



Prevalence of Type 1 and Type 2 Diabetes and its Related Factors in Diabetic Patients Hospitalized in Khatam-ol-Anbia Hospital in Shoushtar, 2014-15: A Retrospective Study

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ABSTRACT

Diabetes is the most common endocrine disorder. It is estimated that about 2 percent of the general population in Iran and 7.3 percent of people over 30 have diabetes. This disease is associated with multiple short-term and long-term complications, which in many cases is not reversible. This retrospective study was conducted to determine the prevalence of type 1 and type 2 diabetes and its related factors in diabetic patients hospitalized in Khatam-ol-Anbia Hospital in Shoushtar during 1994-95. In this retrospective cross-sectional descriptive study, 1257 patients with diagnosis and history of diabetes were examined from all 1995 patients referring to Khatam-ol-Anbia Hospital in Shoushtar during 2014 to 2015. And the required information was collected through a researcher-made checklist from the records. The inclusion criteria for all diabetic patients were Type One and Two. Pregnant diabetes, cases without diabetes and incomplete cases (213 n =) were excluded. Data were then entered into SPSS software version 17. Data was analyzed using descriptive statistics, Chi-square, Chi-square, T-test, ANOVA and non-parametric tests such as Mann-Whitney and $P < 0.05$ Were analyzed. The sample consisted of 1257 individuals with type 1 and type 2 diabetes with an average age of 58.6 ± 17.6 . Of these, 43.2% were male and the rest were female. Of these, 18.6% had type 1 diabetes and the other type 2 diabetes. People with a weaker economic status were more likely to have type 2 diabetes ($P < 0.0001$). Also, people with lower literacy were significantly more likely to have type 2 diabetes than those with more educated ones ($P = 0.002$). Due to the relatively high prevalence of diabetes in this study and the fact that people with lower literacy are less likely to suffer from type 2 diabetes, there is a need for a higher education class and education through the media and cyberspace to improve the level of education of these patients. It looks like Also, because prevention is always prioritized, it is therefore recommended that training should be provided to diabetic patients in the field of treatment, prevention, and other necessary training through treatment staff, especially nurses, because of the direct and continuous relationship with Patients should be presented.

Key words: Diabetes, Prevalence, Diabetic patients, Type 1 diabetes, Type 2 diabetes

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INTRODUCTION

Diabetes or diabetes is the most common endocrine disorder [1]. This disease is a chronic, metabolic and genetically heterogeneous disease characterized by increased levels of blood glucose and carbohydrate metabolism disorders, protein

and lipids [2] and due to an increase in the number of people with this disease, A major public health problem has become a major concern in the world, especially in Asia, so the World Health Organization has called it a "silent epidemic [3]. It is also a major cause of death in the industrialized world and in developing countries [4]. Inappropriate combination (low physical activity and unhealthy foods) has led to an increase in the uncontrolled prevalence of diabetes in the world [5]. In 2014, the global prevalence of diabetes

among adults older than 18 years was 9%. [6]. It is also estimated that about 2 percent of the general population of Iran and 7.3 percent of people over 30 have diabetes. This disease is associated with multiple short-term and long-term complications, which in many cases is not reversible [7]. As more than 50% of all non-transmissible amputations occur in diabetic patients [8]. Also, diabetics with a BMI above the normal range are at increased risk of secondary complications of diabetes [9]. Complications of diabetes, while imposing high costs on the individual and society, lead to an increase in mortality in the affected population [3]. Type 1 diabetes with long-term effects on the eyes, the kidneys, and the peripheral and autonomic nervous system. Although the pathophysiological basis of these complications is still unclear, hyperglycemia seems to play an important role [10]. Type 2 diabetes has long been known. Progress in treatment Despite the reduction in glucose, 50% of people need to take insulin within 10 years [11]. Within 7 days after a significant negative calorie balance was achieved through dietary intervention or obesity surgery, glucose levels fasting blood can be normal. This rapid change involves a significant reduction in the fat content of the liver and the return of normal liver insulin sensitivity [12].

Considering that in the study of Mrs. Abbasian *et al.*, [13] who studies the complications of diabetes in diabetic patients, it is evident that with increasing body mass index, heart disease has increased prevalence, which affects such as blood pressure and other complications following This is a disease that needs planning and education to avoid, which indicates that we need accurate information on the local outbreak of the disease. Also, because planning for increasing the health performance of type 1 and type 2 diabetic patients requires awareness of the prevalence of these two types of diabetes, and that limited studies have been conducted on the prevalence of type 1 and type 2 diabetes in diabetic patients in Khuzestan province And in Shushtar city. In order to make available the prevalence statistics of diabetic patients in the city due to lack of detailed statistics in the city, the researchers decided to conduct a retrospective study with the aim of determining the prevalence of type 1 and type 2 diabetes and related factors In diabetic patients admitted to Khatam Al Anbia Hospital 2015-16 years Shushtar friends do.

MATERIALS AND METHODS

In this cross-sectional descriptive study, all patients referring to hospitals in Shoushtar during the years 2015 to 2016 were enrolled. The data needed for the study were extracted from patients hospital records in the years 94 and 95 by checking and refereeing the files. In this study, 1999, the files of patients referring to hospitals in Shoushtar city were studied. The inclusion criteria included all diabetic type 1 and type 2 diagnoses in each age group and sex with any diagnosis of diabetes or history of diabetes in their case, and the exit criteria included other cases that had medical diagnosis other than diabetes, diabetes Pregnancy, cases without a history of diabetes and incomplete cases (n=213) were excluded. In order to study the files and collect data, a written Letter of Introduction from Shoushtar School of Medical Sciences was sent to the hospitals of Shoushtar city to access the archives. After obtaining permission from the head of the hospitals of the city, 1995 cases It was examined that 1257 patients with diagnosis and history of diabetes were extracted from them and the required information was collected through a researcher-made checklist from the records. This information includes demographic information such as age, gender, ethnicity and race, marital status, economic status, education, occupation, income, and information about the disease, such as the cause of hospitalization, the amount of blood glucose at the time of admission, the history of previous illnesses, such as heart disease Gastrointestinal, gastrointestinal, ocular, renal, was studied. Data were then entered into SPSS software version 20. Data were analyzed using descriptive statistics such as abstract tables, mean, standard deviation and variance, Chi-square, Chi-square, T-test, ANOVA, and $P < 0.05$. 05 were analyzed.

RESULTS

The sample included 1257 individuals with type 1 and type 2 diabetes with an average age of 58.6 ± 17.6 . Of these, 43.2% were male and the rest were female. Of these, 18.6% had type 1 diabetes and the other type 2 diabetes. Table 1 shows the demographic information of these individuals.

Housewives were significantly more likely to have type 1 diabetes than other people ($P < 0.0001$). Also, unemployed people were significantly more

likely to have type 2 diabetes than others ($P < 0.0001$) (Figure 1).

There was no significant difference between males and females in diabetes ($P < 0.05$). People with a weaker economic status were more likely to have type 2 diabetes ($P < 0.0001$) (Table 1).

Table 1: Demographic characteristics of diabetic patients and their association with the prevalence of foot ulcer and foot ulcer before two years ago using Fisher's and Chi-square's exact tests

Relationship to type of diabetes	Classification	Percent	N	Variable p value
Sex	Male	43.2	543	0.13
	female	56.8	714	
nationality	Lor Arabs	21.4	694	0.002
	Made	0.5	66	
	Shooshtari-Dezfouli	22.9	288	
	Shooshtari-Dezfouli	83.1	1045	
Marital status	Married	14.2	178	0.001
	Single	2.7	34	
	Wife died			
Income	Up to 500 thousand	36.7	461	0.001
	500 to 1 million	45.5	572	
	Above 1 million	18.7	224	
Diabetic foot ulcer	YES	9.1	115	0.001
	NO	90.9	1142	
Amputation of the last two years	YES	1.4	17	0.002
	NO	98.6	1240	
Digestive problems	YES	36.8	462	0.001
	NO	63.2	795	
Heart troubles	YES	39.7	499	0.001
	NO	60.3	758	
Pulmonary problems	YES	51.4	646	0.002
	NO	48.6	611	
Kidney problems	YES	15.8	199	0.001
	NO	84.2	1058	
Eye problems	YES	20.6	259	0.002
	NO	79.4	998	
CABG	YES	6.8	86	0.001
	NO	93.2	1171	
Cataract	YES	13.2	166	0.001
	NO	86.8	1091	

Also, people with lower literacy were significantly more likely to have type 2 diabetes than those with more educated ones ($P = 0.002$) (Figure 2).

The average blood glucose level in these patients was 98.88 ± 328.98 and the mean hemoglobin was 12.54 ± 1.8 .

The distribution of age, blood glucose and hemoglobin variables was not normal ($P < 0.05$). Nonparametric tests were used.

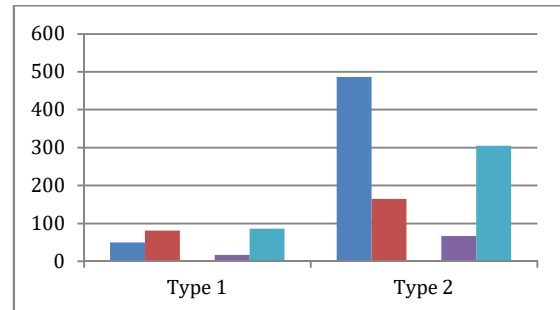


Figure 1: Comparison of Frequencies of Types of Occupation by Type of Diabetes in Diabetic Patients

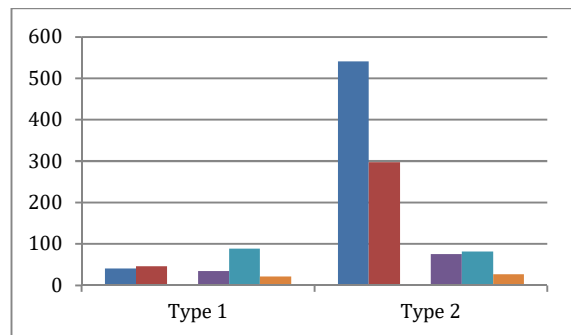


Figure 2: Comparison of the frequency of education according to the type of diabetes in diabetics

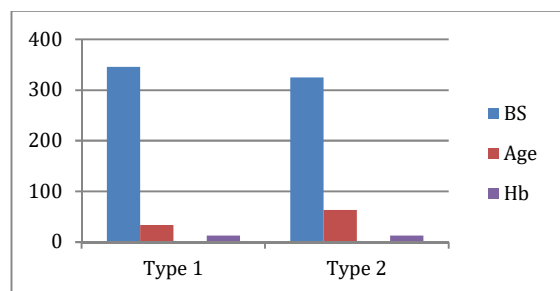


Figure 3: Comparison of mean blood glucose, age and hemoglobin in type 1 and type 2 diabetic patients

The results of Mann-Whitney test showed a significant relationship between type of diabetes and blood glucose, hemoglobin and age ($P < 0.05$). In people with type 1 diabetes, there was a higher level of glucose and hemoglobin, but the age of people with type 2 diabetes was statistically significantly higher than those with type 1 diabetes (Figure 3).

DISCUSSION

The global prevalence of diabetes in 2014 was 9% among adults over 18 years of age [6]. It is also estimated that about 2 percent of the general population of Iran and 7.3 percent of people over 30 have diabetes. This disease is associated with multiple short-term and long-term complications, which in many cases is not reversible [7]. This retrospective study aimed to determine the prevalence of type 1 and type 2 diabetes and its related factors in diabetic patients admitted to Khatam-ol-Anbia Hospital Shushtar city was carried out during 1995-94.

In this study, the prevalence of type 1 diabetes was 18.6% and other patients had type 2 diabetes. In the study of Jan and colleagues, the prevalence of diabetes type 1 was 7% [5] and in the study by Frykberg et al. 12.9% [14]. The average age of the study was consistent with studies by Mukendi et al., [15], Amjad et al., [16], Cardoso et al., [17], which, as compared to previous studies, had a moderate average age of diabetic patients, as expected, The diabetes river is emerging as a chronic disease at an older age.

In the present study, the number of diabetic women is higher than that of men, which is consistent with the results of studies by Urbančič Rován et al [9], Stoekenbroek et al., [18]. However, in Frykberg et al., 90.3% of the male population [14] and Tan and colleagues were equal in number of women and men [19]. The number of diabetic women in most studies is greater than that of men, perhaps due to their gender characteristics, but men are more likely to be diagnosed with diabetes than women.

The mean blood glucose level of the study was 98.48 ± 328.98 , which is twice the mean of glucose level in Kateel et al., [20], which itself indicates a very low blood glucose control in diabetic patients in this study.

In the present study, the familial economic status of the majority of the patients was moderate, which is in line with the results of the study by Amalraj et al. [21]. In many studies, there was a significant difference between diabetes in different races [22], which may be genetic, Lifestyle, economic status and education level.

In a study by Zhu et al., in 2017 in Shanghai, there was a significant correlation between FBS and

cataract in diabetic patients ($P = 0.025$) [23] which can be attributed to the high blood glucose levels. It provides a suitable culture medium for the growth of various microorganisms and increases the risk of infection.

Considering that in the study of Mrs. Esfahrud et al [24], Tehran Bani Hashemi et al., [25], Lee et al., [26], Sun et al., [27], Fang et al., [28], Nakoyi Moghadam et al., and McCleary et al., [30], the level of health literacy in people with diabetes significantly increased with higher education. Also, in the present study, people with lower literacy were significantly more likely to have type 2 diabetes than those who were more literate. Obviously, people with diabetes need to be further trained to improve their level of education and education as well as education. Needed to heal your disease as quickly as possible and reduce the incidence of diabetes.

CONCLUSION

Considering the relatively high prevalence of diabetes in this study and the fact that people with lower literacy are less likely to have type 2 diabetes, the need for a more educational class and training through mass media and cyberspace seems necessary to improve the level of education of these patients. Also, because prevention is always prioritized, it is therefore recommended that training should be provided to diabetic patients in the field of treatment, prevention, and other necessary training through treatment staff, especially nurses, because of the direct and continuous relationship with Patients should be presented, because the results of some studies indicate that nursing education not only increases their level of information and knowledge, but also increases their ability and skills in the care of diabetic patients, resulting in more prevalence Diabetes and the secondary complications and risks will be prevented more effectively.

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