Awareness Regarding Diabetes Mellitus among People Suffering from Diabetes Mellitus in Selected Community Areas of District, Fazilka: A Descriptive Study

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ABSTRACT

Diabetes mellitus is a disease whose dramatic increase in prevalence worldwide poses a global health crisis. The incidence of diabetes has risen due to insufficient practice surrounding the disease. The quality of life has decreased due to the recent rise in diabetes related mortality and illnesses. Hence, leading healthy lives requires patients to have self-awareness, which will eventually contribute to reducing diabetes mellitus related complications. (Mahzari M A, Oraibi O H, Shami A M, et al , 2022)[1]

Diabetes mellitus is rapidly, gaining a potential epidemic state all over the world. In 2014, about 387 million people were suffering from diabetes mellitus globally, of which 75 million people are from Southeast Asia. And it is projected to be 592,000,000by 2035. Among the diabetic population, 77% are living in low and middle income countries or average developed people. Every 7 seconds, one person dies from diabetes mellitus. Globally, more than 21 million live births have been affected by diabetes mellitus during pregnancy in 2013. It not only poses a grave threat to the health of a mother and her child, but evidence shows that this can lead to an increased risk of type 2 diabetes mellitus later in life for the child between 20 to 79 years of age. 66846 million people have been diagnosed with diabetes mellitus and 35495 million people remained undiagnosed. (Koley M, Saha S, Arya JS, et al, 2016)[2]

So, a quantitative descriptive research approach and design was used to assess the level of awareness regarding Diabetes Mellitus among people suffering from Diabetes Mellitus. A total sample of 100 people suffering from Diabetes Mellitus was taken through purposive sampling technique. Self-structured interview schedule was used for collection of data. Data collected is analyzed with descriptive and inferential statistics.

Conclusion: Findings of the study revealed that out of 100 Diabetes Mellitus patients, 98% had good level of awareness, 2% had average level of awareness and 0% had below average level of awareness. Study concluded that most of the sample had good level of awareness regarding Diabetes Mellitus.

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INTRODUCTION

Diabetes is a silent disease in which many sufferers become aware that they are sick only when they develop one or more of its life threatening complications. Complications from type 2 diabetes mellitus include blindness, renal disease, and amputation among others. In India, limited efforts have been devoted to educate the people about the awareness and the practice of the diabetes through the public media, but the impact of such efforts has yet to be evaluated. General knowledge on diabetes mellitus to the community can assist in early detection of the disease and

reduce the incidence of complications. Overweight factor for non - communicable diseases including diabetes. **(Carolyne C. Ruhembe, Theobald C. E. Mosha And Cornelio N. M. Nyaruhucha 2014)[3]**

Due of the nature of the disease, health professionals alone can't provide high quality care. Diabetes being a chronic illness requires sound awareness of self-care by patients so that they can contribute meaningfully in the management of their lives .Control of diabetes mellitus through a tight schedule of blood glucose and unique urine sugar monitoring, medication and adjustment to dietary conditions need patient`s regular attention and discipline. The disease condition requires competent self-care, which can be developed from a thorough understanding of the disease process and management of challenges by patients and family members**. (Solomon Asnakew Feleke, Chalachew Misganaw Alemayehu, Hawult Taye Adane,2013)[4]**

415 million people have diabetes in the world and more than 35.4 million people in the Middle East and North Africa (MENA) region. By 2040 this will rise to 72.1 millions according to one survey1, there were 3.4 million cases of diabetes in Saudi Arabia in 2015. To fight against any disease in community it is very important to aware the population. Managing the daily care of diabetes seems to be challenging task for many patients and a patient`s ability to be involved in the daily routine of diabetes self-care seems to be grounded in psychological, motivational as well as educational factors. **(Ali, Abrar & Siddiue et al, 2017)[5]**

The management of diabetes mellitus largely depends on the patient`s ability to do self care in their daily lives, and therefore, patient education is always considered an essential element of diabetes mellitus management. Studies have shown that patient`s ,who are aware about the diabetes mellitus self-care, have better long-term glycemic control. Awareness about glycemic control can help people to understand the risk of diabetes and motivate them to seek proper treatment and care and to keep the disease under control. Many studies have shown that control of hyperglycemia in diabetes patient`s can prevent or reduce the risk of diabetic complications. Better glycemic management of diabetes mellitus require not only the prescription of an appropriate nutritional and pharmacological regimen by the physician but also the intensive education of the patient. Most studies have used measurement such as blood glucose level and awareness and practice as the index of diabetes management. **(Asmelash D, Asmelash Y, 2019)[6]**

Diabetes Mellitus (DM) is a global public health concern. DM has been increasing alarmingly among the young people and childhood-onset has now become an emerging issue worldwide. Unlike other chronic diseases, DM requires constant and active attention of the patients, sometimes of their family members for successful management of this disease. Knowledge, attitude, and practices make significant differences at the population level, which largely depend on socioeconomic status, area of residence, level of education, and other socio-demographic attributes. Several factors have been attributed to the rising prevalence of diabetes including urbanization, adopting a western lifestyle, inadequate physical activity, and excess calorie intake. Both micro and macrovascular complications like cardiovascular diseases, retinopathy, nephropathy and neuropathy have been known as long term consequences of diabetes mellitus. This will significantly deteriorate patient`s quality of life and create a significant financial burden at the national and individual level. **(Akter F et al, 2022)[7]**

The ignorance among people about their disease process may be related to their low socioeconomic status and lack of quality education available to them about the disease. Some people come to know about their disease once it has led to various complications like retinopathy, nephropathy, and neuropathy. Therefore, increasing awareness and education of people about the disease may help people to control their blood sugar levels and prevent its complications **(*Contreras F, Sanchez M, Martinez MS, et al, 2017)[8]***

Diabetes mellitus (DM) frequency is a growing problem worldwide, because of long life expectancy and life style modifications. In old age (≥60-65 years old), DM is becoming an alarming public health problem in developed and even in developing countries as for some authors one from two old persons are diabetic or prediabetic and for others 8 from 10 old persons have some dysglycemia. DM complications and co-morbidities are more frequent in old diabetics compared to their young counterparts. The most frequent are cardiovascular diseases due to old age and to precocious atherosclerosis specific to DM and the most bothersome are visual and cognitive impairments, especially Alzheimer disease and other kind of dementia. Alzheimer disease seems to share the same risk factors as DM, which means insulin resistance due to lack of physical activity and eating disorders. Visual and physical handicaps, depression, and memory troubles are a barrier to care for DM treatment. **(Chentli F, Azzoug S, Mahgoun S., 2015)[9]**

MATERIALS AND METHODS

Study area: The present study was conducted in community areas of district Fazilka, Punjab (2025).

Sampling and sample size: Purposive sampling technique was used to select the sample. The total sample size was 100 people suffering from diabetes mellitus.

Description of Research Tool: The tool consisted of two parts:

Tool 1:- **Socio-Demographic profile of mother**

It included 11 items that were: Age, gender, educational status, occupation, duration of diabetes mellitus, monthly family income, marital status, family history, dietary habits, working profile, source of information.

Tool 2:- **Structured Interview schedule regarding awareness of diabetes mellitus**

This tool had 20 dichotomous questions to assess the awareness of people suffering from diabetes mellitus

RESULTS

1. Sample Characteristics:

regarding diabetes mellitus. Questions related to definition of diabetes mellitus, its risk factors, causes, diagnosis, management and prevention were included.

Data collection and analysis: Data collection was done on awareness regarding diabetes mellitus among people suffering from diabetes mellitus using self-structured interview schedule. Prior to study, written permission was taken from the Sarpanch and municipal commissioner of concerned community area of district fazilka for data collection. Nature and purpose of the study was explained to them. Verbal consent was also taken from people suffering from diabetes mellitus. Self- Structured interview schedule was used to collect data from sample. Time taken for the structured interview from one mother of infant was approximately 20-30 minutes. Analysis was done to assess frequency distribution and level of awareness of people suffering from diabetes mellitus regarding diabetes mellitus.

Frequency and Percentage distribution of sample characteristics   **N=100**

Sr. No.	DEMOGRAPHIC VARIABLES	FREQUENCY (n)	PERCENTAGE (%)
1	**Age**		
	18 -32	5	5.0%
	33 - 41	10	10%
	42 - 50	22	22%
	> 50	55	55%
2	**Gender**		
	Male	48	48%
	Female	52	52%
3	**Educational Status**		
	Illiterate	27	27%
	Primary education	33	33%
	Secondary education	19	19%
	Senior secondary education	12	12%
	College/University	09	09%
4	**Occupation**		
	Agriculture	24	24%
	Employed	03	03%
	Unemployed	04	04%
	Retired	22	22%
	Housewife	47	47%
5	**Duration of diabetes diagnosis**		
	Upto 5 years	38	38%
	6-10 years	39	39%
	11-20	18	18%
	More than 20 years	05	05%
6	**Marital status**		
	Married	85	85%
	Unmarried/single	04	04%
	Widow/widower	09	09%
	Divorced	02	02%

7	**Family history of diabetes mellitus**		
	Yes	60	60%
	No	40	40%
8	**Dietary habits**		
	Vegetarian	62	62%
	Non-vegetarian	36	36%
	Eggetarian	02	02%
9	**Working profile**		
	Sedentary worker	21	21%
	Heavy worker	31	31%
	Moderate worker	48	48%
10	**Income of Family/Month (In Rs.)**		
	≤10000	43	43%
	10001-20000	32	32%
	20001-30000	09	09%
	≥30001	16	16%
11	**Source of information**		
	Doctor	95	95%
	Media	01	01%
	Relatives/friends	04	04%
	Internet	0	0%

Table 1 represents the frequency and percentage distribution of people suffering from diabetes mellitus as per their sample characteristics.

The data presented in table indicates that highest percentage (55%) of Diabetic patients were in the age group of 50 years and above followed by 22% in age group of 42-50 years, 10% of 33-41 years and only 5% were in the age group of 18-32 years. The data on type of gender shows that 48% were male while the rest (52%) were females. Majority (33%) of the Diabetic patients had Primary School Education whereas lowest percentages (9%) were of colleges/universities education. Majority of Diabetic patients (47%) who participated in the study were housewives and the lowest percentage (3%) was employed. Data presented on duration of Diabetic Diagnosis shows that 39% of sample included people suffering from DM from 6-10 years and lowest (5%) suffered from Diabetes Mellitus for more than 20 years. Majority of Diabetic patients (85%) were married while the lowest percentage (2%) was of divorced patients. The data on family history shows 60% of people were having history of DM while the rest (40%) did not have any history of DM. Majority of Diabetic Patients who participated in the study were vegetarian (62%) and the lowest percentage (2%) was of eggetarian. The data in the table shows maximum (48%) of people were moderate worker while lowest (21%) were sedentary worker. Majority of Diabetic Patients (43%) had a family income of less than Rs.10, 000 per month whereas lowest (9%) had a family income in between Rs.20, 001-30,000 per month. Highest percentage (95%) of Diabetic Patients had doctors as source of information regarding diabetes mellitus followed by relatives (4%) and media (1%)

2. Awareness regarding diabetes mellitus among people suffering from diabetes mellitus

Table 2: Frequency and Percentage distribution of people suffering from diabetes mellitus according to their level of awareness regarding diabetes mellitus. N=100

Level of Awareness	Awareness Score	Frequency (Percentage %)	Mean	Standard Deviation
Good	13 - 20	98%	17.0	1.526
Average	7 - 12	02%	11.0	0
Below Average	0 - 6	0	0	0

Max. Score = 20
Min. Score = 0

Table 2 and **Fig. No. 1** depicts frequency and percentage distribution of people suffering from diabetes mellitus according to level of awareness regarding diabetes mellitus. It shows majority of subject (98%) had good level of awareness regarding diabetes mellitus followed by average awareness (2%) and below average awareness regarding diabetes mellitus (1%).

Hence, it is concluded that maximum number of people suffering from diabetes mellitus had good level of awareness regarding diabetes mellitus.
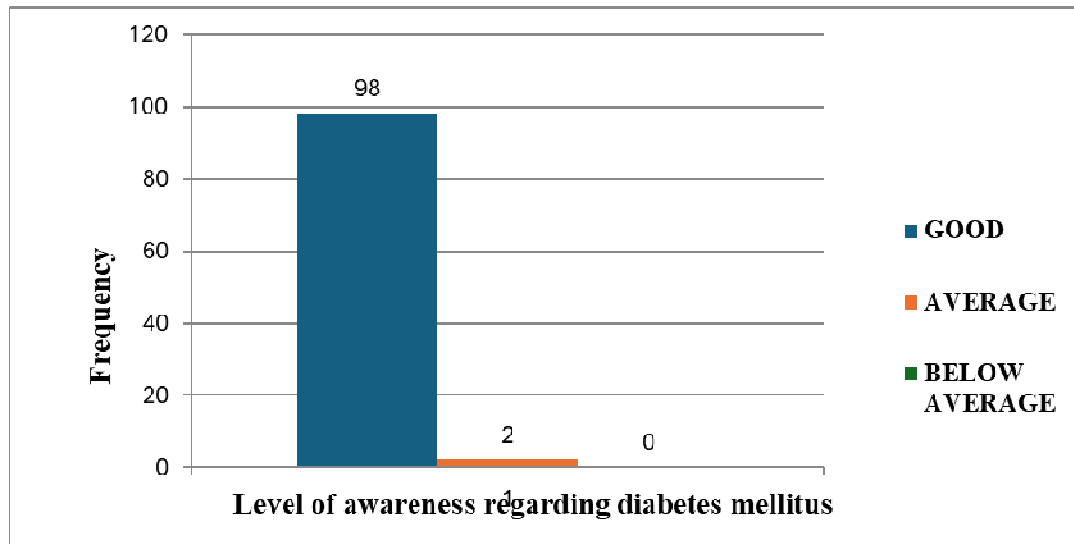

Figure No.1: Frequency distribution of people suffering from diabetes mellitus according to level of awareness regarding diabetes mellitus.

DISCUSSION

The findings of study shows majority of subject (98%) had good level of awareness regarding diabetes mellitus followed by average awareness (2%) and below average awareness regarding diabetes mellitus (1%). Similar findings were reported by **Sue L. Lau et al (2009)[10]** whose healthcare team conducted a community-based survey of the residents of Khowai district, Tripura. All household members above the age of 25 years were eligible to participate, following voluntary consent. Survey questionnaires were administered with interpreter assistance including demographic information, diabetes knowledge, family history, smoking, diet, healthcare access and the international physical activity questionnaire (IPAQ). Anthropometric measurements were taken and blood glucose testing performed. One hundred and forty four participants completed the survey, 66 males and 78 females with a mean age of 44.4 +/- 14.8 years Although 91% had heard about diabetes and 44% were concerned about developing it in the future, only 39% were aware of its association with overweight status and 37% knew it required long-term treatment.

The findings were contradicted by study conducted by **Benil V. And Deepan Nayagam B (2017)[11]** who conducted a cross-sectional study conducted on diabetic patients attending Sri Lakshmi Narayana Institute of Medical Sciences and Hospital, Puducherry over a period of two months, using questionnaire. Among 104 diabetics, 60%, 49% and 66% of the patients answered high sugar intake as the cause of diabetes, loss of vision as its complication and diet control as the important measure of treatment of diabetes respectively. Only 30.67% of the patients were aware of the name of the medicine they consume.

CONCLUSION

Assessing knowledge on weaning among mothers of infants is quite effective if done in a well organized and scientific way. It creates an increased awareness among them, which can empower them to take care of their own health as well as protect their infants from nutritional deficiencies. As the findings reveal that majority of mothers have below average knowledge regarding weaning, an integrated and collective approach by teachers, nurses, health personnel, parent and Govt. should be carried out for a holistic development of mother's as well as infant's health. It ensures a sound mind in a sound body which can enable the individual having a safe mother hood in future.

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