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EVALUATION OF KNOWLEDGE, ATTITUDE AND PRACTICE IN TYPE 2 DIABETES MELLITUS PATIENTS

I. Neelam[1*], N. Rajitha[1], E. Sriram Raj[2] and C. H. Venkata Rama Rao[1]

CMR College of Pharmacy, Kandlakoya (V), Hyderabad 501401.

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***Corresponding Author**
I. Neelam
CMR College of Pharmacy, Kandlakoya (V), Hyderabad 501401.

ABSTRACT

A prospective Observational cross-sectional study was carried out in tertiary care hospital between August 2016 - January 2017. The study was analysed by using statistical method ANOVA windostat 9.2 version. The Knowledge, Attitude and Practice of Diabetes Mellitus patients was assessed. Altogether 120 patients were enrolled in the study. There were 71(51%) males and 49(41%) females. The great number of patients were in the age group of 30-40 years. The more knowledge was seen in the age group of >70 years with the significance of P value <0.005, the more attitude was seen in the age group of 61-70 years with the significance of P value <0.004, the more Practice was seen in the age group of 51-60 years with the significance of P value <0.005. The present study concluded that patients from 61 to more than 70 age group are having adequate knowledge and attitude towards diabetes mellitus, whereas practice to control of DM was between age group of 51-60 years.

KEYWORDS: Attitude, diabetes, Knowledge and Practice.

INTRODUCTION

As per World Health Organization (WHO), the term diabetes mellitus describes a metabolic disorder of multiple aetiology characterized by chronic hyperglycaemia with disturbances of carbohydrate, fat and protein metabolism resulting from defects in insulin secretion, insulin action, or both. The effects of diabetes mellitus include long-term damage, dysfunction and failure of various organs. Diabetes mellitus may present with characteristic symptoms such as thirst, polyuria, blurring of vision, and weight loss. People with diabetes are at increased risk of cardiovascular, peripheral vascular and cerebrovascular disease.

Epidemiology

Diabetes mellitus occurs throughout the world, but is more common (especially type 2) in the more developed countries. The greatest increase in prevalence is, however, occurring in low – and middle- income countries including in asia and Africa, where most patients will probably be found by 2030. The increase in incidence in developing countries follows the trend of urbanization and lifestyle changes, including increasingly sedentary lifestyles, less physically demanding work and the global nutrition transition, marked by increased intake of foods that are high energy- dense but nutrient –poor (often high in sugar and saturated fats, sometimes reffered to as the Western pattern diet). The risk of getting type2 diabetes has been widely found to be associates with lower socio- economic position across countries.

The WHO estimates that diabetes resulted in 1.5 million deaths in 2012, making it the 8th leading cause of death. However another 2.2 million deaths worldwide were attributable to high blood glucose and the increased risks of associated complications (e.g. heart disease, stroke, kidney failure), which often result in premature death and are often listed as the underlying cause on death certificates rather than diabetes.

METHODOLOGY

- **Study site:** General medicine Inpatient departments of Gandhi hospital, secunderabad.
- **Study design:** A prospective observational cross sectional study.
- **Study duration:** 6 months.
- **Study period:** August 2016 – January 2017.
- **Study disease:** Type 2 Diabetes mellitus.
- **Study approval:** Study protocol submitted to institutional ethical committee, CMR College of pharmacy, hyderabad and was approved to conduct the study.
- **Stastical Analysis:** The obtained data was analyzed by using statistical method ANOVA windostat 9.2 version.

Inclusion criteria

- Adults both males and females of age above 30 years.
- Patients with diabetes mellitus with or without co-morbid conditions.

Exclusion criteria

- Type 1 diabetes mellitus
- Diabetes insipidus

Source of data

- **Medical chart review**

Demographic information (like name, age, gender), the results of physical exams, blood tests, x-rays and other diagnostic and medical procedures and treatments as well as medical and surgical history.

- **Questionniare administration**

Collection of personal information, medical history, diet and lifestyle habits, socio economic status.

Study procedure

- All patients admitted to the hospital with diabetes was reviewed on daily basis.
- Those patients who meet the study criteria was enrolled into the study.
- For all patients, data relevant to diagnosis, and treatment approach was documented from the patient's records and was reviewed.
- Patient's case notes, medication charts, laboratory reports and other relevant documents was reviewed to study the treatment pattern and its impact on the disease.
- Questionare was then administered to obtain the other necessary data.

RESULTS

Gender

Table 1(a): percentage of gender.

Gender	No. of cases	Percentage %
Male	71	59%
Female	49	41%

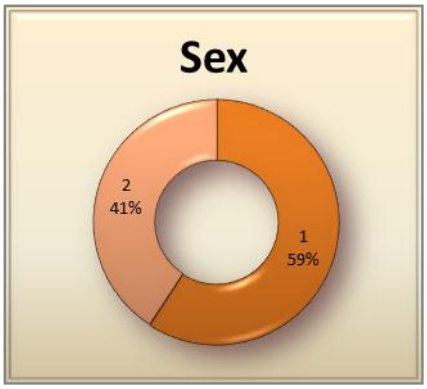

Fig. 1(a): Gender.

In the present study it was observed that 59% of male patients were diabetic and 41% of female patients were diabetic.

Table 2(b): Probability for gender.

Source of variations	Df	Sum of squares	Mean squares	F ratio	Probability
Between samples	4	3.397	0.849	3.816	0.00597
Within samples	115	25.594	0.222		

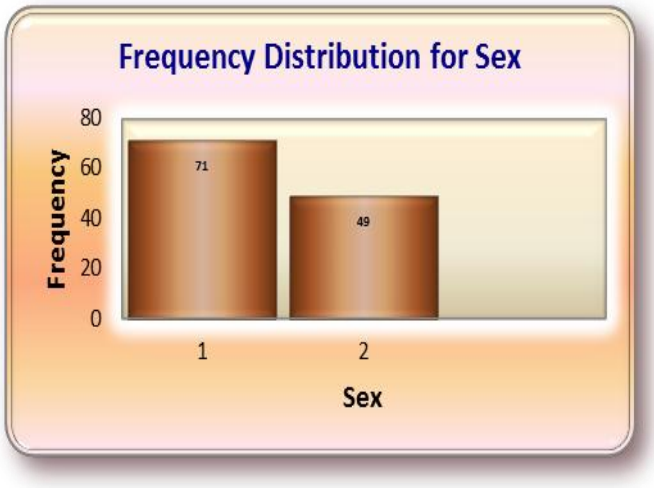

Fig. 2(b): Graph of Frequency distribution for sex.

Age Distribution

Table 3: percentage of Age distribution.

Age (in years)	Frequency	Percentage (%)
30 - 40	38	32%
41 - 50	33	29%
51 - 60	25	21%
61 - 70	13	09%
Above 71	11	09%

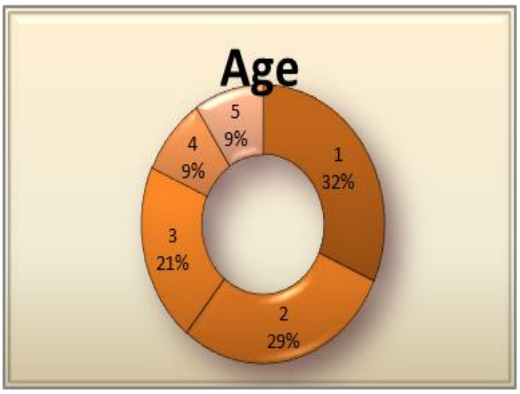

Fig. 3(a): Age.

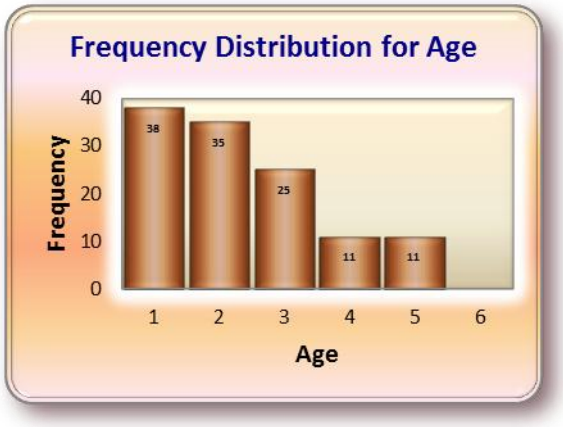

Fig. 3(b): Graph of Frequency distribution for age.

Questionniare

Knowledge

Total Knowledge Score

More than 70 years of age were having good knowledge on Diabetes Mellitus.

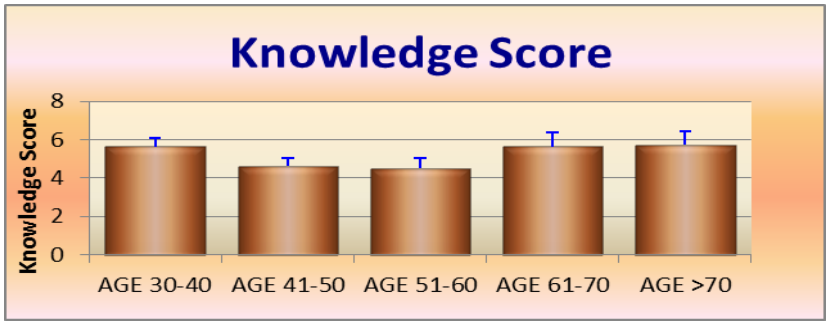

Fig. 4: total knowledge score.

Attitude

Total Attitude Score

At the age group between 61-70 years having good attitude on diabetes mellitus.

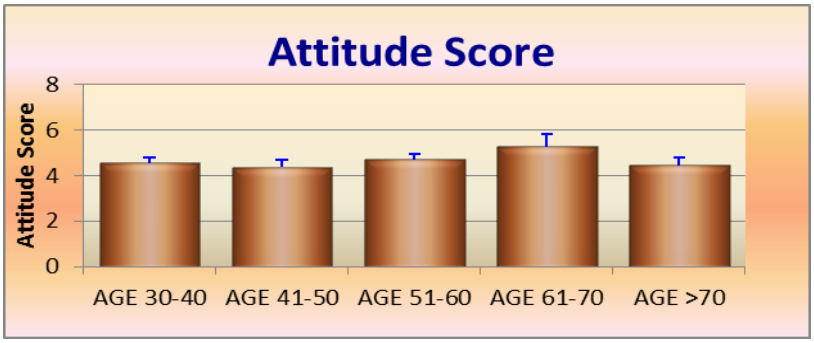

Fig. 5: total attitude score.

Practice

Total Practice Score

51-60 years of age group were having good practice on diabetes mellitus.

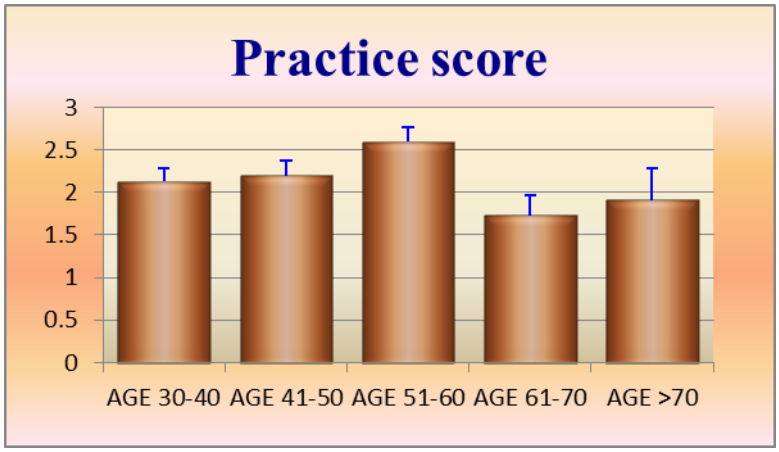

Fig. 6: total practice score.

Questionare

Table 4: probability of total Questionare for KAP.

Knowledge	Age	P-value	Attitude	Age	P-value	Practice	Age	P-value
Normal levels of bgl	30-40	<0.005	Missing dose	61-70	<0.004	Last visit with physician	51-60	<0.005
Elevation symptoms of bgl	>70	<0.005	Avoiding carbohydrates and fats	61-70	<0.004	Last urine test	51-60	<0.005
Smoking and alcohol consumptions	61-70	<0.005	Regular physical activity	61-70	<0.004	Last blood sugar test	51-60	<0.005
Obesity	51-60	<0.005	Exercise	61-70	<0.004	Last lipid profile	51-60	<0.005
Names of the prescribed drugs	30-40	<0.005	Eating sugar and sweet food	51-60	<0.004			
Hypoglycemic condition	61-70	<0.005	Physician contact	51-60	<0.004			
Symptoms without using drugs	30-40	<0.005						
Urine test	>70	<0.005						
Diabetic diet	61-70	<0.005						
Cuts and abrasions	>70	<0.005						

DISCUSSION

A Total of 120 cases were included for the assessment of knowledge, attitude and practice of diabetic patients in a tertiary care hospitals and were analysed by ANOVA method using window stat version 9.2 from indostat services.

Among 120 cases 59% were male and 41% were female with a significant difference of 0.005.

In present study it was observed that there was 38% of diabetes at the age of 30-40 years followed by 41-50 years with 29%, 51-60 years with 21% and 61-70 years and above it was 9%.

In this study has an important finding that diabetic patients have positive Knowledge, attitude and practice. This was contradicted by **Dinesh k Upadhyay et al.,** which reports there was low level of knowledge, Attitude and practice among diabetic patients.

Some of our findings like that men had higher mean knowledge score than women which appeared to conflict with **Fatma Al-Maskari et al.**

The majority of the participants in all groups are males with the age of 30-40 years and duration of illness in all groups are equal. This indicates that this Diabetes Mellitus problem might be more prelevant among males than females. This was contradicted by **Titien Siwi Hartayer et al.,** which reports that majority of the participants are females with the age group of 39 years and indicates that this diabetes problem might be more prevalent among females than males.

In this study we observed that most of the patients having good Knowledge on smoking and alcohol consumptions can cause diabetes with probability of 0.04 at the age group of >70 years of male patients, Which is correlated with **Anju Gautam et al.,** were it was reported that smoking and alcohol consumptions may further increase the consequences of diabetes.

Assesment of Knowledge, attitude and practice among 120 cases was found to be with good significant difference (0.005).

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