# **Original Research Article**

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# Evaluation of the health seeking practices among diabetics (>10 years of duration) in the field practice areas of government medical college, Amritsar

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#### **ABSTRACT**

**Background:** Diabetes has become global issue due to premature illness and death due to its complications. Awareness about good health seeking practices are essential for prevention, early detection and management of diabetic complications. Objective of the study was to evaluate the health seeking practices among diabetics (>10 years of duration) in the field practice areas of Government Medical College, Amritsar.

**Methods:** A community based cross-sectional study was conducted in rural and urban areas of district, Amritsar. A total of 200 diabetic patients who had diabetes equal to or more than 10 years of duration were interviewed using pretested and predesigned questionnaire. Data such collected was analysed at p<0.05.

**Results:** Out of total 200 diabetic respondents, 50% (100) were from urban and 50% (100) were from the rural area. In both urban and rural areas, majority were literate i.e. 80% (161) and employed i.e. 51% (103). The mean age of diabetic respondents was 58.05 years with a male to female ratio of 1.1:1. The majority 82% (165) were diagnosed in the private sector and 99% (198) were on allopathic treatment. Oral hypoglycaemic agents were used by 77% (153) patients to manage their disease. 23% (45) were using both oral hypoglycaemic agents and insulin. About 48% (96) were monitoring their RBS regularly, 76% (151) were on regular treatment for diabetes and 55 (27%) were doing physical activity.

**Conclusions:** Poor health seeking practices and less awareness about non pharmacological measures are main factors for development of complications among diabetics.

**Keywords:** Diabetic respondents, Private sector, Regular treatment, Physical activity

#### INTRODUCTION

Diabetes mellitus (DM) is a major and important noncommunicable disease which contributes to the risk of premature death. Due to rapid socioeconomic development and demographic changes along with increased susceptibility for Indian individuals have led to the explosive increase in the prevalence of diabetes mellitus in India over the past four decades.<sup>1</sup> According to the International Diabetes Federation, an estimated 82 million adults aged 20-79 years were living with diabetes in the SEA (South East Asia) region in 2017 representing a regional prevalence of 8.5% and this will increase up to 151 million in 2045. About 45.8% of these diabetes cases were undiagnosed. Close to half (48.8%) of all adults with diabetes in the region live in urban areas.<sup>2</sup>

The DM is a fast-growing global problem with huge social, health, and economic consequences. The burden of diabetes is so much that it drains national healthcare budgets, reduces productivity, slows down the economic growth causes catastrophic expenditure for vulnerable households and overwhelms healthcare systems.

Poor health seeking practices and lack of awareness about non pharmacological measures among diabetics are main factors which lead to early development of complications. So, objectives of the study is to evaluate the health seeking practices among DM (>10 years of duration) in the field practice areas of Government Medical College, Amritsar.

## **METHODS**

The cross sectional study was conducted in both rural and urban areas of district, Amritsar. Duration of the study was from 1st January 2017 to 31st December 2017. A list of all the marked houses in village Nagkalan and adjacent villages were obtained. A list of all the wards covered by the UTHC (urban training health centre) were procured. Out of those one ward was selected randomly by lottery method and similarly the next to study the diabetic patients. A total of 11000 populations were covered i.e. 7500 from rural and 3500 from urban area respectively. In total 200 diabetic patients who had diabetes equal to or more than 10 years of duration were included systematically in the study. Out of which 100 were from the rural and 100 from urban field practice areas. House to house visit was made by investigator with prior information through field staff. Every house was visited and after explaining the purpose of study and the informed written consent was taken from the participant who had diabetes equal to or more than 10 years of duration.

# Study tool

A pretested, predesigned, semi-structured questionnaire schedule in local language consisting of items on the demographic profile including age, sex, religion, education, occupation, etc., was used. Questionnaire consisted of items to evaluate the health seeking practices among DM patients. All the questions were asked in vernacular language and pre tested, semi-structured proformas were filled in.

## Inclusion criteria

The person who had diabetes equal to or more than 10 years of duration with or without complications were included.

Diagnosed diabetic patient for this study was defined as one fulfilling any of the following criteria:

 The patient who had a documented evidence of a diagnosis of diabetes (prescription slip/lab reports by qualified practitioner).

- The patient was taking regular medications for diabetes.
- If the patient was not fulfilling any of the above criteria, then those with random blood sugar more than 200 mg/dl were included in the study.

# Exclusion criteria

The patient who had diabetes less than 10 years of duration with or without complications, patient who was not available after second visit did not included in the study and the patient who did not give consent to the study.

# Statistical analysis

The data thus collected was compiled and analysed statistically using the ratios, proportions and chi square/ Yates correction was used as test of significance with p < 0.05.

#### Ethical issues

All patients were explained the purpose of the study and confidentiality was assured. A written informed consent was taken from each patient before collecting data. The study was approved by the institutional ethical committee of Government Medical College, Amritsar.

#### RESULTS

Out of total 200 diabetic respondents, 50% were each from the urban and rural areas. In urban area, there were 60 males and 40 females while in rural area, there were 45% males and 55% females who participated in the study. In rural area, majority were Sikh 81 and in urban area, majority were Hindu 71. Around 77, 94 were literate in rural and urban areas respectively. Mean age of diabetic respondents was 58.05 years as given in Table 1.

29, 5 respondents of both rural and urban areas were seeking treatment from government sector and 70, 95 respondents of both rural and urban areas from private sectors. The association was found significant (p<0.05) as shown in Table 2.

90% of respondents from each rural and urban area were taking allopathic medicines for diabetes. Out of those, 68 respondents from urban and 85 from rural area were taking oral medicine and 14 from rural and 31 from urban area were taking combined oral and injectable for diabetes. The association was found significant (p<0.05) as shown in Table 3.

39, 57 diabetic respondents from rural and urban areas were monitoring their RBS regularly. The association was found significant (p<0.05) as shown in Table 4.

Table 1: Demographic characteristics of diabetic respondents.

Characteristics	Rural (n=100) (%)	Urban (n=100) (%)	Total (n=200) (%)
Gender			
Male	45 (45)	60 (60)	105 (53)
Female	55 (55)	40 (40)	95 (47)
Religion			
Hindu	6 (6)	71 (71)	77 (39)
Sikh	81 (81)	29 (29)	110 (55)
Others	13 (13)	0 (0)	13 (6)
Education			
Illiterate	33 (33)	6 (6)	39 (20)
Literate	67 (77)	94 (94)	161 (80)
Occupation			
Unemployed	55 (55)	42 (42)	97 (48.5)
Employed	45 (45)	58 (58)	103 (51.5)
Age			
30-40	5 (5)	4 (4)	9 (4)
41-50	20 (20)	16 (16)	36 (18)
51-60	39 (39)	37 (37)	37 (37)
61-70	20 (20)	23 (23)	43 (22)
71-80	16 (16)	20 (20)	36 (18)

Table 2: Distribution of diabetic respondents on the basis of place of treatment (n=200).

Place of treatment	Diabetic respondents		Total (0/)
Place of treatment	Rural (%)	Urban (%)	Total (%)
Government sector	29 (29)	5 (5)	34 (17)
Private sector	70 (70)	95 (95)	165 (82.5)
Traditional faith healer	1 (1)	0 (0)	1 (0.5)
Total	100 (100)	100 (100)	200 (100)

P<0.05

Table 3: Distribution of diabetic respondents on the basis of mode of allopathic treatment (n=198).

Made of allenothic tweetment	Diabetic respondents		Total (9/)
Mode of allopathic treatment	Rural (%)	Urban (%)	Total (%)
Oral medicines	85 (86)	68 (69)	153 (77)
Combined (oral and injectable)	14 (14)	31 (31)	45 (23)
Total	99 (100)	99 (100)	198 (100)

P<0.05

Table 4: Distribution of diabetic respondents on the basis of their regularity to monitor the RBS (n=200).

Dogulouitu	Diabetic respondents		Total
Regularity	Rural	Urban	Total
Regular	39 (39)	57 (57)	96 (48)
Irregular	61 (61)	43 (43)	104 (52)
Total	100 (100)	100 (100)	200 (100)

P<0.05

Table 5: Distribution of respondent on the basis of treatment and diabetes (n=200).

Treatment	Diabetic respondents		Total (0/)
	Rural (%)	Urban (%)	Total (%)
Regular	65 (65)	86 (86)	151 (76)
Irregular	35 (35)	14 (14)	49 (24)
Total	100 (100)	100 (100)	200 (100)

P<0.05

Sixty five, 86 diabetic respondents from rural and urban areas were on regular treatment. The association was found significant (p<0.05) as shown in Table 5.

Out of total 200 diabetic respondents, 55 (27%) respondents were doing physical activity and 17 (9%) had reduced body weight and 16 (8%), 3 (2%) had given up alcohol and smoking and 136 (68%) had had avoided selected food items as shown in Figure 1.

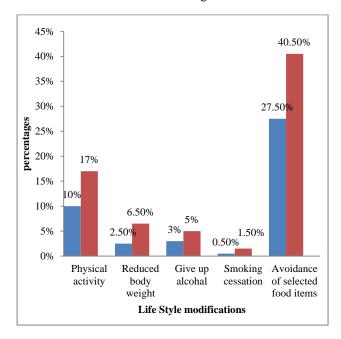


Figure 1: Distribution of diabetic respondents according to life style modifications.

#### **DISCUSSION**

The present study we observed that there poor health seeking practices among diabetics (>10 years) in the field practice areas of Government Medical college, Amritsar.

Kalayou et al to evaluate adherence to diabetes self-management practices among type II diabetic patients stated that out of total 320 subjects, 52.2% and 47.8% were female and male respectively. A significant number of the respondents i.e. 57% did formal school education and 66% were unemployed which showed similar result with present study.<sup>3</sup>

Kishore et al conducted a study in rural and urban slum areas of Delhi to assess the awareness, practices and treatment seeking behavior of type 2 diabetes mellitus patient stated that out of total 98 respondents, 31.6% were from the urban area and 68.4% were from the rural area. In urban area, there were 38.7% males and 61.3% females while in rural area there were 41.8% males and 58.2% females who participated in the study. In both urban and rural areas, majority were Hindu (74.2% and 97%), married (83.9% and 92.5%), literate (77.4% and 80.6%) and unemployed (71% and 61.2%) and mean age (standard division) in the urban area was 49.5 years and

in a rural area was 51.18 years and which showed almost similar result with present study.<sup>4</sup>

Similarly a study conducted by Mookambika et al to evaluate the self-care among diabetic patients in a tertiary care health center stated that out of total 120 patients, 61% were males and 39% were females and 14.2%, 31.7% were illiterate and unemployed respectively.<sup>5</sup>

A cross-sectional household survey conducted by Bigdeli et al among 709 individuals self-reporting diabetes in three geographical locations in rural Cambodia revealed that the 59% were diagnosed in the private sector and only 56% were on allopathic treatment and 49% were seeking treatment from the private sector which showed coherent results with present study.

A study conducted by Rahaman et al in Dhaka, Bangladesh revealed that out of total 425 diabetic respondents, 234 (55.1%) were males and 68 (16%), 204 (48%), 150 (35.3%) were taking oral medication, insulin and combined oral medication and insulin as treatment modality for diabetes and 64% got information about complication of diabetes from physician which showed same results with present study.<sup>7</sup>

Abu Hassan et al conducted a study of 21 type 2 DM patients at a primary care clinic who had been on insulin for more than a year stated that about 50% of patients with poor control T2 DM had not started insulin therapy on time and the initiation was usually three to five years after failure of oral medicines and there were many factors influencing delayed insulin initiation, one of the main barriers was psychological insulin resistance defined as psychological opposition towards insulin use among patients and healthcare providers.<sup>8</sup>

A study conducted by Feng et al to identify the individual and social factors that are associated with positive health-seeking behaviors and regular maintenance of diabetes showed that out of total 510 respondents, 49.2%, 51.8% were male and female respectively and 42.3% were between 60-80 years of age group and 27.9% were educated up to high school and out of total, 42.2% were taking regular treatment for diabetes.<sup>9</sup>

Mookambika et al conducted a study at outpatient department of general medicine in Kulasekaram and total 120 diabetic patients were included in the study. Out of total, 60% of the diabetics knew that management of diabetes includes diet, exercise and drugs and 74% were taking diabetic medication regularly. 52.5% of the study population did their blood sugar checkup once a month which showed similar results with present study.<sup>5</sup>

A study conducted by Selvaraj on self-care practices in an urban area of Pondicherry revealed that out of total 162 diabetic patients, the mean age of participants was 57 years and 99% had avoided the selected food items and 78% of patients had their blood sugar checked at least once in the last three months and only half of them i.e. (50.6%) had followed at least 20 minutes of physical activity. <sup>10</sup>

#### **CONCLUSION**

Effective utilization of services for early detection of diabetes and initiation of treatment could be achieved through successful awareness generation, health care providers should be adequately trained to motivate the individuals regarding healthy lifestyle, appropriate testing, compliance to treatment and regular follow up to ensure prevention of the disease, early diagnosis and appropriate treatment. Extensive community awareness involving sensitization of population and advocacy of the administration would help in minimizing the burden of diabetes in these limited resource settings.

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