

# Assessment of Knowledge, Attitude, and Practice of Type 2 Diabetic Subjects in a Tertiary Care Hospital

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**Abstract:** DM is one of the most common chronic conditions in human history. DM can occur at any age. Type 2 DM is most common at 50-70 years of age, affecting both sexes equally. The purpose of this study is to assess the Knowledge, Attitude, and Practice on the diabetes of type- 2 diabetic subjects in Puducherry population. The reasons for increase in the prevalence of diabetes mellitus in developing countries may include unhealthy lifestyle, rapid westernization food habits, poor knowledge, negative attitude and poor practices are the main reason for type 2 diabetic mellitus. The World Health Organization [W. H. O] has estimated the global number of people with diabetes will be more than double over the next 25 years. Community Based Interactive Approach-diabetes mellitus [CBIA-DM] is an active self-learning method and it is the other way for knowing about the KAP. Almost all high-income countries, diabetes is a leading cause of cardiovascular disease, blindness and kidney failure. Family history has a major role in the cause of diabetes First-degree relatives of diabetic subject have long been known to have an increased risk of developing T2DM. Recent studies in genetic research have also identified the genetic variants linked with T2DM. A total of 75 patients enrolled for the study age between 30-60 years with 40 male & 35 female. Among the 75 Type 2 diabetes mellitus patients, knowledge level was identified as 4% poor, 13.3% average and 82.7 are a good level of knowledge. All 100% participant shows a positive attitude and 8% poor, 17.3% average and 74.7% are good in practice. Several socio-demographic factors play significant roles about knowledge, attitude and practice of diabetes. This study has highlighted even though knowledge level has good among most of the population some more educational intervention is needed to increase their Knowledge, attitude and practice on their disease conduction.

**Keywords:** Attitude, Knowledge, Practice and Type 2 Diabetes Mellitus

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## 1. Introduction

One of the most known major growing non-communicable diseases (NCD) is Diabetes Mellitus (DM) is which leads to the cause of threat to global public health [1]. DM is rapidly gaining a potential epidemic state all over the world. In 2014, about 387 million people, 8.3% prevalence and 46.3% undiagnosed were suffering from DM Worldwide, of which 75 million people are from southeast Asia prevalence 8.3% and undiagnosed 52.8%, and it is projected to be 592 million by 2035 [2]. India is home town to 69.1 million people with DM and is

determined to have the second-highest number of DM cases in the world after China in 2015 [3]. More than 80% of DM deaths occur in lower and middle-income countries. By 2030, diabetes will be the 7th leading cause of death [4]. According to the International Diabetes Federation, the current study stated that 39.5 million people in India have pre DM, and the other seven million people develop diabetes every year. The number of people with DM in India is expected 87 million DM by 2030 [5]. DM is a disturbance in the metabolism of carbohydrates, fat, and

protein that is caused by loss of insulin-producing cells in the pancreas or decreased tissue sensitivity to insulin that results in an increased level of glucose in the blood [6]. Growing evidence that Knowledge, Attitude, and Practice (KAP) studies indicate that there is an immediate need to enhance DM awareness, early diagnosis, control of risk factors, and disease management [7]. DM is a risk factor for cardiovascular and kidney disease. It has been associated with an unhealthy lifestyle, including inappropriate nutrition, caffeine overuse, and improper sleeping habits [8]. Effective management of the disease is associated with the KAP of diabetic patients regarding their lifestyle practices [9]. This study deals with the level of assessment of the knowledge, attitude, and practices on diabetes among type II DM people.

## 2. Materials and Method

- 1) Type of Study: Observational study
- 2) Number of groups to be studied: One group
- 3) Sample size: 75
- 4) Subjects: Subject with type 2 diabetes mellitus

A cross-sectional hospital-based study carried out with the enrollment of Seventy five clinically diagnosed type 2 diabetes subjects from the tertiary health care hospital aged between 30-60 years. Known cases of Type 2 Diabetes Mellitus less than 6 months were included in the study. Participants will be interviewed one by one in vernacular language (Tamil) using an adapted (validated) structured questionnaire, which included type 2 diabetes mellitus related knowledge (10 questions), attitudes (10 questions) and lifestyle practices (10 questions). A score of 'one' for each correct answer and 'zero' for each wrong answer will be given. Detailed history, demographic, clinical and anthropometric measurements were collected. The response to knowledge, attitude and practice were obtained from the type 2 diabetes mellitus subjects.

## 3. Statistical Methods

The collected data will be organized, tabulated and statistically analyzed using numerical quantitative- Mean, SD, 95%, CI and categorical qualitative -%, x<sup>2</sup> - test.

## 4. Results

Totally 75 patients were enrolled for the study aged between 30 to 60 years. In the case of gender 40 (53.3%) and 35 (46.7%) are males and females respectively. The BMI of every patient was calculated using the formula. The result shows 8.0% was underweight, 49.3% was normal, 17.3% was overweight and 25.3% was obese. All participants got married 75 (100%). Assessing their education level the result shows that 8 (10.7%) were illiterates, 12 (16%) were crossed their primary section, 17 (22.7%) were high school level, 26 (34.7%) were higher secondary level and 12 (16%) were graduate above.

## 5. Other Chronic Diseases

While estimating their health condition 60(80%) are free from heart disease and 15 (20%) are having queries of heart disease. 56 (74.7%) are free from kidney disease and 19 (25.3%) are having queries of kidney disease. 66 (88%) are free from liver disease and 9 (12%) are having queries of liver disease. 73 (97.3%) are free from stroke and 2 (2.7%) are having queries of stroke.

## 6. Life Style Practices

While assessing their lifestyle 52 (69.3%) are non-smokers and 23 (30.7%) are smokers. Alcohol consumption was elicited and found that 36 (48%) had the habit of alcoholism which 39 (52%) did not have it. The result of the practice of daily exercise was found among 60 (80%) T2D patients and 15 (20%) were not doing exercise. A family history of T2D patients was enumerated and found 57 (76%) of them had a family history of diabetes which 18 (24%) does not have a family history. Among the 57 had a family history of T2D 35 (61.4%) of their mother, 13 (22.8%) of their father and 9 (15.7%) of siblings were with type 2 diabetic.

## 7. KAP on DM

The knowledge Attitude and Practice on T2D were enumerated among all the 75 types 2 DM patients and found that 82.7% were good, 13.3% were average and 4% low level of knowledge. The attitude of T2D patients was assessed by a pretested questionnaire and found that all of them had a good attitude (100%). the practice was good among 74.7% of patients, 17.3% were average and 8% were in the lower level of practice. There is a positive correlation seen between knowledge and attitude, knowledge and practice, attitude and practice.

## 8. Discussion

The study was done by Mervat Alsousley et al., in Jordan a KAP on DM among public he reported that out of 1,702 participants only 13.1% of participants have a poor level of knowledge. Most of the participants (81.3%) are good at knowledge. While comparing with our study it has been done only for DM patients visited the tertiary care center. the report shows the knowledge was poor in 4%, average 13.3% and good in 82.7%, attitude 100% has a good attitude, practice poor in 8%, average 17.3% and good 74.7% this shows the regional difference where comparative all knowledge, attitude and practice are good in our population than the Bangladesh and Srilanka but it shows similar towards the population of Jordan than the northeastern countries like Bangladesh [10].

Mariya Amin Qureshi et al., in their study on knowledge on DM among adults in a rural population of Kerala were analysis a case of the literary level that Over half of the respondents 55.7% had high school and higher secondary education. In our study, only 16% of the population has been a degree holder

this shows that there higher literary level in Kerala compared with the Puducherry population. In the same study while discussing genetic factors. Among 343 respondents, (23%) reported (self) to have diabetes and (42.6%) had a family history of DM. Finding 76% has a family history of DM where 24% reported that self to have DM [11].

Fakir M. Amirul Islam et al., in his study on KAP ON DM among Rural Bangladesh People in older age groups showed significantly poorer knowledge, compared to the people in younger age groups. They knew that regular physical activity can prevent diabetes compared to those aged less than 35 years. While comparing education and knowledge. Both people with at least an SSC level of education and/or people with higher SES showed better knowledge of all of the items. than others, our finding also shows that knowledge level on 30-40 years are having 0.1% poor, 20% average and 80% good. 40-50 years are having 3.3% poor, 13.% average and 83.3% good. 50-60 years are having 5% poor, 12.5% average and 82.5% good. Then middle-aged people have more knowledge than the old age. Compared with their study older people have more knowledge [12].

Mahtab Niroom and et al. did a study on DM, knowledge, attitude and practice among Iranian in-patients with type-2 diabetes were they included 106 male and 94 female patients there finding shows that Practice was better in patients with diabetic nephropathy than a patient who has absent of diabetic neuropathy. Our finding also Shows similar results that DM neuropathy has better practice than with no DM neuropathy [13].

Our study reported 76% has a genetic hereditary factor for DM, the remaining 24% reported that self to have DM. This shows the causes vary from region to region. Hereditary is the major causes among Puducherry population.

## 9. Conclusion

The present study comprehensively assesses the KAP towards DM among. T2DM patients who visited MGMCRI Puducherry. Only 75 samples were taken for the study. To our knowledge, this is the first study explores KAP among DM patient in Puducherry population. This study emphasis educational intervention to promote healthy lifestyle practices and dietary habits. We strongly concluded knowledge of the disease will help the patient to overcome the other complication of the disease.

## References

- [1] Vivek Nagar et al; assessment of knowledge, attitude and practice about diabetes among diabetic patients of the tertiary care center in the center in central India, *Int J Community Med Public Health*. 2018 Sep; 5 (9): 4065-4071.
- [2] Anju Gautametal. Diabetes related health knowledge, attitude and practice among diabetic patients in Nepal, *BMC Endocrine Disorders* (2015) 15: 25 DOI 10.1186/s12902-015-0021-6.
- [3] Srushti C. et al. A Study to Assess the Knowledge, Attitude and Practice Regarding Blood Glucose Monitoring among Diabetic Patients Attending a Tertiary Care Hospital, Karad, *International Journal of Health Sciences & Research* (www.ijhsr.org) 208 Vol.9; Issue: 3; March 2019.
- [4] Bernard B Benjamin et al. Knowledge, attitude and practice about diabetes and its treatment in patients attending the specialty clinic. Bernard B Benjamin et al. *Int. Res. J. Pharm.* 2017, 8 (6).
- [5] IDF. IDF Diabetes Atlas. International Diabetes Federation. 2015. 1-163 p.
- [6] Chanyalew Worku Kassahun et al. Knowledge, attitude, practices and their associated factors towards diabetes mellitus among non-diabetes community members of Bale Zone administrative towns, South East Ethiopia. Across-sectional study *PLOS ONE* | DOI: 10.1371/journal.pone.0170040 February 2, 2017.
- [7] Kavita Jaiswal et al, Knowledge, attitude & practices of type II diabetes mellitus patients in a tertiary care teaching institute of central India, *Journal of Diabetes, Metabolic Disorders & Control*. Volume 6 Issue 1 – 2019.
- [8] Kumar PJ et al. *Textbook of Clinical Medicine*. Saunders (London). 2002; 1099-1121.
- [9] Reza J N et al. A: Diabetes and heart disease in Bangladeshis and Pakistanis. In. Queen Mary University of London: [HTTP://www.mantaraymedia.co.uk/](http://www.mantaraymedia.co.uk/).2014. Accessed 15 Apr 2015.
- [10] Mervat Alsous, Public knowledge, attitudes and practices toward diabetes mellitus: A cross-sectional study from Jordan, *PLOS ONE* | <https://doi.org/10.1371/journal.pone.0214479> March 29, 2019.
- [11] Mariya Amin, A community-based study on knowledge of diabetes mellitus among adults in a rural population of Kerala, *International Journal of Medical Science and Public Health* | 2016 | Vol 5 | Issue 10.
- [12] Fakir M. Amirul Islam, Knowledge, Attitudes and Practice of Diabetes in Rural Bangladesh: The Bangladesh Population-Based Diabetes and Eye Study (BPDES), DOI: 10.1371/journal.pone.0110368.t001, October 2014 | Volume 9 | Issue 10 | e110368.
- [13] Mahtab Niroomand, Diabetes knowledge, attitude and practice (KAP) study among Iranian in-patients with type-2 diabetes: A cross-sectional study, \_ 2015 *Diabetes India*. Published by Elsevier Ltd. All rights reserve.