

## **Research Article**

# **A Study to Assess the Practice of Diabetic Patient towards Self Care Activities for Longevity of Life**

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**Abstract:** Diabetes has been traditionally divided into insulin dependent (IDDM) and non insulin dependent (NIDDM). A third form LADA (latent autoimmune diabetes in young) having features of both has emerged. DM is a disorder characterized by fasting and post prandial hyperglycaemia resulting from a deficiency of insulin secretion and / or resistance to it. The aim of the study was to assess the practice of diabetic patient towards self care activities. In this study 500 diabetic patients were selected by simple random selection technique. The participants were received structured practice questionnaire with their formal concerned. Result of research indicates that mean score (9.44) with S.D of 2.06 of practice towards self care activities among diabetic patients and this value indicate that the practice of diabetic patients towards self care activities were not satisfactory and the result showed that significant association between practice towards self care activities in diabetic patients with socio demographic variables such as gender, age, marital status, type of the family, educational status, dietary habits and duration of diabetes.

**Keywords:** Diabetes, Practice, Self care activity, Longevity of life

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## **INTRODUCTION**

An Egyptian was given the first confirmation of diabetes by the name Papyrus Ebers (1500 BC). The word "Diabetes" is origin from Greek word which mean "to run through" or a term "siphon" was first used by Aretaeus of Cappadocia in 2 century A.D [1]. An accurate factual description of the diabetes condition, which is instantly recognizable even today. Diabetes is a fearful problem, not very common among man, being a melting down of the fleshy tissue and limbs into urine. The patients may have increased thirst an increased urination [2]. In the 5 century B.C. Charaka and Susruta described a situation "Madhumeha" in which a person passes urine, which contain honey, so that it strongly attracts ants [3].

At present there are 19.4 crore diabetes patients worldwide, out of these 3.5 crore were identified in India [4]. U.S. death certificates status of 2007 shows that diabetes was the 7<sup>th</sup> major leading reason of death in the country [5]. India's embrace of the worst of both Eastern and Western ways is sending lifestyle illnesses such as obesity and diabetes skyrocketing. According to the International Diabetes Federation (IDF) and the Madras Diabetes Research Foundation report in 2011 India had 62.4 million people suffered by type 2 diabetes, compared with 50.8 million the previous year [6]. In India the crude prevalence rate of diabetes in urban areas is about 9% and that the prevalence in rural

areas has also increased approximately 3% of the total population [7].

Study subjects have very poor practice in all the aspect of self care and were not aware about various complications of diabetes. They should be made more aware the complications of diabetes, so that they could seek medical advice as early as possible. The objective of this study was to test the relationship between practice and self care activities among diabetic patients.

## **MATERIALS AND METHODS**

A descriptive research has been adopted for this study. The simple random technique was selected sample of 500 diabetic patients who attended diabetic OPD/ ward in MLB Medical College, Jhansi during the period of data collection and who fulfilled the inclusive criteria.

Informed written consent was obtained from each sample after explaining the purpose of the study and was given assurance for keeping the information confidential. The information regarding demographic data was collected from samples to structured interview questionnaire .Self administered to practices questionnaire was distributed to each individual, who are willing to participate in the research study. 50-60 minutes was allotted to fill up the questionnaire.

A medium sized two- part questionnaire was designed by the researcher. The first part of the questionnaire consisted of socio demographic information of diabetic patients. Part two consisted of 15 multiple choice questions related to food intake, exercise, practice foot care, and take other actions indicative of patient lifestyle. The maximum score is 15 in part two. Practices questionnaire was developed to assess practices of diabetic regarding self care activities of diabetes mellitus based on the review of literature and in consultation with the experts in the field of Medicine, Nursing and related discipline.

After the intervention to maintain data confidentiality, all data related to patient identify was excised, and a code system was assigned to participants. Participants were informed of their right to withdraw from the study at any point. Assessing the practices of the self care activities in diabetic patients help to clear

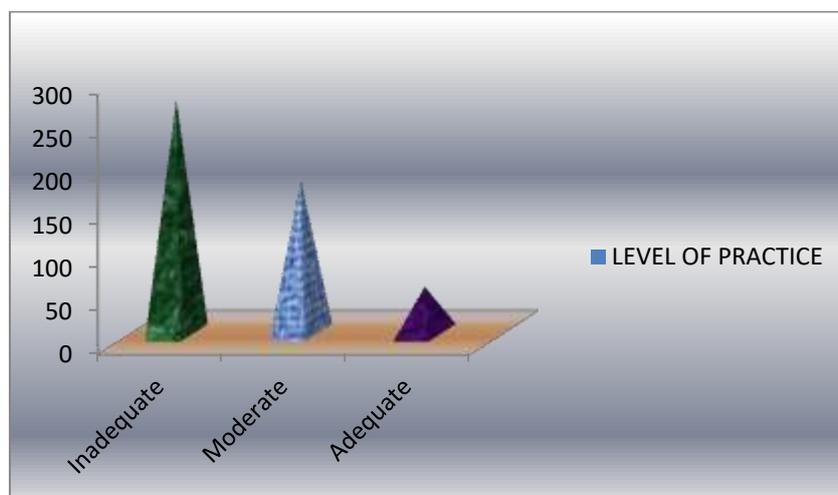
the picture about practices of the self care activities in diabetic patients.

**RESULTS**

The study included 500 samples, 300 (60%) were male and 200 (40%) were female. Status of age showed that 130 (26%) were in the age group of 40-50 years and another 70 (14%) were in the age group above 70 years. Religion status showed that 160 (32%) were Hindu and 130 (26%) were Muslim. Educational status showed that 290 (58%) were literate and 210 (42%) were not take the formal education. Marital status showed that 150 (30%) were married and 80 (16%) were unmarried. Family status showed that 178 (36%) were lived in joint family and 225 (45%) were lived in nuclear family. Food habits showed that 270 (54%) vegetarian and 230 (46%) were non- vegetarian (Table1).

**Table 1: Characteristics of the study subjects (N=500)**

Sl. No.	Demographic variables	Frequency (f)	Percentage (%)
1	<b>Gender</b>		
a	Male	300	60
b	Female	200	40
2	<b>Age in years</b>		
a	40-50	130	26
b	51-60	140	28
c	61-70	160	32
d	Above 70	70	14
4	<b>Educational status</b>		
a	Literate	290	58
b	Illiterate	210	42
5	<b>Marital status</b>		
a	Married	150	30
b	Unmarried	80	16
c	Separate	130	26
d	Widow/ Widower	140	28



**Fig. 1: Bar diagram shows the level of practice about the diabetic patients related to self care activities**

The above diagram shows that out of 500 samples majority 54% had inadequate practice, 36% had

moderate practice, while only 10% have adequate practice related to self care activities.

**Table 2: Mean, Median & Standard Deviation of practice of diabetic patients related to self care activities**

Sample	N	Mean	Median	Standard Deviation
Diabetic patients	500	9.44	9.5	2.06

The data presented in table indicates that mean score of practice towards self care activities among diabetic patients and this value indicate that the practice

of diabetic patients towards self care activities were not satisfactory

**Table 3: Practice of diabetic patient towards self care activities associate with socio demographic variables**

Analysis of variance	Square of variance	df	Sum of Square	Mean sum of square	F ratio
Gender	Between groups	1	50.7	50.7	9.2*
	Within the groups	498	2742.5	5.50	
Type of family	Between groups	2	13.95	6.97	2.79*
	Within the groups	497	1246.97	2.50	
Education	Between groups	1	8.98	8.98	5.28*
	Within the groups	498	850.22	1.70	
Marital status	Between groups	3	75.96	25.32	9.78*
	Within the groups	496	1289.04	2.59	
Age	Between groups	3	85.36	28.45	10.77*
	Within the groups	496	1313.84	2.64	
Dietary habits	Between groups	1	20.13	20.13	11.63*
	Within the groups	498	859.87	1.73	
Duration of diabetes	Between groups	3	58.14	19.38	8.80*
	Within the groups	496	1094.66	2.20	

\*shows significant relationship with socio demographic variables

Table 3 shows the summary analysis of F test between the levels of practice and socio demographic variables among diabetic patients. A significant relationship existed between practice of diabetic self care activities and gender, type of family, education, marital status, age, dietary habits and duration of diabetes. When considering the practice of diabetic patients related to Intake of food & Medicine, (20%) were taking food after administration of insulin, 55 (11%) take food within half an hour, 195 (39%) take food within one hour and 150 (30%) take food at any time. A significant relationship existed between practice and dietary habits of diabetic patient, in this 75 out of 500 (15%) are aware the restricted food of diabetes 130 (26%) know the Ghee/Butter/Cream is only restricted in diabetes, 185 (37%) know that Jiggery, honey, jam, sweet food is restricted in diabetes and 110 (22%) suggested that fried food is restricted in D.M. The relationship between practices of diabetic patients related to self administration of insulin / oral medication for this 180 (36%) take insulin without prescribed dose, 90 (18%) take as per advice of physician, 110 (22%) take according to result of urine test and 120 (24%) do not know the proper dose of insulin/ medication. Practice of diabetic patients related to injecting insulin in rotation manner shows that 185 (37%) were suggested that injecting insulin in rotation manner for better absorption, 130 (26%) said that it reduce pain,

115 (23%) said to prevent injection abscess and 70 (14%) were not known why rotation manner is applied.

**DISCUSSION**

The accessible systematic information in relation to diabetes mellitus is a significant resource to guide and teach diabetes patients concerning self-care activity. Self-care concepts that can benefit patients include adherence to diet, physical activity, blood glucose monitoring, and taking oral medication and insulin. Few studies regarding the relationship between practice and self-care activity among diabetics patients are available in India or elsewhere in the world.

It was reported that human financial costs of diabetes and its difficulties are abnormally high. For every 10 seconds, diabetes causes one death and one amputation every 30 seconds. It is furthermore related with blindness, cardiovascular (CVD) and renal malfunction [8]. A descriptive cross-sectional study was carried out to assess the practice regarding self care among all diabetics’ patients served by Govt. Medical College and Hospital, Nagpur. In the study subject were selected with predesigned and pretested Performa. Out of 927 study subjects, 407(43.9%) study subjects were aware about the effects of exercise. 558(60.2%) study subjects were not doing any type of exercise. Study subjects have very poor knowledge in all the aspect of

self care and were not aware about various complications of diabetes [9].

Jegadeesh Ramasamy *et al.*, conducted to there are seven essential self-care behaviours in people with diabetes which predict good outcomes namely healthy eating, being physically active, monitoring of blood sugar, compliant with medications, good problem-solving skills, healthy coping skills and risk-reduction behaviours. This integrated approach is required for promoting self-care practices among diabetic patients to avert any long-term complications [10]. Abioye-kuteyi EA *et al.* assess the dietary knowledge, practices and control in 33 type 2 diabetes in a Nigerian teaching hospital over a three month period were studied. The results show that moderately severe in 60% of subjects. About 52% received dietary advice. Significantly higher mean knowledge scores seemed to be associated with better dietary practices and better glycaemic control. Overall, dietary practices improved significantly following diagnosis and counseling [11].

Thais *et al.* conduct a cross-sectional study aimed to describe the most common correct and incorrect self-administration techniques for insulin using disposable syringes by patients cared for by the Family Health Strategy (FHS), the results identified errors in all the steps for the safe administration of insulin, from hand washing to compression on the injection site [12]. American Diabetes Association the injection of insulin is essential for management of patients with type 1 diabetes and may be needed by patients with type 2 diabetes for intermittent or continuous glycaemic control. The result shows that species and dosage of insulin used should be consistent, and the patient's injection technique should be reviewed periodically with the diabetes care team [13]. So the researcher achieved the main aim of this study by stating that the relationship between practice and self care activity of diabetic patients for longevity of life.

## CONCLUSION

The purpose of the study was to assess practice of self care activities of diabetes mellitus among diabetic patients in selected hospital at M.L.B. Medical College, Jhansi. The whole study was cost effective, simple and carried out in an acceptable way to assess the level of practice of self care activities of diabetes mellitus among diabetic patients. The result shows that the diabetic patients had in adequate practice regarding self care activities of diabetes mellitus; hence the researcher felt the need to focus the results in general. So the health personnel help to improve the practice of self care activities of diabetes mellitus among diabetic patients.

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