knowledge, 18(30%) samples has moderate knowledge and 32(53.33%) samples had inadequate knowledge on complication of diabetes mellitus. A study conducted by **Hoque and colleagues(2016)** among Indians visiting the Khulna Diabetic Centre, Bangladesh found heart disease (48.9 %) as the most common complication known by diabetic patient followed by cerebrovascular disease (15.2 %), renal disease (13 %), hypertension (5.4 %), and eye diseases (4.9 %). There was disparity of this study with another study where 53.5 % patients reported that heart disease was a potential complication of diabetes mellitus ^{8,9}Another study observed that only 10 % of diabetic patients knew diabetic foot as a complication of diabetes. Comparably, results of this present study differ from previous studies. The difference in response of patients' knowledge on diabetic complication in this study compared to previous study may be explained by the difference in the diabetes education. Hoque^{10,11,12} and colleagues conducted their study among Indians population whiles our present study was among Ghanaian diabetic population. Reports indicate that differences in culture, race, and ethnic background may affect the pattern of knowledge on diabetic complication

6. CONCLUSION

Participants knew the individual complication of diabetic mellitus but lack an in-depth knowledge on the complications. Further expansion of diabetic educative programs like using mass media and involving national curriculum of education can improve self-regulatory awareness of diabetic complications which may reduce the morbidity and mortality of diabetic patients.

Acknowledgement

We would like to extend our gratitude to the authorities of Saveetha College of Nursing and Saveetha Medical College Hospital.

Authors Contribution

All the authors actively participated in the work of the study. All authors read and approved the final manuscript.

Conflict Of Interest

The authors declare no conflict of interest.

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