Research Article

A survey on the level of awareness of people with university education in Yasuj from type 2 diabetes in 2017

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ABSTRACT

Introduction and goal: Diabetes mellitus is a group of metabolic disorders that hyperglycemia is a common symptom. Diabetes mellitus is divided into 2 types of type 1diabetes and type 2 diabetes. Type 2 diabetes is caused by several causes, including insulin resistance, insufficient insulin secretion, and extra glucose production by the liver. Among the risk factors fortype 2 arediabetes :familial history of diabetes, over weight, lack of mobility, history of gestational diabetes, high blood pressure, low HDL levels, polycystic ovarian syndrome, history of cardio-vascular disease. Increasing the level of general information about type 2 diabetes will have a direct relationship with improving community health and improving patients and reducing the complications of the disease. In Iran, public awareness about diabetes and its complications are not ideal. In addition to increasing the prevalence of illness in the coming years, late complications of the disease were such as cardiovascular events, stroke, ocular complications, renal complications , amputation of limbs and spinal cord injuries. Therefore, we considered the study of people with university education in Yasuj city , because they are expected to have a high level of knowledge about chronic diseases, such as diabetes, and because still a study that show the status of knowledge about diabetes among people with university education in yasuj city has not be done, Therefore, the aim of this study was to investigate the awareness of people with university education in Yasuj city, in relation totype 2diabetes, in order to develop educational programs based on their findings, if necessary, and to increase the level of knowledge of this group about the occurrence or progression of diabetes mellitus prevention. The aim of this study was to determine the level of awareness of people with university education in Yasuj regarding to type 2diabetes, based on gender, age, education, marital status and family history.

Materials and Methods: Our study was a descriptive cross-sectional study in Yasuj, Iran, in 1995. The population of this study was 650 people with university education in Yasuj, which is a multi-stage sampling that was entered randomly in the final step.

 The questionnaire was also given to the subjects, and in the scoring of those who score from 1 to 30, they will have a low level of knowledge, a score of 30-36 have average knowledge and a score of 60 to 100 will be good. Data were analyzed by SPSS 21 using Chi-square test.

Results: The results of this study were analyzed by Chi-square test that between the ages of 21-30, 62% of the well-informed, aged 31-40 years old, had a good 79.2% awareness, and between the ages of 41 and 50, about 84%

had a good awareness and between 51 and 60 years of age. Therefore, according to this test there is a significant relationship between different age groups and awareness (P value = 0.000).

Conclusion: According to this study, the knowledge of type 2 diabetes with age, marital status, and related education is influenced by these factors, but gender, family history, is unaffected by consciousness.

Keywords: diabetes, type 2diabetes, age, gender.

INTRODUCTION:

Diabetes mellitus is one of the most common diseases in advanced countries as well as in Iran. If diabetes is not diagnosed at a specified time, diabetes is associated with serious complications. Diabetes is diagnosed based on the amount of glucose in the serum (1). Diabetes mellitus is a group of metabolic disorders that hyperglycemia is a common symptom. Diabetes mellitus is classified into two types of diabetes, type 1 and type 2 based on pathogens that lead to hyperglycaemia (1). Type 1 diabetes is a major cause of insulin deficiency and a tendency to ketosis. Type 2 diabetes is caused by several causes, including insulin resistance, inadequate insulin secretion, liver extra glucose production. Other types of diabetes, gestational diabetes or GM (Gestantial mellitus) that occurs during pregnancy and in most cases becomes type 2 diabetes (1). One of the risk factors for type 2 diabetes is familial history of diabetes, obesity, lack of mobility, history of gestational diabetes, high blood pressure, low HDL levels, polycystic ovarian syndrome, history of cardiovascular disease [1]. According to the American Diabetes Association, there are two stages of pre-diabetes and diabetes: in the pre-diabetes stage, fasting blood glucose levels are equal to or greater than 100 and less than 126 mg / dL, and then diabetes with a fasting blood sugar over than 126 mg /dL and dosage of glucose tolerance that is measured after giving 75 grams of glucose oral powder is above 200 mg / dl , Indications for the diagnosis of diabetes [2]. The global prevalence of diabetes in adults in 2010 is reported to be 6.4% and it is estimated that the prevalence of diabetes will increase by about 7.7% until 2030. Between 2010 and 2030, the number of people with diabetes in developing countries will increase by 69% and in advanced countries, the number of people affected is increased by 20% [3].

The prevalence of diabetes in Iran in 2013 is estimated at 9.9% and in 2035 it is estimated at about 10.1%. [4] In a study conducted by AzimiNezhad et al in 2008, it was concluded that the prevalence of diabetes in women (5.8%) was higher than males (5.1%) and in urban areas more than rural areas. Considering the above mentioned cases, the increasing prevalence of this disease and its complications, the necessary measures for the awareness of people with university education in Yasuj city are essential for preventing diabetes. On the other hand, awareness of people with university education in Yasuj city regarding to diabetes has been observed in some studies in Iran that educated people have more knowledge about diabetes [5]. For example, in a study by Rashidi et al. in 2011 about the level of knowledge of people with university education in the Ahvaz city, they concluded that the general knowledge about diabetes,36.8% was in good classification, and 44.2% was in the medium classification, and 19% was in poor classification, and women were more aware than men ,and the married couple had more knowledge than the singles [5]. The level of awareness increased with increasing the level of literacy. Knowledge of housewives and employees was higher than other occupational groups. The source of information for radio and television was 23.2%, friends and acquaintances 21.2%, books and journals 19.1%, and doctors were in ranked fourth [5]. Another study by Dr. GholamrezaBabaei et al. In the year 2007 on the level of knowledge of people over the age of 18 years with type 2 diabetes in Bushehr concluded that the level of knowledge of men is higher than that of women and with age, knowledge of individuals Decreases. In this study, the level of knowledge of individuals was directly related to the level of literacy and the level of knowledge

of single and married individuals was not the same as diabetes [6].

In a study by Latyra Stinson et al in 2015 on Type 2 diabetes about awareness among African students at the University of the Americas, it was concluded that women's knowledge of the level of knowledge about diabetes was higher and 70% of the students were aware of this that one of the risk factors for diabetes is familial history, and 78% of students knew that diabetes was a risk factor for diabetes and sugar content, and 70% of the students knew that diabetes was a sign of excessive thirst [8]. In a study by Maryam Al-Hussaini et al. In 2015 about Kuwaiti adolescents' knowledge of diabetes, they found that 71% of the students had a general awareness of diabetes, 63% of them had diabetes risk factors, 55.8% % Of them knew about symptoms, and 62.7% knew about treatment and diabetes control methods. In this study, the level of knowledge of adolescents other than multiple areas was good [9]. Therefore, because diabetes mellitus is one of the most common metabolic diseases, increasing the level of general information about diabetes will have a direct correlation with improving community health and improving patients and reducing the complications of the disease. Existing information and studies indicate that incidence of diabetes in Iran is increasing. In Iran, public awareness about diabetes and its complications are not ideal Diabetes, in addition to increasing the prevalence of the disease in the coming years, is associated with late complications of the disease, such as cardiovascular events, stroke, ocular complications, renal complications, limb amputation and spinal cord injuries. Studies have shown that education has a major role in improving the level of knowledge of diabetics and non-diabetics in how to deal with the disease, change their attitude and behaviour before it. Therefore, in the study, we considered people with university education in Yasuj city , because they are expected to have a high level of knowledge about chronic diseases, such as diabetes, and since a study that studies the status of knowledge about diabetes in Yasuj University has not been done, the study was conducted to investigate the awareness of people with university education in the city of Yasuj regarding the diagnosis of diabetes in Yasuj city, so that is necessary, According to the findings of the study, educational programs to raise awareness of this group prevent the progression or progression of diabetes.

MATERIALS AND METHODS:

Our study is a descriptive cross-sectional study in Yasuj, Iran in 2017. The population of this study was 650 people with university education in Yasuj, who entered in this study. Sampling was done randomly. The number of samples, taking into account the sample size and sample error, $\alpha = 0.05$, and the level of knowledge about type 2 diabetes according to similar studies, $P = 0.4$ and taking into account the maximum error estimated $d = 0.05$, Which eventually becomes n = 650 (z = 2/58).A study was conducted on 650 people with university education in Yasuj who were randomly selected from different regions of Yasuj, which were clustered randomly. The questionnaire included 2 sections: 1 - Information section General who asked for a demographic data set. These questions included 9 questions: age - gender - marital status - degree of education - university and high school - workplace - family history of diabetes - number of children 2-An exclusive section containing 31 questions about diabetes awareness Demographic information was recorded in the information format. The questionnaire was also given to the participants, the questions were answered three, yes, no, I do not know, and the respondents answered the questions based on their knowledge. The answers to the correct score (1) and the wrong answers score (-1) and I do not know give a score (zero), those who score 1-30 have a low awareness, a score of 31-60 average awareness and a score of 60 to 100 They will have a good knowledge. Data were analysed by SPSS 21 using Chi-square test.

FINDINGS:

Note: Considering knowledge as a qualitative variable, we used Chi-Square Independence test and we evaluated the level of awareness ,(0 to 30) was poor awareness ,(31 to 60) Medium awareness , (61 to 100) is a good awareness.

1.The level of awareness of people with diabetes in terms of age university education in Yasuj from type 2

Table 1: Level of awareness based on age groups

		age			
		21-30	31-40	41-50	total
Aware ness	low	37	15	4	56
		13.4%	5.0%	5.3%	8.6%
	Medium	68	47	8	123
		24.6%	15.8%	10.7%	18.9%
	good	171	236	63	471
		62.0%	79.2%	84.0%	72.5%
Total		276	298	75	650
		100.0%	100.0%	100.0%	100.0%

In this study, according to Chi-square test, between the ages of 21- 30, 62% had good knowledge, 24.6% had moderate knowledge, and 13.4% had poor knowledge. At age 31-40, 79.2% had good knowledge, 15.8% had knowledge Moderate and 5% had poor knowledge. Between the ages of 41 and 50, about 84% had good knowledge, 10.7% had moderate aqueous and 5.3% had a low level of knowledge. Between 51-60 years, had good knowledge and the same test showed that there is a significant relationship between these two variables (P value = 0.000, df = 6, = 28.58, chi-square, n = 650), and with increasing age, awareness increased Finds.

2.The level of awareness of people with university education in Yasuj city with type 2 diabetes in terms of gender .It can be seen that 9.6% of the women had poor knowledge, 19.1% had a moderate level of knowledge and 71.3% had a good knowledge, while 7.7% of the men were aware of the weakness, 18.8% had a moderate level of knowledge and 73.5% had good knowledge. According to Chi-square test, there is no significant relationship between gender and level of knowledge of type 2 diabetes (P value = 0. 691, df = 2,chi-square = 0.738, n = 650).

3. The level of awareness of people with university education in Yasuj in type 2 diabetes based on education.

Table 2: Awareness by gender

		sex		Total
		female	male	
Aware ness	low	30	26	56
		9.6%	7.7%	8.6%
	medium	60	63	123
		19.1%	18.8%	18.9%
	good	224	247	471
		71.3%	73.5%	72.5%
Total		314	336	650
		100.0%	100.0%	100.0%

Table 3: Knowledge based on education

		education			Total
		Associate And BS	MA	PHD	
Aware ness	low	53	2	1	56
		12.5%	5.9%	0.5%	8.6%
	medium	111	7	5	123
		26.2%	20.6%	2.6%	18.9%
	good	260	25	186	471
		61.3%	73.5%	96.9%	72.5%
Total		424	34	192	650
		100.0%	100.0%	100.0%	100.0%

It can be seen that those with associate and bachelor's degree 12.5% had poor knowledge, 26.2% had moderate knowledge and 61.3% had good knowledge. the people with MA degree 5.9% had poor knowledge, 20.6% had a moderate level of knowledge and 73.5% had a good knowledge. The people with PHD degree.5% had poor knowledge, 2.6% had a moderate level of knowledge and 96.9% had a

good knowledge. Based on chi-square test (P value = 0.000, df = 4,chi-square = 28.45, n = 650), the level of awareness with the education of individuals is significantly related and people with higher degrees have better knowledge.

4. The level of awareness of people with university education in Yasuj in type 2 diabetes according to marital status.

Table 4: Awareness of Type 2 Diabetes Based on Marital status

			Marital status		Total
			single	married	
Aware ness	low		39	17	56
			13.9%	4.6%	8.6%
	medium		64	59	123
			22.8%	16.0%	18.9%
	good		178	293	471
			63.3%	79.4%	72.5%
Total			281	369	650
			100.0%	100.0%	100.0%

It can be seen that in single subjects 13.9% had poor knowledge, 22.8% had moderate knowledge and 63.3% had good knowledge. In married individuals, 4.6% had poor knowledge, 16% had moderate knowledge and 79.4% had good knowledge. According to chi square test (P value = 0.000, df = 2,chi-square = 25.47, n = 650), there is a significant relationship between marital awareness and knowledge and the awareness of marital people is higher than single people.

5.The degree of awareness of people with university education in Yasuj city with type 2 diabetes according to family history of diabetes

Table 5: Awareness based on family history

			History of diabetes		Total
			Have	Have not	
Aware ness	low		17	39	56
			6.4%	10.1%	8.6%
	medium		55	68	123
			20.8%	17.6%	18.9%
	good		192	279	471
			72.7%	72.3%	72.5%
Total			264	386	650
			100.0%	100.0%	100.0%

It can be seen that individuals with a family history of diabetes had 6.4% poor knowledge, 20.8% had moderate knowledge and 72.7% had good knowledge. In non-familial individuals, 10.1% had low knowledge, 17.6% had moderate knowledge and 72.3% had good knowledge.

According to chi-square test (P value = 0.192, df = 2,chi-square = 3.30, n = 650) there is no significant relationship between family history and knowledge level.

DISCUSSION AND CONCLUSION:

Different factors can affection diabetes and given the fact diabetes is increasing in Iran, increasing awareness of the health of the community can be effective. Therefore, education plays a major role in increasing the level of knowledge of diabetics and non-diabetics. It has been seen that as age grows, consciousness also increases. There is a significant relationship between age and knowledge of diabetes (P value = 0.000). In Rashidi's study, as in our study, awareness increases with age (5). This increases the experience and increases the risk and increases the awareness of the same. In our study, people with higher ages had higher degrees, which in the knowledge, they are effective. Dr. Babaei, in his study, it is understood that with the increase of age, intelligence decreases(7),the reason for this contradiction can be found in the studying of individuals in our study.

It can be seen that there is no significant difference between gender and knowledge level (P value = 0.691) and the mean knowledge of women is slightly higher than males. In a similar study with Rashidi, there is no relationship between gender and awareness (5). Due to the similarity of the conditions in the society for both women and men and the presence of women in the working environment, both of

them in our study are educated and have the same level of awareness in this regard. A study by PK Rani in India's rural population of India in 2008 concluded that of 1938 people,966(49.9%)people knew about Diabetes Mellitus, and women were more awareness and those in the upper economies (12). This study is consistent with our study. In a study by Latyra Stinson, it was shown that awareness of women is higher than that of men (9), which have contradicts with our study, because in our study, all people with university education are more knowledgeable. With increasing levels of education, the level of awareness of diabetes is also rising. There is a significant relationship between education and awareness of diabetes (P value = 0.000). In a study that was done by Rashidi (5) and Babaei (7), similar to our study also increases in degrees can increases the awareness, since literacy raises information in every field. It has been shown that there is a significant difference between marital status and knowledge of type 2 diabetes (P value = 0.000)and married people have higher awareness than single ones. In Rashidi study (5), similar to our study, married people have higher knowledge because our age-old suffering was mostly married. In Surwade study (7), similar to our study , married people have higher awareness, because most of the people in that study were married. There was no significant difference between the family history of diabetes and their knowledge (P value = 0.192), and there was no significant relationship between people with family history and without family history. Changwang's study (10) contradicts with our study, and between the family history of diabetes and awareness there is direct connection. Because our study is for all people with university education and practice, therefore, there is no relationship between history and awareness. Ulvi OS (11) studies contradict with our study ,there is direct communication between familial history of diabetes, which is also due to the fact that in our study ,all people have a university degree, so there is no relationship between history and awareness. Therefore, in general, the level of awareness is directly related to age, marriage,

higher education level. However, family history of diabetes and gender are not related to the knowledge of diabetes. It is suggested that FBS or fasting blood sugar should be measured in humans. To make a comparison between blood sugar and people's knowledge of diabetes for other studies.

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