Diabetes Awareness among College Going Students

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Abstract

Background: *Awareness of various aspects of Diabetes Mellitus (DM) is essential for the prevention, management and control of the disease. However, several studies have consistently shown that awareness of DM is low in the general population.*

Aims And Objectives: *To study the awareness of diabetes mellitus among the college going students. To study on awareness of diabetic symptoms, its complications, and recommended treatment and follow ups among the college going students.*

Materials And Methods: *This is a descriptive study where we interviewed 230 participants of various grades of pre university (PU), undergraduate (UG) and post graduate (PG) course. A questionnaire was administered to the subjects to assess their awareness on symptoms and complications, treatment and management; and monitoring of diabetes. The subjects were studied under PU, UG, PG groups. They were further divided as good, moderate or poor based on their level of awareness.*

Results: *Among the 230 participants 36 were PU, 149 were UG and 45 were PG students. We found 57 % of UG and PG students to have moderate awareness, while 55 % of PU students had good awareness. Of 88 participants from rural area, 53% had moderate knowledge on DM awareness. Good awareness of 44% was seen among students with diabetes in family member. Moderate knowledge was seen among all groups on awareness in general diabetic symptoms. Good knowledge about symptoms and complications was seen among PU (63 %) and UG (64 %) students. Only 5.6% to 6.5% of all grades had good knowledge on treatment and complications of DM. Only 5.6% to 31.2% of all grades had good knowledge about monitoring of diabetes.*

Conclusion: *The level of awareness on DM among our study group was moderate. We feel the health education programs organised by various agencies and organisations can play a leading role to bring up awareness on the diagnosis, lifestyle modifications and complications of DM.*

Keywords: *Diabetes Mellitus; awareness; college students; semi- urban.*

I. Introduction

Awareness on Diabetes Mellitus (DM) as a disease is essential for its identification, management and prevention of complications. By year 2030, India is predicted to have over 79.4 million people affected with DM [1, 2]. In spite of public awareness programs by governmental and non-governmental agencies the knowledge of diabetes among the public is questionable. Several studies have shown the awareness of DM among the general population to be low. Young adults are a major risk group of developing diabetes in the next decade [3], making it essential to build their awareness on DM and its complications. This study is to find the awareness among college going students about DM andcomplications.

II. Materials &Methods

This descriptive study was done by interviewing 230 students belonging to pre-university (PU), undergraduate (UG) and post graduate (PG) programs in a semi urban educational institution. They were administered a questionnaire containing 36 questions on various aspects of diabetes under four sections. The questions were on (i) General knowledge on diabetes, (ii) symptoms& complications, (iii) treatment and management and (iv)monitoring of diabetes. The subjects were studied under PU, UG, PG groups. They were further divided as good, moderate or poor responders based on the competency of their awareness.
Inclusion criteria: (i) Students attending pre -university, undergraduate and post graduate programs. (ii) Age above 16 yrs.

Exclusion criteria: Students pursuing medical/ nursing/ allied health science streams.

Analysis: The data collected was captured on an Excel data sheet and analysed by frequency, percentage and Chi-square test.

III. Results

Of the 230 participants 56 % were males. There were 36 in PU, 149 in UG and 45 in PG groups. Among the participants 61.74% were from urban dwellings.We observed 38.68% of the participants to have a family member with T2DM.Among the participants moderate awareness of DM were seen in 48.8% of males and 60.9% of females. In the group with moderate awareness, the urban and rural participants were nearly equal(53.4% and 56.3% respectively). Among participants with a family member being diabetic, 41.6% had good awareness of DM.

Figure 1 - 4 shows the distribution and percentages of scores obtainedby each groups from the questionnaire. Our study found37.8 %, 53 % and 66.7 % of participants belonging to the PG, UG and PU to have moderate awareness on symptoms of diabetes. Good knowledge about symptoms and complications were seen among PU group (63 %) and UG group (64 %). On their awareness of treatment and complications of diabetes, only 5.6% PU, 6.7% UG and 6.7% PG patricipants were found to have good knowledge. Only 5.6% of PU, 13.4% of UG and 31.2% of PG participants had good knowledge on the regular monitoring of diabetes.

IV. Discussion

In present study, the knowledge on diabetes among males and females were similar. This was in contrast to the observations made by Murugeshanet al.[4] in their study done at Chennai. They observed gender, level of education and occupation of the participants to positively relate to their knowledge of diabetes.

There was no significant difference in awareness noted among participants from rural and urban area. The participants belonging to rural area also had moderate knowledge when compared to the urban area than our expected outcome. A study done by Mohanet al.[5] in Chennai also emphasised the lack of knowledge on T2DM in rural areas and need for intensive awareness programmes.They emphasis the need for diabetes education to the masses and alsoextending diabetes education activities to rural areas.

A study by Snehalatha et al, wherepersons with diabetes or, with positive family history of diabetes were likely to have higher exposure to education regarding the disease[4]. They felt this was possibly due the exposure from the treating doctor or from their quest to know from available. Similar observatios were made in the present study. This observation is very well explained as they are in close proximity as a caregiver and caretaker who is involved in the day to day management. Also the exposure they get to the medical care where awareness about the disease, complications and preventive methods of long term complications are explained to the diabetic patient and their caretakers.

In present study, participants belonging to the PU group fared well when compared to PG students. This was in contrast to a study done by Jasper et al in Nigeria, where it was found that knowledge increased exponentially as level of education, with those who had never attended school scoring lowest and those with tertiary education scoring highest.[6] The role of social media and their influence on young minds might have played a role in obtaining such a result in our study. The usage of internet services and easy access to the medical subjects were higher in our study group as compared to general population. The newer teaching methodology and inclusion of medically related topics for disease awareness may have positively influenced our results.Astudy done in China by Le et al. noted that less educated individuals had lower rates of awareness as they have less exposure to hospital care than educated. The levelof education is positively associated with diabetes-relatedknowledge, the ability to adhere to recommended medicationand treatment choices[7,8].

And a study done in South Korea by Oh etalshowedadherence to guidelines is associated with better outcomes amongpatients with diabetes. However, the adherence to clinicalpractice guidelines and recommendations for diabetespatients is still low[9].Study done by Sims et al. among Africo -american people concluded that the lack of awareness on diabetes was associated with lower levels of education.[10]

There are limitations of this study which may have influenced our results. The responses might not have been marked in full sense of seriousness by the participants. The influence of the colleague might have also biased the responses they have marked. There mabe a bias as the study was done in oneinstitution. Similar studies among a diabetic population to analyse their awareness on diabetescould thow light into the effectiveness of our exiating diabetes awareness programs.

V. Conclusion

The level of awareness on DM among our study group was moderate. We need to improve the awareness among young adults on DM, as they are at a higher risk of developing the disease. We feel the health education programs organised by various agencies and organisations can play a leading role to bring up awareness on the diagnosis, lifestyle modifications and complications of DM. This could probably help in early diagnosis and bring down the burden of diabetes to a larger extent.

References

[1]. Wild S, Roglic G, Green A, Sicrce R, King H. Global prevalence of diabetes, Estimate for the year 2000 and projections for 2030, Diabetes care 2004; 27: 1047- 53.
[2]. Ramachandran A, Snehalatha C, Shetty AS, Nanditha A. Trends in prevalence of diabetes in Asian countries. World J Diabetes 2012; 3: 110-17.
[3]. Nakagami T, Qiao Q, Carstensen B, Hansen CN, Hu G,Tuomilehto J, Balkau B, Borch-Johnsen K; The DECODEDECODAStudy Group. Age, body mass index and Type2 diabetes-associations modified by ethnicity. Diabetologia2003;46:1063-70.
[4]. Murugesan N, Snehalatha C, Shobhana R, Roglic G b, A. Ramachandran A. Awareness about diabetes and its complications in the general and diabetic population in a city in southern India. Diabetes Research and Clinical Practice 2007; 77: 433- 37.
[5]. Mohan D, Raj D, Shanthirani CS, Dutta M, Onwin NC, Kapur A, Mohan V; Awareness and Knowledge of Diabetes in Chennai - The Chennai Urban Rural Epidemiology Study[CURES - 9]; J Assoc Physician India 2005: 53: 283- 87.
[6]. Jasper US, Ogundunmade BG. Determinants of diabetes knowledge in a cohort of Nigerian diabetics. Journal of Diabetes & Metabolic Disorders 2014, 13:39.
[7]. Le C, Jun D, Zhankun S, Yichun Lu, Jie T. Socioeconomic differences in diabetes prevalence, awareness,and treatment in rural southwest China.Tropical Medicine and International Health. doi:10.1111/j.1365-3156.2011.02805.x.
[8]. Brown AF, Ettner SL, Piette J et al. Socioeconomicposition and health among persons with diabetes mellitus: aconceptual framework and review of the literature. EpidemiologicReviews2004; 26, 63–77.
[9]. Oh SW, Lee HJ, Chin HJ, Hwang TI. Adherence to clinical practice guidelinesand outcomes in diabetic patients. International Journal for Quality in Health Care 2011; 23; 413- 19.
[10]. Sims M, Roux AVD, Boylan S, Sarpong D, Gebreab SY, Wyatt SB et al. The Socioeconomic Gradient of Diabetes Prevalence, Awareness,Treatment, and Control among African Americans in the JacksonHeart Study. Ann Epidemiol 2011; 21: 892- 98.
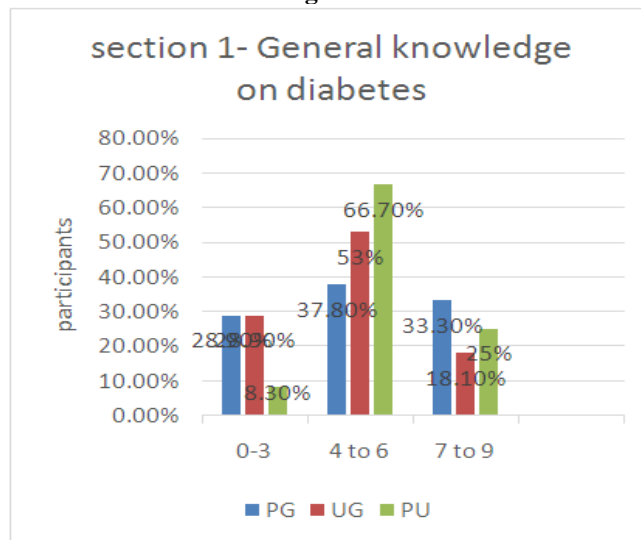
Figures:

Figure-1

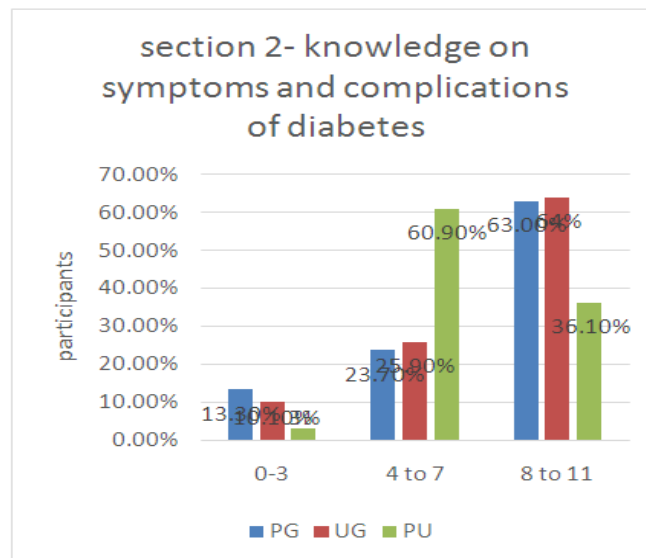**Fig -1:** General Knowledge on diabetes

Fig- 2: Knowledge on symptoms and complications of diabetes
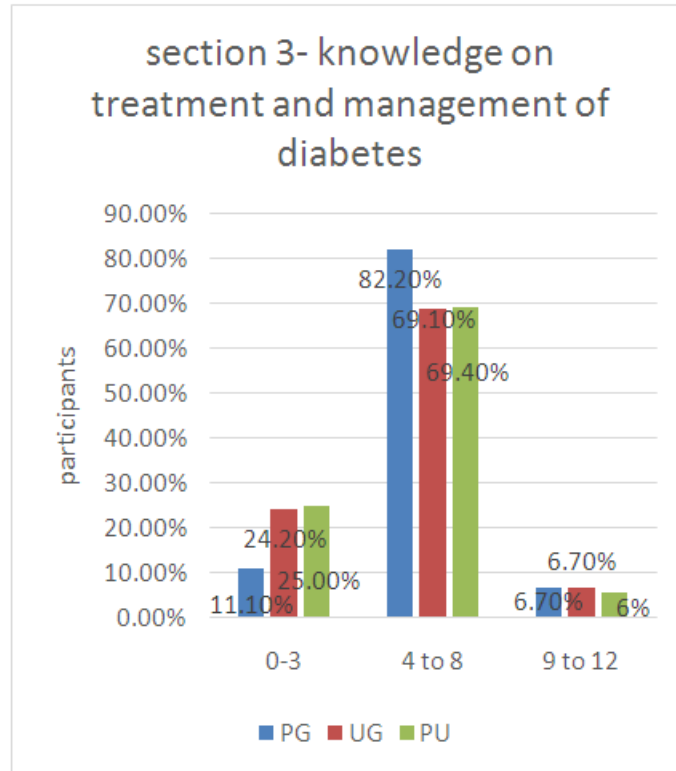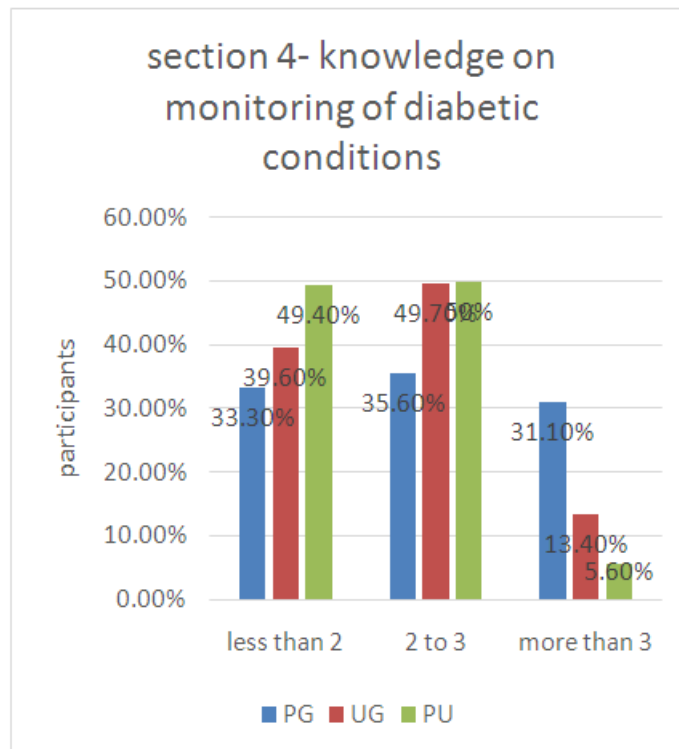
Fig-3: Knowledge of treatment

Fig- 4: Knowledge of monitoring, management of complications.