SHORT COMMUNICATION

Knowledge towards diabetes mellitus among the Health Sciences and Education students in UiTM Selangor, Puncak Alam Campus

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Abstract:

Diabetes mellitus (DM) is a major emerging clinical and public health problem. It is essential to evaluate the knowledge of DM among students to help in designing a promotional strategy to plan an effective programme of health education among students in order to improve the knowledge on DM among young generation. The objective of this study is to evaluate the level of knowledge toward DM among students in UiTM Puncak Alam. A cross-sectional study was carried out among 376 students from March 2019 to June 2019, assessing their knowledge on diabetes, its symptoms, risk factor and complications. A Pearson chi-square and T-test was used to determine the level of knowledge. Out of 376 students, 72% were female and 27.9% were male with the mean age of 22 years. The study showed a significant difference in the level of knowledge between Health Sciences and Education students with (p-value <0.05). A higher mean total level of knowledge was observed among Health Sciences students (2.8, SD=0.32) compare to Education students (2.5, SD=0.52). Although there is the mean difference between the two faculties, this study showed that both students from Faculty of Health Sciences and Education have an excellent level of knowledge towards DM.

Keywords: Cross-sectional study, diabetes mellitus, level of knowledge

1. INTRODUCTION

Diabetes mellitus (DM) is a major emerging clinical and public health problems. According to WHO estimates in 2007, 190 million people suffer from diabetes worldwide and about 330 million are expected to be diabetic by the year 2025 [1]. Worldwide, five Asian countries including both China and India are expected to emerge as the leading countries in terms of the number of people who has DM [2]. Meanwhile, in Malaysia, the Health Ministry estimates 3.6 million Malaysians above the age of 18 are now suffering from diabetes. The Health Minister mentioned half of the total or about 1.8 million had not been diagnosed and had never undergone a health screening and did not realize the presence of the disease [3].

DM is a group of metabolic diseases characterized by chronic hyperglycemia resulting from defects in insulin secretion, insulin action, or both [4]. Insulin is essentially the only hormone that can lower blood glucose [5]. In addition, diabetes is a chronic medical condition, meaning that although it can be controlled, it lasts a lifetime [6].

It is now being considerably agreed that knowledge of diabetes among the young generation will be of great help to reduce the risk of developing diabetes and its complication. Therefore, this study aimed to evaluate the knowledge of DM among young adults in UiTM Puncak Alam.

2. MATERIALS AND METHODS

A cross-sectional study with a convenience sampling method had been used for this survey. This study used a pre-validated questionnaire to obtain data and information. The sample for this study is specific for Health Sciences and Education undergraduate students. Students from other than the two faculties were not eligible to be enrolled. Before starting the study, the questionnaire was adopted from the previous journal and ethical clearance was granted from UiTM Research Ethics Committee. Health Sciences and Education students were identified by different courses and semester of study. The questionnaire and consent form were distributed to the 376 students involved. The questionnaire consists of five parts (demographics, general knowledge of diabetes, risk factors of DM, symptoms and complications of DM). All 27 questionnaires were scored. Each question on

every section consisted of three options which were "Yes", "No", and "Unsure" that required participants to put a tick on the specifically selected column. A system of point allocation was incorporated in this study where one point was given to the correct response and none (zero) was given to the wrong or unsure response. The pointer score on each section was based on the highest score on that section as higher scores indicated a high knowledge in each section and the whole questionnaire as well.

Data were analyzed using SPSS version 21. Most of the calculation used descriptive statistics to describe it. Descriptive statistics were used to present the data in frequency and percentages. The results were stated in percentage (%).

3. RESULTS AND DISCUSSION

It was seen from Table 1 that a total of 376 students participated in the study. Based on the result calculated (n=376), majority students (n= 271, 72%) were female and (n=105, 27.9%) were male. It showed that out of the 376 students who responded to the age survey category, the mean of the students was 22 years (SD=1.17), within age range of 18 to 40 years of age.

Table 1: Demographic characteristics of the students

Characteristic	Sex	Number	%	M(SD)
Gender		376		
	Male	105	27.9	
	Female	271	72	
Age				22.94(1.17)

Previous similar type of study mostly used students related to science field as their subject. Similarly, they tend to study the knowledge of DM. A recent study in Saudi Arabia and Jordan used Health Sciences and Medical students as their subject research [7]. In this study, Health Sciences and Education students were selected. Education students were selected as they were not related to the sciences field program. Study by Bhalge et al used other field of subjects beside science fields such as arts as their research subject [8]. The previous study by Khamaiseh et al. [7], showed that the Health Sciences students have adequate background knowledge concerning DM. Meanwhile, a study done by Bhalge et al. [8] showed that students from other than science field showed poor or lack of education and knowledge on DM. In this study, the Health Sciences and Education students were selected because of the different degree of exposure in health education obtained by the two groups of students.

Table 2 shows the overall knowledge level of DM among Health Sciences and Education students based on total score. The result stated that most students have an excellent knowledge of DM with 73.1% (n=275). The students were found to have a mean knowledge score of 2.72 (SD=0.46).

Table 2: Knowledge level of students about DM.

Level of knowledge	Total score	Number (%) N=376	M (SD)
Poor	0-7	3 (0.8)	
Moderate	8-15	98 (26.1)	
Excellent	16-23	275 (73.1)	
Total knowledge score			2.72 (0.46)

Meanwhile, Table 3 shows the resulting level of knowledge between Health Sciences and Education students. It showed that both students from the two different faculties have excellent knowledge of DM. Only three students (1.6%) from Education have poor knowledge of diabetes. Health Sciences students showed an excellent 88.3% for the level of knowledge while Education students, 58% and 40.4% with a moderate and excellent level of knowledge, respectively.

Table 3. Knowledge level between the Health Sciences and Education students

Faculty	Frequency (n=376)	Level of knowledge	Percentage (%)	M (SD)
Health Sciences	188	Poor	(0)	
		Moderate	(11.7)	2.8 (0.32)
		Excellent	(88.3)	
Education	188	Poor	(1.6)	
		Moderate	(40.4)	2.5(0.52)
		Excellent	(58)	

4. CONCLUSION

This study has revealed that the level of knowledge towards DM among students from the Faculty of Health Sciences and Education is excellent. However, there is a need for the students to be given an opportunity to learn more about DM so that they can play a vital role in educating and creating awareness among other students from different faculties and the public population as well.

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