International Journal of Community Medicine and Public Health
Shiba et al. Int J Community Med Public Health. 2020 Apr;7(4):1480-1484
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20201460

Original Research Article

Level of myths and misconceptions about diabetes mellitus and its treatment among urban diabetics of Haryana: a cross sectional study

Shiba[1], Meena Rajput[1]*, Rajesh Rajput[2], Ankit Kumar Goutam[3]

[1]Department of Community Medicine, [2]Department of Endocrinology, [3]Mother and Child Health Department, PGIMS, Rohtak, Haryana, India

Received: 14 February 2020
Revised: 06 March 2020
Accepted: 07 March 2020

***Correspondence:**
Dr. Meena Rajput,
E-mail: drmeenarajput@outlook.com

ABSTRACT

Background: Myths and misconceptions about diabetes and its treatment are a major obstacle in control and prevention of diabetes which is a disease of national concern.
Methods: Cross-sectional study was carried out from July 2016 to June 2017 among known diabetics more than 18 years of age. A total of 400 diabetics were chosen using Simple Random Sampling from five urban health posts attached to PGIMS, Rohtak. A predesigned and pretested semi-structured questionnaire was filled by interviewing known diabetics in their vernacular language individually.
Results: Among 400 urban participants, 204 (51%) were male and 196 (49%) were female. Mean age of study participants was 58.05±11.63 years. Majority of urban participants 328 (82%) fall in category of moderate level myths and misconceptions.
Conclusions: Majority diabetics despite having long standing disease and regular outpatient diabetic care have moderate level myths and misconceptions about disease. Myths and misconceptions were more common in illiterate and participants with diabetes of less than 5 years duration.

Keywords: Diabetes, Myths, Misconceptions, Treatment

INTRODUCTION

Diabetes is one of the largest global health emergencies of 21st century. Diabetes is a chronic disease with its complications imposing significant economic consequences on individuals, families, health systems and countries. India occupies second position, after China, in the global list of countries with the highest number of diabetics.[1] WHO declared that India will become the "Diabetes capital of World" by the year 2025. There were 66.8 million cases of diabetes in India in 2014 which are expected to rise to 120.9 million by 2035. When diabetes is not well managed, complications develop that threaten health and endanger life. Acute complications are a significant contributor to mortality, costs and poor quality of life.[2]

In spite the fact that there is so much information available about diabetes, myths and misconceptions about diabetes are highly prevalent. These misconceptions have a significant influence on the day-to-day life including the search for treatment in times of illness.[3]

Myth is defined as traditional story, especially one concerning the early history of people or explaining a natural or social phenomenon, and typically involving supernatural beings or events. Myths are also defined as stories shared by a group of people which are a part of their cultural identity.[4]

Misconception is a view or an opinion that is incorrect because it is based on faulty thinking or understanding.[5]

These myths and misconceptions are affected by various factors including socio-demographic factors. Understanding the myths and misconceptions about diabetes mellitus, is important in providing excellent care and health education to both patients and healthy individuals.[6]

Aim of study was to know the level of myths and misconceptions about diabetes and its treatment among urban diabetics of Haryana.

METHODS

The crossectional study was conducted in the Urban field practice area attached to Department of Community Medicine, PGIMS, Rohtak, Haryana from July, 2016 to June, 2017. Considering 50% prevalence of the awareness about diabetes with a 10% relative error, sample size came out to be 400.[6]

400 known diabetic patients of study area who were above 18 years and had given their consent to participate in the study were included. Known diabetics were enrolled in the study because they practice various methods to control the disease and carry various beliefs about the disease. Diabetics of age ≤18 years, those who are not willing to participate in the study, patients with known psychiatric illness were excluded from study.

Patients who had the prescription of a registered medical practitioner diagnosing patient as diabetic or already taking treatment from more than 6 months were considered known diabetic.

Urban field practice area comprised of 5 urban health posts (Gandhi camp, Housing Board, Shivaji Colony, Ekta colony, Kamla Nagar). 80 diabetic patients were taken from area covered by each of 5 urban health posts by house to house visit. Interviewer selected first house randomly from adjoining area of each urban health post and subsequently all houses were covered to find out diabetics till sample size of 80 was met from area of each urban health post. Houses where more than one known diabetic was found, only one was included using lottery method. Approval from ethical committee was sought before commencing the study.

Study tool

A self-designed and pretested semi-structured questionnaire which includes information about sociodemographic variables and family history of the study subjects along with myths and misconceptions about diabetes and its treatment was filled by investigator herself by interviewing known diabetics in their vernacular language individually. Questionnaire included 36 questions on the commonest reported misconceptions relating to etiology, pathogenesis, day-to-day life, diet and treatment of diabetes. An answer of "yes" to a misconception question was considered a myth or misconception and a score of one was given and an answer of "no" was scored zero. The total myths and misconceptions score of each patient was calculated. The possible maximum score for any patient was between 0 to 36.

The scores were then arbitrarily divided into three equal categories of myths and misconceptions.

- Low level (scores 0-12)
- Moderate level (scores 13-24)
- High level (scores of 25-36).

The highest myths and misconceptions score represented the maximum number of misconceptions.

Data was entered in MS Excel and data was analyzed in percentages and chi square test was applied using SPSS software.

RESULTS

The age of respondents ranges from 32 years to 90 years with mean age of 58.05±11.63 years. Out of 400 urban participants, 204 (51%) were male and 196 (49%) were female (Table 1).

131 (32.75%) participants studied till Middle school followed by 99 (24.75%) who studied till high school and 67 (16.75%) were illiterate (Table 1).

Majority of participants 231 (57.75%) were unemployed. Most of participants 152 (38%) belong to lower middle socioeconomic class (Table 1).

Nearly half of study subjects 188 (47%) were having a disease duration of less than 5 years. Nearly one third participants 126 (31.5%) had disease duration of 5 -10 years and 86 (21.5%) were having a disease duration of more than 10 years (Table 1).

307 (76.75%) participants didn't have family history of diabetes whereas 93 (23.25%) urban participants had family history of diabetes (Table 1).

Majority of urban participants 328 (82%) fall in category of moderate level myths and misconceptions followed by 38 (9.5%) having low level myths and misconceptions and 34 (8.5%) having high level myths and misconceptions. Almost equal males and females (80%) had moderate level misconceptions (Table 2).

Majority of urban participants had no family history of diabetes. Among the participants with family history of diabetes, majority of them 86 (92.47%) had moderate

level misconceptions followed by 5 (5.38%) with family history of diabetes had high level of misconceptions and 2 (2.15%) had low level misconceptions. Participants without family history of diabetes had more misconceptions than those with family history of diabetes (Table 2).

Table 1: Socio-demographic profile of study participants (n=400).

	No of participants
Age group (years)	**N (%)**
20-39	29 (7.25)
40-59	213 (53.25)
60-79	148 (37)
80 and more	10 (2.5)
Gender	
Male	204 (51)
Female	196 (49)
Education	
Diploma or Graduate	98(24.50)
High school	99 (24.75)
Middle school	131 (32.75)
Primary school	5 (1.25)
Illiterate	67 (16.75)
Occupation	
Professional	51 (12.75)
Clerk/Shop owner	27 (6.75)
Skilled	44 (11)
Semi skilled	32 (8)
Unskilled	15 (3.75)
Unemployed	231 (57.75)
Socioeconomic status	
Upper	2 (0.5)
Upper Middle	136 (34)
Lower Middle	152 (38)
Upper Lower	88 (22)
Lower	22 (5.5)
Duration since diagnosis of diabetes (years)	
<5	188 (47)
5-10	126 (31.5)
>10	86 (21.5)
Family history of Diabetes	
Absent	307 (76.75)
Present	93 (23.25)

Table 2: Distribution of participants according to level of myths and misconception.

Number of participants	Level of myths and misconceptions			Total
	Low	Moderate	High	
	N (%)	N (%)	N (%)	
Family history (p<0.05)**				
Present	2 (2.15)	86 (92.47)	5 (5.38)	93
Absent	36 (11.73)	242 (78.82)	29 (9.45)	307
Duration since diagnosis of diabetes (p<0.05)**				
<5 years	22 (11.7)	142 (75.5)	24 (12.76)	188
5-10 years	9 (7.14)	98 (77.77)	19 (15.07)	126
>10 years	7 (8.13)	72 (83.7)	7 (8.13)	86

Continued.

Number of participants	Level of myths and misconceptions			Total
	Low	Moderate	High	
	N (%)	N (%)	N (%)	
Education				
Graduate	7 (8.64)	74 (91.36)	0 (0)	81
Diploma	0 (0)	17 (100)	0 (0)	17
High school	17 (17.17)	81 (81.82)	1 (1.01)	99
Middle school	6 (4.58)	102 (77.86)	23 (17.56)	131
Primary school	0 (0)	5 (100)	0 (0)	5
Illiterate	8 (11.94)	49 (73.13)	10 (14.93)	67
Socio economic class				
Lower	0 (0)	22 (100)	0 (0)	22
Upper lower	6 (6.82)	82 (93.18)	0 (0)	88
Lower middle	18 (11.84)	124(81.58)	10 (6.58)	152
Upper middle	14 (10.29)	98 (72.06)	24 (17.65)	136
Upper	0 (0)	2 (100)	0 (0)	2
Total	38 (9.5%)	328 (82%)	34 (8.5%)	400 (100%)

**statistically significant.

75.5% of diabetics with less than 5 years duration since diagnosis of diabetes had moderate level misconception followed by 11.7% having low level misconception and 12.76% having high level misconception. 83.7% of participants with more than 10 years since diagnosis of diabetes had moderate level misconceptions (Table 2).

None of graduate, post graduate or diploma participants had high level misconception. High level misconceptions were seen more among those who had not studied beyond middle school.

All the participants belonging to lower social class had moderate level misconceptions. Among those belonging to upper lower class, 93.18% had moderate level misconceptions.

DISCUSSION

In present study, mean age of participants was 58.05±11.63 years. Patil et al in his crosssectional study conducted among 406 adult patients attending Ariankuppam Urban Health Centre (UHC) reported mean age of participants to be 44.2±17.2 years.[6]

In our study, majority (57.75%) participants were unemployed. Similar findings were observed in a study conducted by Rehman et al in a tertiary care hospital where majority (45%) participants were unemployed.[7] One of the reasons of this occupational profile in our study may be that this study was conducted in slum areas where majority of lower middle and lower socio-economic section of the community reside.

In present study, 76.75% urban participants didn't have family history of diabetes. There were more diabetic participants without any family history of diabetes which indicates that people are getting diabetes more due to fast changing life style and other associated factors. Diabetes mellitus is now an important component among list of lifestyle diseases. The findings are contrast in comparison to study conducted by Ahmed et al where 73.5% participants had family history of Diabetes and 26.5% had no family history of diabetes.[8]

Majority of urban participants 82% fall in category of moderate level myths and misconceptions (score 13-24) followed by 9.5% having low level myths and misconceptions (score 0-12) and 8.5% having high level myths and misconceptions(score-24 -36) while Ahmed et al found that misconception score was low in 57.5%, moderate in 38.5%, high in 4% respondents.[8] The difference in results may be attributed to the difference in study settings along with different literacy, socio-economic status and cultural differences. While the present study was a community based study, the study conducted by Ahmed et al was carried out at diabetic clinic of tertiary care hospital.[8]

Statistically significant difference of family history of diabetes with level of myths and misconceptions among urban diabetics was seen in present study. Similar findings were reported by Sharaf et al.[9] In present study, 92.47% urban participants with family history of diabetes had moderate level misconceptions. This indicates that people who have diabetes since long practice different methods to control the disease and hence withhold lots of myths and misconceptions about the disease.

Statistically significant difference of duration of diabetes with myths and misconceptions score was seen among diabetics. Similar statistical difference was reported in study done by Ahmed et al.[8] This shows that longevity of disease appears to be an important factor associated with level of knowledge of diabetes.

CONCLUSION

A large number of diabetic patients especially those who never received diabetic education were found during study and majority of them fall in category of moderate to high level misconceptions. The reasons for prevailing myths and misconceptions are multifactorial. Misconceptions were more in those without in family history of disease, those with diabetes duration of less than 5 years and less educated group.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. International Diabetes Federation. IDF Diabetes Atlas. 9th ed. Brussels, Belgium: International Diabetes Federation; 2019. Available at: http://www.diabetesatlas.org. Accessed on 29 January 2020.
2. World Health Organization. Global report on Diabetes. 2016. Geneva: WHO; 2016. Available at: http://apps.who.int/iris/bitstream/10665/204871/1/9789241565257_eng.pdf. Accessed on 29 January 2020.
3. American Diabetes Association. Medical experts dispel myths about diabetes. American Diabetes Association. 2005. Available at: http://findarticles.com/p/articles/mi_m1355/ is_1_108/ai_n15681366. Accessed on 29 January 2020.
4. Oxford English dictionary. Oxford: Oxford University Press; 2012. Myth. Available at: http://www.oxforddictionaries.com/definition/english/myth/. Accessed on 29 January 2020.
5. Oxford English dictionary. Oxford: Oxford University Press; 2012. Misconception. Available at: http://www.oxforddictionaries.com/definition/english/miscon. Accessed on 29 January 2020.
6. Patil R, Nasrin AN, Datta SS, Boratne AV, Lokeshmaran. Popular misconceptions regarding the diabetes management: where should we focus our attention?. J Clin Diagn Res. 2013;7(2):287-91.
7. Rehman A, Mirza U, Jehan M, Pasha SA. Myths and misconceptions regarding diabetes mellitus among diabetic and non-diabetic indian population. Int J Cur Res Rev. 2009,5(6):26-30.
8. Ahmed A, Waleed I, Ahmed B. Determinants of misconceptions about diabetes among Saudi diabetic patients attending diabetes clinic at a tertiary care hospital in Eastern Saudi Arabia. J Family Community M. 2014,21(2):9399.
9. Sharaf FK, Naeem Z, Mohamed AA, Sawaf MN. Prevailing myths and misconceptions about diabetes mellitus in Qassim Region of Saudi Arabia. Ann Alquds Med. 2006;6(1):20-7.

Cite this article as: Shiba, Meena Rajput M, Rajput R, Goutam AK. Level of myths and misconceptions about diabetes mellitus and its treatment among urban diabetics of Haryana: a cross sectional study. Int J Community Med Public Health 2020;7:1480-4.