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

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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:

\[ n = \frac{z^2pq}{d^2} \]

where \( n \) = sample size, \( z \) = 1.96 at 95% confidence level, \( p \) = anticipated proportion of individuals having good knowledge (80%) \( \pm 0.20 \), \( q \) = 1 - \( p \), \( d \) = precision (10%) = \( \frac{(1.96)^2 (0.80) (0.20)}{(0.1)^2} = 62 \).

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. 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 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.

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. In another study conducted by Rahman et al, the study participants had a better knowledge of complications.

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. Knowledge score was better in males compared to females as supported by other study findings. Patient counselling about the disease and its complications and self-care can help in achieving better glycaemic control as evidenced in other studies.

**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.

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