International Journal of Community Medicine and Public Health
Polineni V et al. Int J Community Med Public Health. 2020 Aug;7(8):3100-3104
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20203384

Original Research Article

Knowledge, attitude and practice among diabetic patients visiting a tertiary care hospital in Bangalore, Karnataka

Vindhya Polineni*, Supriya Acharya

Department of Community Medicine, VIMS and RC, Bengaluru, Karnataka, India

Received: 18 May 2020
Revised: 22 June 2020
Accepted: 29 June 2020

***Correspondence:**
Dr. Vindhya Polineni,
E-mail: vindhyaPolineni@gmail.com

ABSTRACT

Background: Diabetes mellitus is a chronic non-communicable disease which has become the epidemic of the 21st century. According to WHO 1.6 million deaths were estimated to be directly caused by diabetes in the year 2016 and attributed to be the seventh leading cause of death in the world. Objective of the study was to assess the knowledge, attitude, practice about diabetic care among the diabetic patient, and to assess the association between KAP of diabetic care and socio-demographic factors.
Methods: Cross-sectional study was done with purposive sampling for 4 months, on 62 sample size. Data collection tool was the KAP questionnaire which was adapted a study by Herath HMM.
Results: Out of 66 participants, 34 (51.5%) had good knowledge about diabetes, 27 (40.9%) and 5 had poor knowledge (7.6%), 16 had positive attitude about diabetes care (24.2%) and 50 (75.8%) had negative attitude, 47 had good practice about diabetes care (71.2%) and 19 (28.8%) of them had bad practice.
Conclusions: Though majority of the study participants had good to moderate knowledge (92.4%), their attitude was negative (75.8%) and the knowledge level did not fully reflect into the attitude and practices (71.2%). This suggests there is a gap in the knowledge, attitude and practice.

Keywords: Attitude and practices, Diabetes mellitus, Knowledge

INTRODUCTION

Diabetes mellitus is a chronic non-communicable disease which has become the epidemic of the 21st century. Once considered a disorder of the elderly, it has now become one of the major causes of morbidity and mortality affecting the youth and middle-aged people.[1] According to WHO 1.6 million deaths were estimated to be directly caused by diabetes in the year 2016 and attributed to be the seventh leading cause of death in the world.[2]

In the South East Asian region an estimated 87.6 million adults aged 20-79 years were living with diabetes mellitus in the year 2019 with a regional prevalence of diabetes of 8.8%.3 India ranks second with 69.2 million people with diabetes and another 36.5 million with prediabetes among the top 10 countries in the world.[4] Good knowledge, attitude and practices towards diabetes in diabetic patients as well as in general population, is helpful in effective prevention and management of diabetes among population.

Diabetes mellitus is a lifelong metabolic disease, considered often as an epidemic problem that leads reduction in quality and expectancy of life. There is increased prevalence of diabetes mellitus through the world as a result of changing dietary patterns and decreased physical activity. The aim of this study was to assess the knowledge, attitude and practice regarding diabetes mellitus among diagnosed diabetic patients.

Objectives of the study was to assess the knowledge, attitude, practice about diabetic care among the diabetic patients and to assess the association between KAP of diabetic care and socio-demographic factors.

METHODS

This was a cross sectional study carried out at Medicine OPD of Vydehi Institute of Medical Sciences and Research Centre, Bengaluru using purposive sampling technique. The entire study duration was for 4 months from September 2019 to December 2019 with a sample size of 62 and was calculated as per the following formula:

n= z2pq/d2 where n= sample size, z= 1.96 at 95% confidence level, p=anticipated proportion of individuals having good knowledge (80%) 5, q=1-p, d= precision (10%)= (1.96)2 (0.80) (0.20) / (0.1) 2= 62.

All diagnosed diabetic patients attending the medicine OPD of tertiary Hospital, Bangalore who have given consent were included in the study. Data was collected using The KAP questionnaire adapted from a study by Herath HMM which is a validated tool.[5] Permission was obtained from the author to use the questionnaire in our study. The self-administered questionnaire had a total of 18 questions (knowledge-8 questions, attitude-6 questions, and practice-4 questions) and each correct answer was given a score of 'one' and the wrong answer was given a score of 'zero'.

A score of 0-13, 14-18 and 19-26 were considered as poor, moderate and good knowledge respectively. For attitude- participants with a score of 4 or more were considered to have a positive attitude. For practice- participants who scored 2 or more were said to have good practice. Ethics committee approval was obtained from the institution ethics committee to conduct the study.

Statistical analysis

Data was entered in MS Excel and was analysed using SPSS software (version 18). Data is represented in tables. Descriptive statistics is used to express frequencies and percentages. Chi-square test is used to test the association between socio-demographic variables and KAP and p-value<0.05 is considered statistically significant.

RESULTS

Table 1 describes the socio-demographic characteristics of the study population.

Majority of the study participants (40.9%) belonged to the age group of 51-60 years and were males (59.1%). Most of them (60.6%) had studied above tenth standard and 15 % of them were farmers by occupation.

Table 1: Distribution of study participants based on socio-demographic characteristics (n=66).

Socio-demographic characteristics	Frequency (N)	Percentage (%)
Age (years)		
30-40	11	16.7
41-50	22	33.3
51-60	27	40.9
>60	6	9.1
Gender		
Male	39	59.1
Female	27	40.9
Religion		
Hindu	43	65.2
Muslim	23	34.8
Marital Status		
Single	1	1.5
Married	63	95.5
Widowed	2	3
Occupation		
Housewife	25	37.9
Unemployed	1	1.5
Student	1	1.5
Businessman	8	12.1
Farmer	10	15.2
Teacher	2	3
Clerk	6	9.1
Bank officer	1	1.5
Private employee	6	9.1
Daily labourer	2	3
Others	4	6.1
Education		
Not literate	6	9.1
<10	20	30.3
>10	40	60.6
First degree relatives with diabetes		
Yes	31	47
No	32	48.5
Don't know	3	4.5

Table 2: Distribution of study participants based on their knowledge (n=66)

Knowledge	Frequency (N)	Percentage (%)
Poor	5	7.6
Moderate	27	40.9
Good	34	51.5
Total	66	100

Table 2 describes the knowledge level of the study participants. Majority of them had moderate (40.9%) to good (51.5%) knowledge level.

Table 3 describes the attitude of the study participants. Majority of them (75.8%) had negative attitude.

Table 3: Distribution of study participants based on their attitude (n=66).

Attitude	Frequency(N)	Percentage (%)
Positive	16	24.2
Negative	50	75.8
Total	66	100

Table 4 describes the practices of the study participants. Majority of them (71.2%) had good practice

Table 4: Distribution of study participants based on their practice (n=66).

Practice	Frequency (N)	Percentage(%)
Good	47	71.2
Bad	19	28.8
Total	66	100

Table 5 shows the association of level of knowledge with KAP of the study participants. Chi-square test was used to test the association. Majority of them who had good to moderate knowledge had educational status above 10th standard and the association was not statistically significant.

Table 5: Association of level of education with knowledge, attitude and practice of study participants.

Level of education	Knowledge				Attitude			Practice		
	Good	Moderate	Poor	P*	Positive	Negative	P*	Good	Bad	P*(chi-square)
	N (%)	N (%)	N (%)	(chi-square)	N (%)	N (%)	(chi-square)	N (%)	N (%)	
Not literate	3 (8.8)	1 (3.6)	2 (40)	0.109	3 (13)	3 (6.9)	0.497	6 (9.3)	0 (0)	1
<10th Std	11 (32.4)	7 (26)	2 (40)	-8.295	8 (34.8)	12 (28)	-1.255	18 (30)	2 (40)	-0.66
>10th Std	20 (58.8)	19 (70.4)	1 (20)		12 (52.2)	28 (65.1)		37 (60.7)	3 (60)	

Association of KAP with other socio-demographic variables like gender, age, religion, occupation were also not statistically significant.

DISCUSSION

In the present study it was observed that out of 66 participants, 59.15 were male and 40.9% were between 51 and 60 years of age and 16.7% of the participants were between 30 and 40 years of age, 33.3% were between 41 and 50 years of age. Out of the 66 study participants, six of them were not literate and 33.3%of them had studied upto 10th std and 66.6% of them had studied above 10th std.

Out of 66 participants, 34(51.5%) had good knowledge about diabetes, 27 (40.9%) and 5 had poor knowledge (7.6%), 16 had positive attitude about diabetes care (24.2%) and 50 (75.8%) had negative attitude, 47 had good practice about diabetes care (71.2%) and 19 (28.8%) of them had bad practice, while the study conducted by Herath HMM 5, 75% had good or moderate knowledge and 25% had poor knowledge, 88% of the participants had negative attitude and 12% had positive attitude towards diabetes, 55% of the participants had good practice and 45% had bad practices towards diabetes self-care.

In the current study done around 59% had good knowledge among those who studied 10th and above. In the study done by Shah et al only 10% were graduate and nearly 37% were completely illiterate, around 63% did not know what diabetes is and the consequences of diabetes.[6] Illiteracy may be the most important obstacle in diabetes management of such patients in their study. This shows literacy has positive impact on the knowledge about diabetes mellitus.

In response to the knowledge questions majority of the study participants had knowledge towards risk factors of DM namely: family history of diabetes mellitus (50%), overweight/obesity (77.3%) and 84.8% of the study participants had the knowledge that regular exercise and avoiding sugary foods (59%) help in controlling diabetes mellitus. In a study conducted by Kant et al in a hospital in Rishikesh and Konduru SST yielded similar findings.[7,8]

Majority of the study participants (87.9%) and half of them (53%) were aware about fasting blood sugar and urine tests for diagnosing Diabetes mellitus respectively. In a study conducted by Hussain et al in Kerala 79.6% people were aware of the fact that DM could be identified by blood and urine tests. Similar findings were observed in Prayitesh et al study.[9,10]

While majority of the study participants had good to moderate knowledge when it came to practices, 53% of them responded that they could not resist sugary foods, 40.9% of them were not exercising regularly. This suggests those with adequate knowledge are not practicing enough. Moreover, it was seen in spite of 75.8% of them having a negative attitude, 71.2% had good practice.

In the present study 65.2% of the respondents were aware that diabetes could lead to complications. 21.2% of them knew that stroke was a complication of DM, 48.5% of them were aware of the renal complication and 53% of them knew that it can cause heart attack. Similar findings were observed in other studies.[11,12] In another study conducted by Rahman et al, the study participants had a better knowledge of complications.[13]

While majority of the study participants with literacy above had good to moderate knowledge 10th std, the association of education with knowledge, attitude and practice was not statistically significant. Similar findings were observed in the studies.[5,13,14] Knowledge score was better in males compared to females as supported by other study findings.[6,11,14,16] Patient counselling regarding the disease and its complications and self-care can help in achieving better glycaemic control as evidenced in other studies.[17,18,19]

Limitations

The sample size was small and hence to generalize the study results a larger sample would have been considered.

CONCLUSION

Though majority of the study participants had good to moderate knowledge (92.4%), their attitude was negative (75.8%) and the knowledge level did not fully reflect into their attitude and practices (71.2%). This suggests there is a gap in the knowledge, attitude and practice. Information educational and communication activities centred on diabetes is the need of the hour. The efforts should be more focussed on female patients, younger patients and those who have family history of diabetes. Moreover health care providers should be trained to provide effective counselling to diabetic patients.

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

REFERENCES

1. Wild S, Roglic G, Green A, Sicree R, King H. Global prevalence of diabetes: Estimates for the year 2000 and projections for 2030. Diabetes Care. 2004;27:1047-53.
2. World Health Organisation. Diabetes fact sheet 30 Oct 2018. Available at: https://www.who.int/news-room/fact-sheets/detail/diabetes. Accessed on 20 March 2020.
3. International Diabetes Federation Available at: https://idf.org/our-network/regions. Accessed on 20 March 2020.
4. National Health Portal. Available at: https://www.nhp.gov.in/overview. Accessed on 20 March 2020.
5. Herath HMM, Weerasinghe NP, Dias H, Weerarathna TP. Knowledge, attitude and practice related to diabetes mellitus among the general public in Galle district in Southern Sri Lanka: a pilot study. BMC Public Health. 2017;17(1):535.
6. Shah VN, Kamdar PK, Shah N. Assessing the knowledge, attitudes and practice of type 2 diabetes among patients of Saurashtra region, Gujarat. Int J Diabetes Dev Ctries. 2009;29(3):118-22.
7. Kant R, Thapliyal V. Knowledge attitude and practice of type 2 diabetic patients in a tertiary care teaching hospital in India. Integrat Food Nutri Metab. 2015;2(1):131-5.
8. Konduru SST, Ranjan A, Karthik, Muddada S, Shaik S, Vakkapatla LS. Assessment of diabetes related knowledge, attitude and practice among diabetics and non-diabetics using self prepared questionnaire for awareness of health promotion. Indian J Pharm Practice. 2017;10(1):32-8.
9. Hussain R, Rajesh B, Giridhar A, Gopalakrishnan M, Sadasivan S, James J, et al. Knowledge and awareness about diabetes mellitus and diabetic retinopathy in suburban population of a South Indian state and its practice among the patients with diabetes mellitus: a population-based study. Indian J Ophthalmol. 2016;64(4):272-6.
10. Bruce P. Knowledge attitude and practice about diabetes among patients with diabetes attending medicine OPD of tertiary care hospital at Kulasekharam. Int J Commu Med Public Health. 2018;5(10):4254-7.
11. Saleh F, Mumu SJ, Ara F, Begum HA, Ali L. Knowledge and self-care practices regarding diabetes among newly diagnosed type 2 diabetics in Bangladesh: a cross-sectional study. BMC Public Health. 2012;12:1112.
12. Khamseh ME, Vatankhah N, Baradaran HR. Knowledge and practice of foot care in Iranian people with type 2 diabetes. Int Wound J. 2007;4(4):298-302.
13. Rahaman KS, Majdzadeh R, Naieni KH, Owais R. Knowledge, attitude and practices (KAP) regarding chronic complications of diabetes among patients with type 2 diabetes in Dhaka. Int J Endocrinol Meta. 2017;15(3):77-9.
14. Nagar V, Prasad P, Mitra A, Kale S, Yadav K, Shukla M. Assessment of knowledge, attitude and practice about diabetes among diabetic patients of tertiary care centre in central India. Int J Commu Med Public Health. 2018;5(9):4065-71.
15. Mohan D, Raj D, Shanthirani CS, Datta M, Unwin NC, Kapur A. Awareness and knowledge of diabetes in Chennai-the Chennai Urban Rural Epidemiology Study. J Assoc Physicians India. 2005;53:283-7.
16. Mohan V, Kaur T, Deepa M, Bhansali A, Anjana R, Pradeepa R, et al. Knowledge and awareness of diabetes in urban and rural India: The Indian Council of Medical Research India Diabetes Study (Phase I): Indian Council of Medical Research India

Diabetes. Indian J Endocrinol Metab. 2014;18(3):379.
17. Murata GH, Shah JH, Adam KD, Wendel CS, Bokhari SU, Solvas PA, et al. Factors affecting diabetes knowledge in Type 2 diabetic veterans. Diabetologia. 2003;46(8):1170-8.
18. Tarrier N, Bobes J. The importance of psychosocial interventions and patient involvement in the treatment of schizophrenia. Int J Psychiatry Clin Pract. 2000;4(1):35-51.
19. Malathy R, Narmadha MP, Jose AM, Ramesh S, Babu DN. Effect of a diabetes counseling programme on knowledge, attitude and practice among diabetic patients in Erode District of South India. J Young Pharm. 2011;3(1):65-72.

Cite this article as: Polineni V, Acharya S. Knowledge, attitude and practice among diabetic patients visiting a tertiary care hospital in Bangalore, Karnataka. Int J Community Med Public Health 2020;7:3100-4.