Assessment of Collegians' Perception about Diabetes Mellitus Type II in the University of Baghdad

تقييم ادراك طلبة الكليات حول داء السكري من النوع الثاني

في جامعة بغداد

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ABSTRACT

Objective: The aim of this study was to assess of Collegians' perception about Diabetes Mellitus Type II in the University of Baghdad.

Methodology: A descriptive study, purposive sample of (100) students at risk for diabetes mellitus type 2, sitting of the study college of Arts in University of Baghdad, the study was performed through the period from 16th September to-17th November 2024. a self-report questionnaire is standard for the purpose of the study Collegians' perception about diabetes mellitus type 2 were self-report question. This part is comprised of (17) questions perception of collegians' about diabetes mellitus type 2 consists which answers were as put (✓) front of the appropriate option. Scoring (1) for disagree answer, (2) Neutral answer and (3) for agree answer, Content validity of the questionnaire is tested by presenting it to panel of (15) experts. Cronbach's alpha is used to estimate the reliability of the instrument items. the perception (0.787), (17 items).

Results: The result of this research showed that the total level of Perception about diabetes mellitus type II (mean: **25.68**) This indicates that the mean is within the low level (mean of score: (L)Low (17-28.33), (M) Moderate (28.34-39.66), (H) High (39.67-51).

Conclusions: This study concluded that Collegians' have a low level of Perception about type 2 diabetes.

Recommendations: The study recommended Conduct educational programs to increase collegians Perception about type 2 diabetes.

Keywords: Assessment, Perception, Diabetes mellitus type II.

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المستخلص

الهدف: هدفت هذه الدراسة إلى تقييم ادراك طلبة الكليات حول داء السكري النوع الثاني في جامعة بغداد.

المنهجية: دراسة وصفية عينة غرضية من (١٠٠) طالب وطالبة معرضين لخطر الاصابة بداء السكري النوع الثاني ,مكان الدراسة كلية الآداب في جامعة بغداد، تم إجراء الدراسة خلال الفترة من ١٦ ايلول إلى ١٧ تشرين الثاني ٢٠٢٤.استبانة التقرير الذاتي هي المعيارية لغرض الدراسة كانت حول ادراك طلبة الكلية بمرض السكري من النوع الثاني عبارة عن سؤال تقرير ذاتي قياسي. يتكون هذا الجزء من (١٧) سؤالاً تتكون حول ادراك طلبة الكلية بمرض السكري من النوع الثاني كانت الإجابات عليه كما يلي: يضع علامة(✔) أمام الخيار المناسب. غير موافق (١),محايد (٢) وموافق (٣) وجرى تحليل بيانات الدراسة من خلال تطبيق برنامج SPSS. تم اختبار صدق محتوى الاستبانة من خلال عرضها على لجنة من الخبراء مكونة من (١٥) خبيراً، وتم استخدام معامل ألفا كرونباخ لتقدير صدق فقرات الأداة، حيث بلغت درجة الإدراك (٠.٧٨٧)، (١٧ فقرة).

النتائج: أظهرت نتائج هذا البحث أن المستوى الكلي للإدراك حول مرض السكري من النوع الثاني (المتوسط الحسابي=٢٥.٦٨) وهذا يشير إلى أن المتوسط الحسابي لادراك الطلبة يقع ضمن المستوى المنخفض .

الاستنتاجات: استنتجت الدراسة أن مستوى ادراك جميع الطلبة المشاركين في البحث حول داء السكري من النوع الثاني كان منخفض.

التوصيات: وأوصت الدراسة بإجراء برامج تعليمية لزيادة ادراك طلبة الكليات حول داء السكري من النوع الثاني.

الكلمات المفتاحية: التقييم, الادراك , داء السكري النوع الثاني.

Introduction

One of the metabolic diseases is diabetes, which is caused by a defect in the way insulin works, or by a deficiency in the amount of insulin, or both. It is a global health problem that requires taking the necessary measures to prevent it or improve the lives of patients suffering from it (Hussein & Hattab, 2023). Diabetes is one of the diseases that constitute an increase in the number of people infected with it or at risk of developing diabetes, which increases the concern of organizations concerned with the health system, especially the

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World Health Organization and other organizations, as the number of people infected with diabetes is expected to reach more than five hundred and fifty million people around the world in the year 2030 (Alotaibi, et al.,2017). In low- and middle-income countries, diabetes is more prevalent than in high-income countries. Blindness, nervous system problems, and heart, brain, and blood vessel diseases are the main causes of diabetes .(Manne-Goehler, et al.,2019) There is a matter of concern for health organizations, especially the World Health Organization, about the increase in infections among Iraqi adults, estimated at more than 8% to nearly 20% of people are at risk of developing diabetes. These estimates are based on recent studies conducted in this regard (Abusaib, et al.,2020). Damage to blood vessels and nerves, loss of sensation to heat and cold, weakness in nerve receptors for pain, and changes in blood circulation, especially in the extremities, these problems occur in patients with diabetes, and their recovery is also slow (Gabish & Mohammed, 2018) Diabetes has many types, but the most common types are type 1, type 2, and gestational diabetes, and each type has different causes than the other (Khudhair & Ahmed, 2022). Type 2 is considered the most common type compared to the other types, according to studies proving that the remaining types constitute 10% of those infected, and the remaining percentage are those with type 2 diabetes (DeFronzo, et al.,2015). As we explained previously, type 2 begins with the cells resisting insulin until the efficiency of the pancreas decreases and the amount of insulin it secretes into the bloodstream decreases (AL-Saady & Qasim, 2024). In the event that there is no production of insulin in the pancreas, this will be the first type and the hormone necessary to convert nutrients into a source of energy and benefit from them is insulin, and any problem in this hormone will cause a disruption in the individual's daily functions and other health problems in the rest of the other parts of the body (Faraj, 2016). Frequent eating, intense desire to eat, excessive thirst, and the urgent need to urinate are among the main and important symptoms in diabetes patients (Kumar, 2020). The incidence of diabetes increases with the increase in body mass index. The study showed that men have a rate of developing

diabetes of approximately 70% if their body mass index is more than 35 kg/m2, and women have a rate of developing diabetes of more than 70% if their body mass index is more than 35 kg/m2(Ruze, 2023). Properly followed healthy behaviors are important to reduce the complications of diabetes and achieve good results. These behaviors are related to eating, exercising, visiting a specialist doctor, following up on medication schedules, conducting periodic examinations and adhering to them, healthy adaptation, and avoiding sources of danger and events that may cause injuries (Abbood & Naji, 2023). Good control and management of blood sugar levels is one of the most important reasons that lead a person with diabetes to live a life free from the complications of this disease as much as possible, because the loss of control and management of the sugar level increases the risk of complications of diabetes and affects the individual's ability to perform daily life activities correctly (Salim, et al., 2024). People with chronic diseases make up half of the people who visit primary health care centers, which increases the financial burden on the state budget by an estimated 70% of the funds allocated to health matters (Al-Zubaidi & Qasim, 2024). To prevent diabetes, people must be more perception of the seriousness of this disease and the seriousness of its complications (Shiferaw, et al., 2020). When people realize the seriousness of contracting it, many of the behaviors followed to limit its spread will improve (Rawi, et al., 2023).

METHOD

A descriptive study, sample of (100) students Sitting of study The colleges included in this study are the humanities faculties. There are eight humanities faculties (College of Law, College of Arts, College of Political Sciences, College of Education for Women, College of Languages, College of Education Ibn Rushd for Humanities Sciences, College of Mass Communication, College Of Islamic Sciences). The study is carried out at the College of Arts in University of Baghdad. Probability (sample random sampling) were used to choose this college was chosen for the study, the study

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Instrument: A self-report questionnaire for the purpose of the study. The questionnaire is comprised of two parts as follows:

Part I: Collegians Demographic Characteristics

This part is comprised of (11) items which include age, sex, educational level, marital status, family history, do you suffer from chronic diseases, are you a smoker, weight, length, waist circumference measurement, do you have information about type 2 diabetes? And sources of your information about diabetes mellitus type II.

Part II: Collegians' Perception about diabetes mellitus type 2 were self-report question standard.

This part is comprised of (17) questions. Consists (4) domains:

Domain I: Perceived susceptibility (3) items.

Domain II: Perceived severity (4) items.

Domain III: Perceived benefits (5) items.

Domain IIII: Perceived barriers (5) items.

which answers were as put (✓) front of the appropriate option. Scoring (1) for Disagree answer, scoring (2) for Uncertain answer and Scoring (3) for agree answer. The study was performed through the period from 19th September to- 17th November 2024.The data are collected from the Collegians' through the study instrument. Each Collegians' spends approximately (10-15) minute to have the questionnaire completed. The IBM SPSS 26.0 program was used for all the analyses that follow. Frequency and percentages were used to categorize the variables, while the mean and standard deviation were used to characterize the continuous variables.

Results

Table (1): Distribution of the study sample according to their Socio-demographic Characteristics (No.=100)

Characteristics		f	%
Age	18-22	71	71.0
	23-27	29	29.0
	Total	100	100.0
Sex	male	55	55.0
	female	45	45.0

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	Total		100	100.0
College stage	second stage		53	53.0
	third stage		29	29.0
	fourth stage		18	18.0
	Total		100	100.0
Marital status	single		89	89.0
	Married		11	11.0
	Total		100	100.0
Family history of diabetes	no		82	82.0
	yes		18	18.0
	Total		100	100.0
smoking	no		63	63.0
	yes		37	37.0
	Total		100	100.0
Body mass index	<18.5		15	15.0
	18.5-24.9		18	18.0
	25-29.9		67	67.0
	Total		100	100.0
Waist circumference measurement	male	< 40	23	23.0
		≥ 40	32	32.0
	female	< 35	18	18.0
		≥ 35	27	27.0
	Total		100	100.0
information about type 2 diabetes	Yes		100	100.0
	Total		100	100.0
source(s) of information about type 2 diabetes	Medical websites		20	20.0
	social media		80	80.0
	Total		100	100.0

F= frequency, %=percentage

Table (1) shows the sample study collegian's whose age range between (18-22) years have (71%), the collegian's whose male (55%) and female (45%), the college stages of collegians second stage (53%), the marital status of collegians single (93%), Family

history of diabetes of collegian's (no) (82%), smoker collegians (no) (63%), Body mass index of collegian's 25-29.9 (67%), Waist circumference measurement female of collegian's have a knowledge level $\geq$ 40 (32%), All collegian's have information about type 2 diabetes mellitus (100%), sources of collegian's information about type 2 diabetes social media (80%).

Table (2): A Distribution of the Subjects' Responses in The sample study to Perception Items About Diabetes Mellitus Type II and total level of perception.

Responses →	Agree	Neutral	Disagree
17 Items	**f %**	f %	**f %**
Perceived susceptibility			
1 **My chances of getting diabetes in next few years is great**	**0(0)**	**0(0)**	**100(100)**
2 **I feel I will get diabetes sometime during my life**	**2(2)**	**2(2)**	**96(96)**
3 **I believe all population are equally likely to develop diabetes**	**0(0)**	**0(0)**	**100(100)**
Perceived severity			
4 **If I had diabetes , I would be worried and depressed**	**12(12)**	**6(6)**	**82(82)**
5 **If I had diabetes , I would have to have my diabetes taken off by anti-diabetes medication**	**88(88)**	**12(12)**	**0(0)**
6 **Diabetics can be a serious disease if you don't prevent it.**	**12(12)**	**24(24)**	**64(64)**
7 **If I had diabetes, it would cause me to die**	**8(8)**	**20(20)**	**72(72)**
Perceived benefits			
8 **I believe diabetes can be cured easily**	**88(88)**	**6(6)**	**6(6)**
9 **I believe maintain a normal body weight help to control diabetes**	**12(12)**	**30(30)**	**58(58)**
10 **Regular health care visit will help finding diabetes early and can help save my life**	**12(12)**	**32(32)**	**56(56)**
11 **I believe that eat low sugar snacks & low-fat meals prevent diabetes in the future**	**44(44)**	**26(26)**	**30(30)**
12 **I believe that regularly physical exercise will help to prevent diabetes**	**48(48)**	**0(0)**	**52(52)**
Perceived barriers			
13 **I don't want to know if I have diabetes or not.**	**80(80)**	**6(6)**	**14(14)**
14 **I think having a regular health check-up takes too much time.**	**92(92)**	**6(6)**	**2(2)**
15 **Not having enough money would keep me from having a check-up.**	**70(70)**	**12(12)**	**18(18)**

16	I never heard or read anything encouraging having regular health check-up.	4(4)	16(16)	80(80)
17	I could not have enough of time to exercise	86(86)	10(10)	4(4)
Total level of perception		mean	St.d.	L.P
		25.68	2.62	L

(L) Low (17-28.33), (M) Moderate (28.34-39.66), (H) High (39.67-51) and (L.p) level of perception

the table above shows that the total level of Perception about diabetes mellitus type II (mean: **25.68**) This indicates that the mean is within the low level (*(L) Low (17-28.33), (M) Moderate (28.34-39.66), (H) High (39.67-51))*

Discussion

The sample of this study is college students. for age at (18-22) years old was 71.0%, this finding are supported by a study in Saudi Arabia found that The incidence of Type 2 diabetes mellitus has tremendously increased globally in the last 20–30 years (Saraswathi, et al.,2019). Several studies in the United States have shown that the risk of developing type 2 diabetes is more than 40% in the population aged 20 years and older, which represents a large proportion of the population as a target group and potential for developing type 2 diabetes and is considered a target group in primary prevention (Zheng, et al.,2018). percentages for No Family history of diabetes (82.0%), percent for NO smoker was (63.0%),Multiple studies have confirmed that tobacco smoking is a major modifiable risk factor for coronary heart disease, stroke, lung and upper airways cancer, chronic obstructive pulmonary disease, peripheral vascular disease, infertility, bone and joints problems, type 2 diabetes mellitus, and hypertension (Al-Fayyadh,et al., 2022) body mass index at (25-29.9) was (67.0 %) this finding are supported by study in south Korea Being obese before age 50 increased the risk of developing T2DM in the future, but becoming obese after age 50 did not. Therefore, it is important to maintain normal weight from early adulthood to prevent future metabolic

perturbations (Moon, et al.,2023). Waist circumference measurement (male more than or equal 40) was (27.0%), (female more than or equal 35) was (28.0%), this finding are supported by study in India majority of our type 2 diabetic patients having waist circumference, Family History of Diabetes in Father or Mother did not show any significant correlation with these anthropometric parameters in Male or Female Type 2 diabetic patients (Gokhale, et al.,2017). This study confirmed the results of the National Assessment of University Health, which included 38,679 university students, nearly half of whom are obese (Khan, et al.,2022). source(s) of information about type 2 diabetes (social media) was (80.0%).

Table (2): shows that the distribution of the subjects' responses in the study sample to Perception Items About Diabetes Mellitus Type II and total level of Perception this table shows that the total level of Perception about diabetes mellitus type II (mean: **25.68**) This indicates that the mean is within the low level (*(L) Low*, My results support the results of a study conducted in Malaysia of college students whose Perception of the risk of developing type 2 diabetes was low(Rawi, et al.,2023). This supports the results of my study, where a study was conducted in Nigeria on university students to assess the knowledge and risks of developing type 2 diabetes. The results were that there was a small percentage who achieved a fairly good level of knowledge, but they needed educational programs to increase their knowledge and Perception of the risks of developing type 2 diabetes (Orok, et al.,2024). This study also agrees with and supports the results of my study, where more than 80% of the students participating in the study had a weak level of Perception about the risks of type 2 diabetes, which negatively affects their daily life behaviors and makes them vulnerable to developing type 2 diabetes (Agofure, et al.,2022). These results support my findings A study was conducted on college students in New York State, USA, on students' awareness of the risks of developing diabetes and risk factors. There was a gap between students' level of awareness of diabetes risks and risk factors for developing diabetes. This gap was due to misconceptions

about diabetes (Antwi, et al.,2020). A study conducted in the United States of America. The results of this study supported my results The participants in the study were adolescents studying at the University of Mississippi Their ages ranged between 18 and 25 years They had a Low Level Perception of the risk of developing type 2 diabetes (Simmons, 2018). The results of this study are not consistent with the results of my study, as this study included Egyptian and Malaysian students to know their level of perception about type 2 diabetes, and they had a good perception about the risks of type 2 diabetes (El-Sherbiny, 2015). This study does not support my findings as this study focuses on individuals' perception of the seriousness of diabetes and the influence of cultural factors and beliefs of South Asians on their perception of the risks of the disease. Their level of perception of the seriousness of the disease was good (Vaja, et al., 2021). The results of a study conducted in Uganda on university students do not support the results of my study, as most university students had a good level of knowledge and perceptions about the symptoms, signs, risk factors and methods of prevention of type 2 diabetes (Kharono, et al., 2017).

Conclusions

We conclude from this study that humanities students have a low level of Perception about type 2 diabetes mellitus.

Recommendation

The study recommended conduct educational programs to increase collegians Perception about type 2 diabetes.

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