A STUDY TO ASSESS THE KNOWLEDGE REGARDING EARLY SIGN AND SYMPTOM OF DIABETIC MELLITUS AMONG ADULT IN SELECTED AREA, DEHRADUN, UTTARAKHAND

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ABSTRACT

The objective of this study was to assess the knowledge regarding early sign and symptoms of diabetes mellitus among adults. To find out the association between knowledge and socio demographic variables. Non experimental quantitative research approach and descriptive research survey design was adopted. Total 152 samples were selected through simple random sampling. Data was collected by tools socio-demographic profile and structured interview technique was used and the data was analyzed by using descriptive and inferential statistics. Mean with standard deviation of the knowledge was 9±3.36. Majority of adults were having average knowledge regarding early sign and symptoms of diabetes mellitus that is 57%. The result shows that education status, occupation, type of work, dietary pattern, family history of diabetes, previous knowledge of diabetes which was significant at p<0.05 level. It can be concluded that the majority (57%) of the adults were having average knowledge regarding early signs and symptoms of diabetes mellitus.
Keywords: Adults, Knowledge, Diabetes Mellitus.

INTRODUCTION

Diabetes is a disorder of carbohydrates metabolism, usually occurring in genetically predisposed individual, characterized by inadequate production or utilization of insulin and resulting in excessive amount of glucose in blood and urine, excessive thirst, weight loss etc. Some cases progressive destruction of small blood vessels leading to such complication as infection and gangrene of the limbs or blindness, nephropathy that may lead to renal failure, and neuropathy. Risk of foot ulcers, amputation, characot joints, features of autonomic dysfunction, including sexual dysfunction.[1]

World Health Organization estimated globally, 422 million adults are living with diabetes mellitus. In Asia, 2010 study estimated that more than 92 million showing earlier symptoms. According to international diabetes foundation, India had more diabetic than any other country in the world. Diabetes currently affects more than 62 million Indian, which is more than 7.1% of the adult population. The average age on onset is 42.5 years. Nearly 1 million Indian die due to diabetes every year.[1]

NEED OF THE STUDY

Diabetes mellitus is a chronic disease and an emerging epidemic of the 21st century which threatens to overwhelm the health care system in near future. Diabetes mellitus prevalence is estimated to rise further to 5.5% in 2025. This high economic burden on patients can be elevated if there are properly educated on diabetes mellitus and its management. According to WHO report today heads the world with over 32 million diabetic patient and this number is projected to increase to 79.4 million by the year 2030. Recent surveys indicate that diabetes now affects a staggering 10-16% of urban population and 5-8% of rural population in India. There is very little data on the level of awareness prevalence about diabetes in developing countries like India.

Several studies have shown that in low resource countries a range of social determinants including poor health literacy are critical in the epidemiologic transition of disease outcome. In this study, we aim to determine the level of knowledge of diabetes mellitus, sign and symptoms, risk factors, its coping strategies and the variation according to the social- demographic factors in a community setting. The lack of an infrastructure for diabetic screening and high- risk group identification, knowledge of diabetes symptoms may explain the failure of early diagnosis and, as a consequence, the burdens and loss of economic output associated with diabetes.

METHODS & MATERIALS

The study was conducted in June, 2017 in a selected community area in Bhogpur, Dehradun, and Uttarakhand. The study had adopted quantitative approach with descriptive research design. The sample consisted of 152 adults.

Structured interview questionnaire to assess the knowledge regarding early sign and symptoms of diabetes mellitus was developed and was translated to Hindi. The tool was validate by the six experts from which one was external expert medicine department, others were from pediatrics department, mental health nursing department and three from medical surgical nursing department. The reliability (r= 0.73) of tool was established using split half method. The knowledge questionnaire was divided into 6 domains there were general introduction, thirst, weight and nutrition, urination, vision and wound healing. All the participants were assessed with structured interview technique.

DATA ANALYSIS

The structured interview questionnaire comprised of 20 multiple choice questions to assess the knowledge regarding early sign and symptoms of diabetic mellitus. Each of the correct responses were scored one point and wrong responses were marked zero. Knowledge was assessed in 6domains of general introduction, thirst, weight and nutrition, urination, vision and wound healing. The maximum and minimum possible overall knowledge score was 20 and 0respectively. Descriptive and inferential statistics was used for the analysis and interpretation of data such as percentage, frequency distribution, mean, median, and standard deviation, association of the obtained data.

RESULT

Findings of study showed that the majority (53%) of the participants were female (n=81). The range of knowledge score was 2-18. The mean with standard deviation was 9±3.36. The majority 86(57%) of adults were had average knowledge and 29(19%) had good knowledge regarding early sign and symptoms of diabetes mellitus. The result shows that education status, occupation, type of work, dietary pattern, family history of diabetic, previous knowledge of diabetes which was significant at p<0.05 level.

Table no. 1: Frequency and percentage distribution of socio demographic characteristics of the early sign and symptoms of diabetes in adults.   (N=152)

S.NO	CHARACTERISTICS	FREQUENCY (f)	PERCENTAGE (%)AGE
1.	**Age** 30-40 years 41-50 years 51-60 years	**88** 38 26	**58%** 25% 17%
2.	**Gender** Male Female	71 **81**	47% **53%**
3.	**Educational Status** No Formal Education Primary Education Secondary Education Graduate & Above Education	28 31 **60** 33	19% 20% **39%** 22%
4.	**Occupation** Government Private Own Business Unemployed	11 28 56 **57**	7% 19% 36% **38%**
5.	**Type of Work** Sedentary Work Hard Work Moderate Work Field Work	12 45 63 32	8% 30% 41% 21%
6.	**Marital Status** Married Unmarried	**145** 7	**95%** 5%
7.	**Dietary Pattern** Vegetarians Non vegetarians Eggetarians	53 **89** 10	35% **59%** 6%
8.	**Social Habits** Yes No Others	21 **131** 0	13% **87%** 0%
9.	**Diabetic** No Yes	**140** 12	**95%** 5%
10.	**Past History** No Yes	**149** 3	**97%** 3%
11.	**Family History** No Yes	**136** 16	**89%** 11%
12.	**Previous Knowledge** No Yes	**114** 38	**74%** 26%

The mean age of adults was 50.6 range between 30-60 years. The data shown in **Table No.1** depicts that majority (58%) of adults fall in the age group of 30-40 years, according to gender (53%) of female were participated, regarding education status, mostly (39%) adults were having secondary level of education, most (38%) of them were unemployed, mostly (41%) of them were doing moderate work, most of them are married, In this study (59%) of the people were non- vegetarian, In the social habits majority (87%) of adults were non- alcoholic, majority (95%) of people were non diabetic, In this study there is (97%) of people having no past history of diabetes, majority (89%) of people having no family history of diabetes, majority of them (74%) were having no previous knowledge about early sign and symptoms of diabetes mellitus among adults.

Table No. 2: Mean of the knowledge score of adults in early sign and symptoms of diabetes mellitus. **(N=152)**

S.NO	VARIABLE	RANGE OF SCORE	MEAN±S.D	MEDIAN	MEAN PERCENTAGE
1	Knowledge Score	2-18	9±3.36	8	45%

Maximum Score=18
Minimum Score=2

Table No.3: Comparison of domain of knowledge score regarding early sign and symptoms of diabetes mellitus among adults. **(N=152)**

S.NO	DOMAINS OF KNOWEDGE SCORE	MAXIMUM SCORE	MEAN±S.D	MEAN (%) AGE
1.	General Introduction	6	2.8±1.51	39%
2.	Thirst	2	1.2±0.64	61%
3.	Weight & Nutrition	2	1.3±0.58	15%
4.	Urination	4	2±0.95	49%
5.	Vision	2	0.5±0.58	25%
6.	Wound Healing	3	1.3±0.89	42%

The data presented in **Table No.3** illustrate that the majority (61%) of the adults had knowledge related to thirst, (49%) of the adults had knowledge about urination,(42%) of the adults had knowledge about wound healing, (39%) of the adults had knowledge about general introduction, (25%) of the adults had knowledge about vision, (15%) of the adults had knowledge about weight and nutrition.
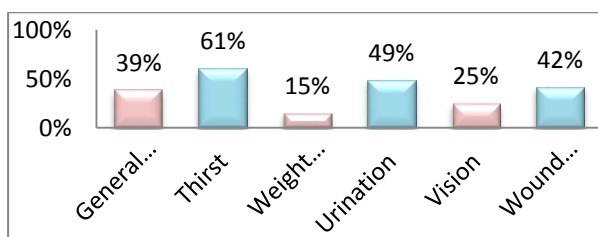
Figure No.1: Percentage distribution of domains of structured knowledge questionnaire. (N=152)
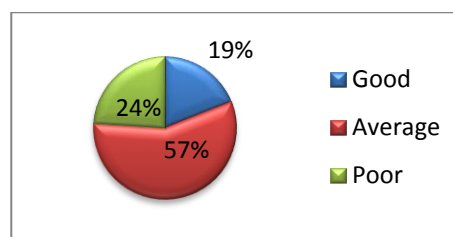
Figure No. 2: Percentage of knowle- –dge score regarding early sign of Diabetes mellitus (N=152)

Figure No. 1: shows that percentage with domain knowledge score of adults, the most (61%) of adults were found in the category of thirst, most (49%) of them were found in the category of urination, most (42%) of them were found in the category of wound healing, some (39%) of them were found in the category of general introduction, few (25%) of them were found in the category of vision, very few (15%) of them were found in the weight and nutrition.

Figure No. 2 shows the percentage of knowledge score of adults in early sign and symptoms diabetes mellitus with gained scoring, the most (19%) of adults were having good knowledge regarding early sign and symptoms of diabetes mellitus among adults, (57%) of adults were having average knowledge and only (24%) had poor knowledge.

DISCUSSION

In the finding of the present study the knowledge of adults was assessed by using structured interview technique. Result shows that 57% of adults were had average knowledge regarding

early sign and symptoms of diabetes mellitus. The mean of knowledge score with standard deviation 9±3.36 and median was 8.

The finding of the present study was consistent by cross- sectional study done by **Chavan.M.G., et al (2014)** on knowledge about diabetes and relationship between compliance to the management . The result shows that the mean with standard deviation of the knowledge score of adults regarding diabetes among diabetic patient was 14.28 ±3.5.[2]

In the finding of the present study result showed that the majority (61%) of the adult had knowledge related to thirst (49%) of the adults had knowledge about urination, (42%) of the adults had knowledge about wound healing, (39%) of the adult had knowledge about general introduction, (25%) of the adults had knowledge about vision, (15%) of the adults had knowledge about weight and nutrition.

The findings of the present study was supported by cross-sectional study done by **Kanwal.S., et al (2015)** on knowledge, attitude, practice of diabetic patient. The result shows that out of 250 only 87 (37%) patients knew that diabetes is characterized by high blood glucose level than normal. Only 88 (35%) knew the normal range of blood glucose level. Majority of patients 90 (36%) characterized diabetes by increase urination.[3]

The findings of the study highlighted the need for educational intervention such as public awareness programs regarding diabetes mellitus to hospital patients and their relatives as well as in the community area.

REFERENCES

1. Epidemiology of diabetes mellitus (2016); [cited on April 5]; Available at:
   https://en.m.wikipedia.org/wiki
2. Chavan M.G. Waghachavare B.V. Dhumale B.G. knowledge about diabetes and relationship between compliance to the management among the diabetic patient;[cited on 2017 August 3];Available at; https://www.ncbi.nlm.gov/pmc/articles/pmc
3. Kanwal S. et al. knowledge, attitude and practice of diabetic patients, Journal of applied pharmacy;[cited on 2017 October 27]; ISSN:1920-4159; Available at; https://googleweblight.com/i?u=htttps://www.omicsonline.org/open-access