

**Original Research Article**

# **Knowledge and attitude of general population of Barabanki and Lucknow towards Diabetes Mellitus**

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## **Abstract**

**Background:** In today's era lifestyle related disease like diabetes mellitus, has emerged as a major public health problem. Diabetes mellitus, a common metabolic disorder, which accounts for a high incidence of morbidity, leads to various events including micro and macro vascular complications. This study aims to assess the baseline levels of (KA) knowledge and attitude of general population of Barabanki and Lucknow.

**Materials and methods:** The present cross sectional study was carried out on general population of Barabanki and Lucknow with the help of a suitably designed and validated KAP questionnaire. The questionnaire was pretested and verified for errors. The data was analyzed statistically.

**Results:** Altogether, 60.12% of respondents scored 100% in the questions related with knowledge. However 23.54% scored 100% in the attitude questions.

**Conclusions:** We can conclude that the responders had good knowledge but poor attitude towards diabetes. We can overcome this by increasing quality of health education and improving applicability of scope of health education at all level.

## **Key words**

Diabetes mellitus, Knowledge, Attitude, Lucknow, Barabanki, Uttar Pradesh, General population.

## Introduction

Diabetes mellitus a life style disease has emerged as a major public health problem. Over the past few years, the working patterns have changed, with fewer people involved in manual labor (e.g. as in the agriculture sector) and more and more people opting for physically less demanding office jobs. Another factor for the increase in risk for diabetes mellitus is the 'fast food culture' that has overwhelmed our cities and towns. As the majority of the young working population depends on these unhealthy 'junk foods,' this may partly explain the rise in diabetes incidence in the younger age-groups. As a result, there has been a dramatic rise in the number of patients with DM, which in turn places urgent demands on health care systems in our country, most of which are ill-prepared for such demands.

Problems associated with DM can be minimized by early diagnosis and proper management [1]. The primary aim of management of DM is to delay the macro and microvascular complications by achieving optimal glycaemic control [1]. The overwhelming burden of the disease threatens to stunt economic growth and undermine the benefits of improved standards of living and education. Proper education and awareness programs developed according to the need of the society can improve the knowledge of general population and change their attitude [2]. KA (Knowledge and Attitude) surveys are effective in providing baseline for evaluating intervention programs [3]. This study aimed to assess the baseline levels of knowledge, attitude of general population of Barabanki and Lucknow.

## Materials and methods

The present cross sectional study was carried out on general population of Barabanki and Lucknow with the help of a suitably designed and validated KA questionnaire during April – August 2015. The main aim of the study was to assess the knowledge and attitude towards DM. Along with this we had educate them about their health concern, hygiene and counsel about ways of healthy living so that many young lives could

be saved from various illnesses. The questionnaire was pretested and verified for errors [4-10]. The questionnaire covered two areas: knowledge and attitude. There were a total of 19 questions, with 14 questions related to knowledge about diabetes and 5 questions to assess the attitude of the patient towards the disease. This questionnaire was filled in at a face-to-face interview with the investigator. In scoring method, twenty five was the maximum possible score in which each correct answer was carry one point and incorrect or unsure answer was carry no point. Hindi or English version of questionnaire was provided as per requirement of individual.

## Results

Most of the respondents (65.8%) were aged 31-40 years, followed by those aged above 40 years. Most of them (58.9%) were educated up to higher secondary school as per **Table – 1**. The major source of knowledge for the general population was television (32%) and newspaper (30%) followed by family physician (28%). However 10% received information from friends and relatives. Majority were aware about the causes, symptoms and complications of the disease as per **Table – 2**. We observed good score in attitude part of the questionnaire and 96.6% had positive attitude towards exercise as per **Table – 3**.

## Discussion

Diabetes mellitus (DM) has become a global epidemic with significant disability, premature death and enormous medical expenditure [11]. Total number of people with diabetes is projected to double by 2030 with a significantly greater rise in Asia [11]. Asia is developing as the epicentre of this escalating epidemic, reflecting rapid transitions in demography, unhealthy diet and lifestyle patterns [12]. People living in the Asia are also at higher risk for developing DM at relatively younger age and at a lower body mass index than other ethnic groups [13].

**Table - 1:** Demographic details of the study population.

Variables		No. of general population	%
Gender	Male	458	45.8
	Female	542	54.2
Marital status	Married	971	97.1
	Unmarried	29	2.9
Educational status	Illiterate	32	3.2
	Up to Primary school	299	29.9
	Up to Secondary school	589	58.9
	Graduate	180	18.0
Age (years)	18-20	53	5.3
	21-30	126	12.6
	31-40	658	65.8
	41 or above	163	16.3

**Table - 2:** Response to knowledge questions.

Sr. No.	Questions	No. of persons with correct answer	%
1	Whether I am aware that diabetes is a disease?	1000	100
2	How many types of diabetes?	351	35.1
3	What is the level of blood sugar to diagnose diabetes?	782	78.2
4	Is there positive family history necessary for development of diabetes?	611	61.1
5	Is the infection can lead to diabetes?	278	27.8
6	What are the various symptoms of diabetes?	910	91.0
7	Which is the most correct method of blood sugar estimation?	105	10.5
8	What occur if diabetes is not treated?	803	80.3
9	Which life style modifications help in diabetes?	918	91.8
10	Why urine examination is needed in diabetes?	723	72.3
11	Which diet is limited in diabetes?	980	98.0
12	Is exercise having valuable role in diabetes?	958	95.8
13	What is insulin?	713	71.3
14	What are the complications of diabetes?	810	81.0

**Table - 3:** Response to attitude questions.

Sr. No.	Questions	No. of persons with correct answer	%
1	Should patient follow a controlled and planned diet to prevent diabetes?	891	89.1
2	Do you think estimation of blood sugar level is important?	703	70.3
3	Should we visit to physician regularly?	633	63.3
4	Do you think regular medication is important in diabetes?	550	55.0
5	Should we exercise regularly for healthy life?	892	89.2

In India, the older members of the population who have had diabetes for a relatively longer

time are protected from risk of diabetic complications because of their physical activity

patterns and dietary habits (making healthier food choices), while the current younger generation face high risk of diabetic complications due to a sedentary and stressful lifestyle. Many causes have been postulated for the rise in the number of cases, including urbanization, sedentary lifestyles, poor nutrition and obesity. People with Diabetes mellitus who wish to live normal lives need to know a lot about their illness [14]. Thus, awareness on Diabetes mellitus and its complication has become an integral and essential part of Diabetes mellitus care for the people in the society.

Almost 79% of responders answered 65% of the knowledge questions correctly. Still a large proportion of population that is almost 35.4% was not able to score above 10. This is comparable to the results of a study done in Malaysia by Ambigapathy R., et al. [15] who reported 87% respondents able to answer 50% knowledge questions correctly. The lack of proper knowledge of each responder should be given individual attention for good practice and fill the gap of this 10% to 100% as studies report that there is a positive correlation between knowledge and good attitude [15]. Regarding Attitude 21.82% scored above 50% in this study, however, reports from Malaysia revealed good attitude with 98% scoring above 50% [15]. Attitude towards Here we can observe that 96.6% believe that habit of exercise is useful for treatment of diabetes. Many studies have confirmed the beneficial role of physical activity in improving glycemic control. Due to inadequate glycemic control there are high chances of developing complications. Great efforts would be needed by health teams to enhance education and improve the knowledge of the diabetics in our society. There is increasing amount of evidence that patient education is the most effective way to lessen the complications of diabetes [16].

Knowledge regarding diabetes forms the basis for informed decisions about diet, exercise, weight control, blood glucose monitoring, and use of medications, foot and eye care, and

control of macro vascular risk factors [17]. Group education as well as individualized education programs should be planned which can lead to better preventive and management techniques in diabetes. The educational programs for the health professionals and paramedical staff are also important because several studies have reported the positive impact of counseling by clinical pharmacists on glycemic control and quality of life outcomes in the diabetic population [18]. Thus there is need for arranging large scale awareness programs for the general population and also to identify and use media to spread the message which could change the attitude of our population in the future.

## **Conclusion**

This study provides a snapshot of the current situation of knowledge and attitude related to diabetes in general population in Barabanki and Lucknow. Even though the majority had adequate knowledge on diabetes, there is still some room for improvement as one fourth of study participants had poor knowledge on various aspects of diabetes. The most interesting finding of this study was the gap between knowledge and attitude towards diabetes and its management. Even though the majority had above average knowledge it was not reflected on their attitudes towards DM. Therefore, this study can be used as a baseline for the national diabetes awareness campaigns and modify the approach towards education on diabetes.

It is crucial to enhance basic DM knowledge among the general population. National-level education and health intervention programs should be instigated and augmented. Properly designed and planned interventions among patients with DM should be conducted at the physician- and community pharmacy-level to ensure patients are aware and vigilant regarding disease management. Educational campaigns should focus on dietary and lifestyle modifications, and regular BGL screening in addition to risk factors. Diabetes educators should be part of the healthcare team, and should

be supported to organize health education programs in both urban and rural areas. BGL screening programs should be initiated at basic health units to diagnose at the pre-diabetes level and support timely control of the disease.

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