

Original Research Article

A cross-sectional study on contributing risk factors and health seeking behaviour among diabetic patients attending the NCD clinic at urban health and training centre of a tertiary care institute in Durg District of Chhattisgarh, India

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ABSTRACT

Background: About 422 million people worldwide have diabetes and 1.6 million deaths each year. Global target is to halt the rise in diabetes and obesity by 2025. In context of above background study was conducted with the aim and objective to determine the risk factor and health seeking behaviour among adult's diabetics who visited urban health and training centre (UHTC) of a tertiary care Institution.

Methods: A cross-sectional study was conducted on 150 adult's diabetics who visited NCD clinic at UHTC, of a tertiary care institution from June 2020 to May 2021. Semi open questionnaire was used. Study setting was department of community medicine, Chandulal Chandrakar Memorial Medical College, Durg, Chhattisgarh. Ethical consent was taken from institutional ethical committee and written informed consent obtained from all the participants. Data analysis done using SPSS software. Statistical significance obtained using Chi-square test at p value <0.05.

Results: About 81% of subjects had good drug compliance whereas 19% had poor compliance. About 5% had exclusively supply from hospital whereas 45% from both sources hospital and medicine shop and 50% from shop only. About 69% of subjects were involved in physical activities whereas 31% did not had any physical activities. About 45% were addicted to substance abuse. Prevalence of diabetes was maximum 38% in age group 50-60 years. The mean age of diagnosis of diabetes was 45.92±13.58 years.

Conclusions: Diabetes was maximum in late adulthood and majority were utilising both medicine shop and hospital for health care.

Keywords: Adult diabetics, Health seeking, Risk factor, Smoking, Substance abuse

INTRODUCTION

Diabetes is a chronic metabolic disorder which leads to damage of target organ. About 422 million people worldwide have diabetes, the majority living in low-and middle-income countries, and 1.6 million deaths are

directly attributed to diabetes each year. Both the number of cases and the prevalence of diabetes have been steadily increasing over the past few decades. The most common is type 2 diabetes, usually in adults, for people living with diabetes, access to affordable treatment, including insulin, is critical to their survival. There is a globally agreed

target to halt the rise in diabetes and obesity by 2025.¹ Type 2 diabetes affects both the old and the youths and is highly associated with morbidity, mortality, and a high health cost to individual patients, their families, and countries.² It was found to affect 382 million (7.7%) in 2013 and was estimated to 483 million (8.3%) by the year 2030. In developed countries, more than half of the people with type 2 diabetes mellitus are older than 65 years and only 8% are less than 44 years of age. In developing countries, 75% of diabetic patients are 45 years old and above and 25% of adults with diabetes mellitus are under 44 years.³ In view of above background present study was conducted with the aim and objective to determine the risk factor and health seeking behaviour among adult's diabetics who visited urban health and training centre (UHTC) of a tertiary care institution.

METHODS

Study design

A cross-sectional study was conducted on 150 adults above 18 years of age visiting non communicable disease clinic at urban health and training centre at Bhilai.

In this study semi open questionnaire was used. The study took place at Department of Community Medicine, Chandulal Chandrakar Memorial Medical College, Durg, Chhattisgarh, India. Sample size was 150 (purposive sample). The entire patient visited NCD clinic and given consent. Study duration was June 2020 to May 2021. The study consisted of adult above 18 years of age.

Ethical consent

Ethical consent was taken from Institutional Ethical Committee and written consent obtained from all the participants.

Data analysis was done using SPSS Software. Statistical significance was obtained using Chi-square test at p value <0.05.

Inclusion criteria

All the adult 18 years of age and above having diabetes and visited NCD and willing to participate in study. Established case of diabetes.

Exclusion criteria

Subjects less than 18 years of age. Not willing to participate in study.

Aim and objectives

To determine the risk factor and health seeking behaviour among adults visiting UHTC of a tertiary care institution.

RESULTS

Study shown the mean age of female and male was 50±13 and 52±13 years respectively.

Majority of subjects belonged to Hindu (87%) followed by 13% of Muslim. Majority of study subjects belonged to unreserved category (46%) followed by scheduled caste (29%), other backward classes (17%) and scheduled tribe only 7%. Majority of study subjects were illiterate (44%) followed by up to middle school (39%). Only 8.0% of subjects were educated up to graduate or above. Majority (38.0%) were housewife followed by skilled and unskilled workers (35%). About 55% belonged to class V and 21% class IV of SES. Most of them (53%) residing in joint family. APL were 68% (Table 1).

Table 1: Demographic distribution of study subject.

Socio-demography		Number (%)
Religion	Hindu	130 (87)
	Muslim	20 (13)
Caste category	UR	69 (46)
	OBC	26 (17)
	SC	44 (29)
	ST	11 (7)
Education	Illiterate	66 (44)
	Upto middle class	58 (39)
	Higher secondary	14 (9)
	Graduate and above	12 (8)
Occupation	Housewife	57 (38)
	Unemployed	26 (17)
	Skilled and unskilled worker	52 (35)
	Service category	15 (10)
SES	Class I	10 (7)
	Class II	11 (7)
	Class III	15 (10)
	Class IV	32 (21)
	Class V	82 (55)
Type of family	Nuclear	70 (47)
	Joint	80 (53)
Poverty level	BPL	48 (32)
	APL	102 (68)

Table 2: Distribution of subject with health seeking behavior.

Variables	Number (%)
Health seeking behaviour	
Medicine shop	75 (50)
Hospital	8 (5)
Both place	67 (45)
Total	150 (100)
Compliance of medicine	
Good	121 (81)
Poor	29 (19)
Total	150

About 81% of subjects had good drug compliance whereas 19% had poor compliance (Table 2). About 5% had exclusively supply from hospital whereas 45% from both sources hospital and medicine shop and 50% from shop only (Table 2). About 69% of subjects were involved in physical activities whereas 31% did not had any physical activities. About 45% were addicted to substance abuse. Among substance abused majority (60%) were addicted to smokeless tobacco followed by smoking (23%), about 4% only alcohol and 3% for both smoking and alcohol and 10% with others (Table 3). Age and gender distribution of population shows statistically significant association, the Chi-square was 37.648, df =4, p value <0.00001. Among all the study population the proportion of population having diabetes were distributed with age 5%, 10%, 30%, 38%, 17% corresponding to age group <30 years, 30-40 years, 40-50 years, 50-60 years and more than 60 years of age group respectively. The proportion of diagnosed case of diabetes increased up to 50 years of age followed by decreasing in number (Figure 1). The mean age of diagnosis of diabetes was 45.92 ± 13.58 years, median age of diagnosis was 47.0 years, but range was varied from 14-87.5 years. The mean year of duration of diabetes was 5.43 ± 5.60 years.

Table 3: Distribution of determinants among study subject.

Determinants	Number (%)
Physical activity	
Yes	104 (69)
No	46 (31)
Total	150
Substance abused	
Yes	68 (45)
No	82 (55)
Total	150

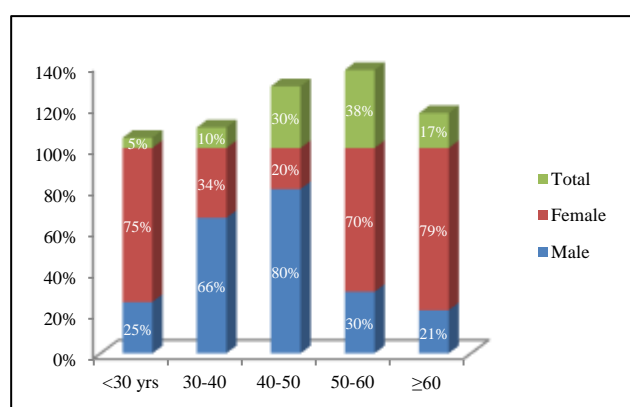


Figure 1: Age and gender based distribution of study subject having diabetes mellitus.

DISCUSSION

In present study 150 adult diabetic patients attending the diabetic clinic were interviewed using semi open

questionnaire. Their demographic profile was assessed and health seeking behaviour obtained. Determinants related with diabetes were ascertained. Study shows, proportion of female (51%) was more than male (49%). Similar observation were found in study conducted in Saudi Arabia.⁴ Whereas male preponderance and age-wise increase in prevalence was observed in other studies.⁵⁻⁷ Mean age of female was 50.00 ± 12.69 years whereas for male it was 52.40 ± 12.64 years. In another study overall mean age of the participants was 54 ± 12 years.⁸ Literacy was 66.0%. In another study conducted in Oman, literacy was 56%.⁸ In present study majority of the subject were housewife (38.0%) which was like the study conducted by Gupta et al (48.14%).⁹ Majority of the subjects belonged to lower class which is similar to the study conducted in rural area of Tamil Nadu.⁹ In present study 70.0% of study subjects had some sort of physical activity whereas Rao et al study showed 11.1% of the subjects with sedentary lifestyle, while 41.8% were engaged in moderate physical activity.¹⁰ Similar observation made in a study conducted in Tamil Nadu, 73% of them had mild to moderate physical activity.⁹ Unlike present study, another study revealed majority of type 2 diabetics were physically inactive.¹¹⁻¹³ Concerned to drug compliance about 81% had good drug compliance. Similar observation was made in a multicentre study conducted in India, where compliance was 79.4%.¹⁴ only 5% of study subjects had supply of drug exclusively from hospital whereas 50.0% had to buy all the medicine from the shop and 45% were dependent both on shop and hospital. Prevalence of diabetes increased up to 50 years of age group followed by decreasing prevalence. The mean age of diagnosis of diabetes was 45.92 ± 13.58 years. Similar finding observed in another study, the mean age of diagnosis was 43.6 years.¹⁵ Mean year of duration of diabetes was 5.43 years (1-32.0 years).

Limitations were purposive sample was taken due to less number of patients attending NCD clinic due to COVID-19.

CONCLUSION

As the mean age of diagnosis was 45 years and mean duration of diabetes was five years. About 50% were seeking medicine from shop only. In early age screening will lead to early detection and less complication. There is need of improvement in health care facility to attract more patients towards government hospital.

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REFERENCES

1. Diabetes. WHO. 2021. Available from: https://www.who.int/health-topics/diabetes#tab=tab_1. Accessed on 1 September 2021.
2. Dozie U, Okonkwo N, Nworuh O, Orji S, Nwaokoro C, Dozie I. Risk Factors of hypertension among type 2 diabetic patients in Imo state, South East of Nigeria. *Asian J Med Health*. 2020;65-72.
3. Poznyak V. World Health Organization guidelines for the treatment of substance use disorders and comorbid conditions. *Revista Internacional de Investigación en Adicciones*. 2018;4(1):1-3.
4. Rahman Al-Nuaim A. High prevalence of metabolic risk factors for cardiovascular diseases among Saudi population, aged 30-64 years. *Int J Cardiol*. 1997;62:227-35.
5. Rao CR, Kamath VG, Kamath A. A study on the prevalence of type 2 diabetes in coastal Karnataka. *Int J Diabetes Dev Countries*. 2010;2:80-5.
6. Mohan V, Sandeep S, Deepa R, Shah B, Varghese C. Epidemiology of type 2 diabetes: Indian scenario. *Indian J Med Res*. 2007;125:217-30.
7. Mohan V, Shanthirani CS, Deepa R. Glucose intolerance (diabetes and IGT) in a selected South Indian population with special reference to family history, obesity and lifestyle factors- the Chennai Urban Population Study (CUPS 14). *J Assoc Phys India*. 2003;51:771-7.
8. Mandhari AA, Zakwani IA, Hasni AA, Sumri NA. Assessment of perceived health status in hypertensive and diabetes mellitus patients at Primary Health Centers in Oman. *Int J Prev Med*. 2011;2(4):256-63.
9. Gupta SK, Singh Z, Purty AJ, Kar M, Vedpriya DR, Mahajan P, et al. Diabetes prevalence and its risk factors in rural area of Tamil Nadu. *Indian J Community Med*. 2010;35:396-9.
10. Rao CR, Kamath VG, Kamath A. A study on the prevalence of type 2 diabetes in coastal Karnataka. *Int J Diabetes Dev Countries*. 2010;2:80-5.
11. Shrivastava SR, Shrivastava PS, Ramasamy J. Role of self-care in management of diabetes mellitus. *J Diab Metab Disorder*. 2013;12:14.
12. Harris MI, Couric CC, Reiber G, Boyko E, Stern M, Bennett P. *Diabetes in America*. 2nd edn. Washington, DC: National Institutes of Health; 1995.
13. Zimmet PZ. Challenges in diabetes epidemiology: from the west to the rest. *Diabetes Care*. 1992;15:232-52.
14. Venkataraman K, Kannan AT, Mohan V. Challenges in diabetes management with particular reference to India. *Int J Diabetes Dev Countries*. 2009;29(3):103-9.
15. Raheja BS, Kapur A, Bhoraskar A, Sathe SR, Jorgensen LN, Moorthi SR, et al. Diabcare Asia-India study: Diabetes care in India- current status. *J Assoc Phys India*. 2001;49:717-22.

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