



Original Research Article

## Knowledge of Diabetes among Diabetic Patients Attending Diabetes Clinic in Kathmandu, Nepal

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### ABSTRACT

**Introduction:** The study was conducted to assess knowledge towards the disease and its consequences among diabetic patients attending in diabetic clinic in Kathmandu, Nepal.

**Methods:** This descriptive hospital based study was conducted in Kathmandu, Nepal. Purposively one private hospital and one government hospital was selected for the study. Total of 162 respondents were taken for the study from each organization. The first come first serve basis was used for the selection of the respondents within the limited time period allocated for data collection.

**Results:** Findings of this study revealed that knowledge regarding symptoms and complications of the disease was adequate from both government and private hospital. Frequent thirst was reported as most common symptoms of diabetes by 36.5 percent of respondents from government hospital and 63.5 per cent from private hospital. Mostly half of the respondents from government and private hospital had knowledge that it can affect heart (50.6 per cent), kidney (58.02 per cent) and eye (69.7 per cent). Almost all respondents (80.86 per cent) from government and private hospital had knowledge that they should have regular follow up with physician and follow order to prevent from its complications.

**Conclusion:** The respondents were aware on detecting early complications of diabetes like periodic eye examination and visiting physician.

**Key Words:** Diabetes, Diabetic Patients, Knowledge.

### INTRODUCTION

Diabetes is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Diabetes mellitus is one of the most common non-communicable diseases, and its epidemic proportion has placed it at the forefront of public health challenges

currently facing the world. The World Health Organization (WHO) estimated the global burden of diabetes at 135 million cases in 1995, in a worldwide adult population of under 4 billion, and has projected that there will be 299 million cases by the year 2025. It is predicted that between 2000 and 2025, the size of the world's adult population will increase from

less than 4 billion to 5.5 billion, mainly on account of a 60 per cent increase in developing countries. The data published in 2011 by WHO showed deaths due to diabetes mellitus reached 3,224 (2.17 per cent) of the total deaths in Nepal. This may be due to changes in life style, urbanization and physical inactivity. Diabetes is also the most common chronic disease with devastating complications which impose significant economic consequences on individuals, families, health systems and countries. Self-care in the form of adherence to diet and drug regimens, blood glucose monitoring, self-administration of insulin, maintenance of optimum weight, blood pressure, recognition of symptoms associated with glycosuria and hypoglycemia etc. are crucial elements in prevention of complications.<sup>[1]</sup> Where as knowledge about the delay in precipitation of disease and prevention for deterioration with the disease known in the community. Hence, knowledge of diabetes self care is the provision of diabetes patients with management skills, and motivation to manage their condition together. Assessment of the level of knowledge in the self care among persons with diabetes can assist in targeting public health efforts to reduce complications.

## MATERIALS AND METHODS

This descriptive hospital based study was conducted in Kathmandu, Nepal. Purposively one private hospital which is specialized in Diabetes and one government hospital with different departments was selected for the study. The study was conducted among 162 diabetes patients. The diabetic patients who had attended the diabetes clinic during the data collection period were taken as respondents till the sample size was completed. 81 respondents were taken from government hospital and other 81 respondents were taken from

private hospital for the study. The first come first serve basis was used for the selection of the respondents and the willingness of the respondents to participate in the study was also considered after the verbal informed consent. Structured interview schedule was used for face to face interview.

## RESULTS

The findings of the study showed that about 43.2 per cent of respondents from government hospital and 56.8 per cent of respondents from private hospital were aware that diabetes mellitus is caused due to genetic defects as half of the respondents had family history of diabetes mellitus in their family. Only about 43.9 per cent of respondents from government hospital and 56.1 per cent of respondents from private hospital knew that it is resulted from defect in insulin.

**Table 1: Knowledge regarding causes of diabetes mellitus  
Multiple Response N=162**

Cause of diabetes mellitus	Government	Private	Total
Defects in the formation of insulin	29 (43.9)	37 (56.1)	66 (100)
Pancreatic disorders	6 (66.6)	3 (33.4)	9 (100)
Genetic defects	32 (43.2)	41 (56.8)	74 (100)
Don't know	30 (53.5)	26 (46.5)	56 (100)

Table 2 shows that frequent thirst was reported as most common symptoms of diabetes by 36.5 percent of respondents from government hospital and 63.5 per cent from private hospital. Only 4.6 per cent of respondents knew that the disease could be asymptomatic.

**Table 2: Knowledge regarding symptoms of diabetes mellitus  
Multiple Responses N=162**

Symptoms of diabetes mellitus	Government	Private	Total
Frequent urination	52 (47.7)	57 (52.3)	109 (100)
Frequent hunger	40 (49.4)	41 (50.6)	81 (100)
Frequent thirst	42 (36.5)	73 (63.5)	115 (100)
Weight loss	20 (45.4)	24 (54.6)	44 (100)
Asymptomatic	9 (52.9)	8 (47.1)	17 (100)

As shown in table 3, about two-thirds of the respondents had knowledge that they should have small meal pattern (2-3 hourly gaping diet).

**Table 3: Knowledge regarding balanced dietary pattern  
Multiple Response N=162**

Dietary pattern	Government	Private	Total
Small meal pattern (2-3 hourly gapping)	57 (48.3)	61 (51.7)	118 (100)
Low carbohydrate diet	16 (43.2)	21 (56.8)	37 (100)
Avoid sugar and sweet	37 (53.6)	32 (46.4)	69 (100)
Restrict fried food & high fat diet	20 (51.2)	23 (48.8)	39 (100)

Patients' lack of knowledge about diabetes can hamper their ability to manage their disease or its complications. Table 4 shows that mostly half of the respondents from government and private hospital had knowledge that it can affect heart (50.6 per cent), kidney (58.02 per cent) and eye (69.7 per cent).

**Table 4: Knowledge regarding complications of diabetes  
Multiple Response N=162**

Complications of diabetes	Government	Private	Total
Heart disease	39 (47.5)	43 (52.5)	82 (100)
Kidney Disease	46 (48.9)	48 (51.1)	94 (100)
Eye disease	55 (48.6)	58 (51.4)	113 (100)
Foot problems	21 (45.6)	25 (54.4)	46 (100)
Stroke	1 (16.6)	5 (83.4)	6 (100)
Death	6 (37.5)	8 (62.5)	16 (100)
Don't know	8 (50)	8 (50)	16 (100)

**Table 6: Knowledge regarding allied care to prevent from complications of diabetes mellitus  
Multiple Response N=162**

Allied care of diabetes mellitus	Government	Private	Total
Blood sugar examination	37 (43.5)	48 (56.5)	85 (100)
Eye examination	48 (47.5)	53 (52.5)	101 (100)
Foot care for diabetes	8 (100)	0	8 (100)
Blood Pressure monitoring	22 (44.8)	27 (55.2)	49 (100)
Regular follow up with physician & follow order	73 (49.3)	75 (50.7)	148 (100)

Almost all respondents (80.86 per cent) from government and private hospital had knowledge that they should have regular follow up with physician and follow order to prevent from its complications.

## DISCUSSION

The findings of the study indicated that majority of the diabetic patients had overall good knowledge about diabetes. Regarding diet management about two-thirds of the respondents had knowledge that they should have small meal pattern (2-3 hourly gapping diet). This finding was in contrast with the finding of a similar study

Table 5 shows that majority (79.1 per cent) from both the hospitals responded that drug was used for the treatment. Lifestyle interventions, namely nutrition and exercise, are the cornerstones of successful diabetes therapy. About 61.3 per cent of respondents from private hospital and responded that healthy diet was also used for treatment of diabetes and 57.3 per cent respondents from government hospital responded that regular exercise was also used for treatment of diabetes.

**Table 5: Knowledge regarding treatment of diabetes  
Multiple Response N=162**

Treatment of diabetes	Government	Private	Total
Drugs	62 (48.4)	66 (51.6)	128 (100)
Insulin	34 (57.6)	25 (42.4)	59 (100)
Healthy diet	45 (38.7)	71 (61.3)	116 (100)
Regular exercise	51 (57.3)	48 (42.7)	89 (100)
Weight control	6 (33.3)	12 (66.7)	18 (100)

conducted in western Nepal which showed that the majority of patients had correct knowledge regarding diabetic diet.<sup>[2]</sup>

Patients' lack of knowledge about diabetes can hamper their ability to manage their disease or its complications. But it was good to know that that half of the respondents from government and private hospital had knowledge that it can affect heart (50.6 per cent), kidney (58.02 per cent) and eye (69.7 per cent). But in a study conducted in India, the patients' awareness on complications of diabetes mellitus was low.<sup>[3]</sup>

## CONCLUSION

Overall, it was observed that diabetic patients were aware of only a few aspects regarding the causes, symptoms, prevention and control of their disease condition. Only about 43.9 per cent of respondents from government hospital and 56.1 per cent of respondents from private hospital knew that it is resulted from defect in insulin. Frequent thirst was reported as most common symptoms of diabetes by 36.5 percent of respondents from government hospital and 63.5 per cent from private hospital. Mostly half of the respondents from government and private hospital had knowledge that it can affect heart (50.6 per cent), kidney (58.02 per cent) and eye (69.7 per cent). Almost all respondents (80.86 per cent) from government and private hospital had knowledge that they should have regular follow up with physician and follow order to prevent from its complications.

It is concluded that diabetic patients should be given more awareness on the risk of complications so that can have good self care practices and deal a healthy life style.

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