

Assessment of Knowledge, Attitude and Practice in a sample of Iraqi type 2 diabetic patients

Saied-Quraish Kareem Abbas *, Haydar F. Al-Tukmagi**, Tawfeeq F. AL-Auqbi ***

* Al-Diwaniyeh Health office, Maternity hospital and children

** Assistant Professor, Department of Clinical pharmacy, College of Pharmacy, Baghdad University

*** Consultant Physician Assistant Professor, Head of Department of Nutrition, National Diabetes Center (NDC) | Al-Mustansiriyah University

الخلاصة:

المعرفة؛ موقف وممارسة الخلفيات الصحية تؤثر كثيرا على نتيجة المطلوبة من معالجة مرض السكري. عدم الامتثال للأدوية الموصوفة يفرض الرعاية الصحية كبيرة وأعباء مالية على النظام الصحي. الأهداف:

تقييم المستوى المعرفي والمواقف وممارسة الخلفيات الصحية حول مرض السكري من النوع 2 للمرضى العراقيين تجاه مرضهم باستخدام الاستبيان الذي من خلاله يتم معرفة المستوى المعرفي والمواقف والممارسات (KAP) . المرضى وطرق العمل:

دراسة مقطعية باستخدام 300 مريض مصاب بداء السكري من النوع الثاني. تمت هذه الدراسة في المركز الوطني لمرض السكري / جامعة المستنصرية في بغداد من يناير 2015 حتى أبريل 2015. المستوى المعرفي، الموقف والممارسات للخلفيات الصحية للمرضى المصابين بداء السكري النوع الثاني تم تقييمه من خلال الاستبيان الذي يتم من خلاله اختبار المستوى المعرفي، الموقف والممارسات الصحية. النتائج:

نتيجة متوسط المعرفة 6.48 + 2.66، نتيجة موقف 5.28 + 2.07 ونتيجة الممارسة 4.62 + 1.49. أظهر الذكور أعلى بكثير من الإناث ($P < 0.001$). وكان المرضى الذين لديهم مستوى عالي من التعليم لديهم أعلى الدرجات المعرفة بالمقارنة مع المرضى الحاصلين على التعليم الثانوي فقط ؛ كان الفارق دلالة إحصائية عالية ($P < 0.001$). وأظهر المرضى الذين يعيشون في المناطق الحضرية أعلى بكثير متوسط الدرجات من أولئك الذين يعيشون في المناطق الريفية ($P < 0.001$). المرضى الذين لديهم وظائف ذوي الخبرة على درجة المعرفة أعلى بكثير من تلك التي من دون وظيفة ($P < 0.001$). وكان المرضى المدخنين أعلى بكثير من المرضى غير المدخن ($P < 0.001$). الاستنتاج:

استنتجت هذه الدراسة الى ان المستوى المعرفي والتطبيقي حول مرض السكري من النوع الثاني كان من منخفض الى متوسط ، والتي تحتاج إلى مزيد من الجهد والدور الذي يجب أن يلعبه الصيدلي السريري على ردم هذه الفجوة.

Abstract

Background: knowledge; attitude and practice backgrounds affect much the outcome of diabetes. Non-compliance imposes a considerable health care and financial burden on the health system.

Objectives: To assess the knowledge, attitude and practice background of type 2 diabetes Iraqi patients toward their disease by using the Knowledge, Attitude and Practice (KAP) questionnaire.

Patients and methods: A cross sectional questionnaire based study enrolled 300 type 2 diabetes patients. It was held in National diabetic center/Al-Mustansiriyah University in Baghdad from January 2015 through April 2015. Patients knowledge, attitude and practice background were assessed using KAP (knowledge Attitude and Practice) questionnaires.

Results: Mean knowledge score was 6.48 ± 2.66 , attitude score was 5.28 ± 2.07 and practice score was 4.62 ± 1.49 . males showed significantly higher KAP scores than females ($P < 0.001$). Patients with higher significant education had the highest knowlegde score in comparison with those with secondary eduction; the difference was statistically highly significant ($P < 0.001$). Patients living in urban areas showed significantly higher mean score than those living in rural areas ($P < 0.001$). Patients who had jobs experienced a significantly higher knowledge score than those without job ($P < 0.001$). Smoker patients had significantly higher KAP scores than non-smoker patients ($P < 0.001$).

Conclusion: The study concluded that low/ moderate knowledge, attitude and practice of diabetes among the diabetic patients, which need more effort and role to be played by clinical pharmacist to fulfill this gap.

Key words: KAP, Type 2 diabetes mellitus.

Introduction

Diabetes mellitus is a combination of heterogeneous disorders commonly presenting with episodes of hyperglycemia and glucose intolerance, as a result of lack of insulin, defective insulin action, or both⁽¹⁾. Such defective insulin action may arise due to derangements in the regulatory systems for storage and mobilization of metabolic fuels, including the catabolism and anabolism of carbohydrates, lipids and proteins emanating from defective insulin secretion, insulin action, or both⁽²⁾.

Classification of diabetes mellitus is based on its etiology and clinical presentation; therefore, there are four types or classes of diabetes mellitus; type 1 diabetes, type 2 diabetes, gestational diabetes, and other specific types^(3,4).

Diet, life style modification and insulin replacement by exogenous insulin or oral hypoglycemic agents (OHA) are considered the cornerstone for the type 2 diabetes management⁽⁵⁾.

Low compliance to prescribed medications is an important and complex problem, especially for patients with a chronic illness. Poor compliance may have a major impact on clinical outcome. Medical non-compliance imposes a considerable financial burden upon modern health care systems⁽⁶⁾.

The lack of adequate solid data and studies about the knowledge, attitude and practice background of type 2 diabetes Iraqi patients were the reason to conduct the present study; therefore the aim of the present study was:

To assess the knowledge, attitude and practice background of type 2 diabetes Iraqi patients toward their disease by using the Knowledge, Attitude and Practice (KAP) questionnaire.

Patients and Methods:

A cross sectional questionnaire based study enrolled 300 type 2 diabetes patients were conducted in the National Diabetes Center (NDC) I Al-Mustansiriyah University, for the period January -April 2015. Patients' knowledge, attitude and practice background toward diabetes were assessed using KAP (knowledge Attitude and Practice) questionnaires.

Results:

Mean knowledge score was 6.48 ± 2.66 , attitude score was 5.28 ± 2.07 and practice score was 4.62 ± 1.49 , as shown in table 1. males showed significantly higher KAP scores than females ($P < 0.001$). Patients with higher significant education had the highest knowledge score in comparison with those with secondary education; the difference was statistically highly significant ($P < 0.001$). Patients living in urban areas showed significantly higher mean score than those living in rural areas ($P < 0.001$). Patients who had jobs experienced a significantly higher knowledge score than those without job ($P < 0.001$). Smoker patients had significantly higher KAP scores than non-smoker patients ($P < 0.001$), as shown in table 2.

Table 1: KAP Score of study sample

Parameter	mean (average)	SD	95% CI
Knowledge Score	6.48	2.66	6.47 - 6.49
Attitude Score	5.28	2.07	5.27 - 5.29
Practice Score	4.62	1.49	4.61 - 4.62
Total KAP	16.39	5.09	16.37-16.4

There was significant association between age of patients and KAP score as well as significant association between duration of disease and KAP score, as shown in tables 3 and 4.

Table 2: The KAP score according to characteristics of study population

Characteristics		Knowledge			Attitude			Practice			P value * (ANOVA, (F))
		Mean (m)	SD	95% CI	Mean (m)	SD	95% CI	Mean (m)	SD	95% CI	
Sex	Male (n=138)	6.73	2.57	6.071 - 6.74	5.41	1.98	5.44 - 5.46	4.72	1.44	4.71 - 4.73	0.0001 (F= 24.79)
	Female (n=162)	6.27	2.71	6.25 - 6.28	5.14	2.13	5.13 - 5.15	4.53	1.52	4.52 - 4.53	
Education	Illiterate (n=131)	4.64	2.12	4.66 - 4.68	4	1.76	3.99 - 4.01	4.12	1.37	4.11 - 4.13	0.0001 (F= 92.74)
	Secondary (n=77)	6.63	2.16	6.62 - 6.65	5.45	1.53	5.44 - 5.46	4.5	1.53	4.49 - 4.51	
	College (n=92)	8.93	1.42	8.92 - 8.94	6.96	1.55	6.95 - 6.97	5.42	1.27	5.41 - 5.43	
Residency	Rural (n=88)	4.82	2.06	4.81 - 4.84	4.03	1.52	4.02 - 4.04	4.27	1.31	4.26 - 4.28	0.0001 (F= 55.25)
	Urban (n=212)	7.17	2.57	7.15 - 7.18	5.8	2.04	5.79 - 5.81	4.76	1.53	4.76 - 4.77	
Occupation (Job)	Jobless (n=166)	5.42	12.64	5.36 - 5.48	4.43	12.59	4.37 - 4.50	4.37	12.54	4.31 - 4.44	0.0001 (F= 65.81)
	Job (n=134)	7.79	11.01	7.73 - 7.85	6.33	11.1	6.27 - 6.36	4.92	11.17	4.86 - 4.98	
Smoking	Non-smoker (n=200)	6.44	2.66	6.43 - 6.45	5.19	2.11	5.18 - 5.20	4.63	1.49	4.62 - 4.63	0.0001 (F= 23.78)
	Smokers (n=100)	6.55	2.66	6.53 - 6.57	5.47	1.97	5.46 - 5.48	4.6	1.49	4.59 - 4.61	

Table 3: KAP score according to Age distribution groups

Age groups	< 40 years (n= 24)	41 - 50 years (n= 96)	51 - 60 years (n=131)	> 60 years (n= 49)
Knowledge score m±SD (95% CI)	8.0±2.1 (7.97 - 8.02)	7.57±2.23 (7.55-7.58)	4.04±2.67 (6.03-6.06)	4.77±2.37 (4.75-4.79)
Attitude score m±SD (95% CI)	6.37±1.7(6.35 - 6.39)	6.2±1.99 (6.19-6.22)	4.81±1.89 (4.80-4.82)	4.2±1.91 (4.18-4.22)
Practice score m±SD (95% CI)	5.0±1.35(4.98 - 5.01)	4.82±1.4 (4.81-4.83)	4.41±1.57 (4.41-4.42)	4.59±1.25 (4.58-4.6)

The factorial two way ANOVA , F=24.88, P<0.0001

Table 4: KAP score according to Duration of Diabetes Mellitus

Duration of DM	< 5 years (n=84)	5 - 10 years (n=151)	11 - 15 years (n=48)	> 15 years (n=17)
Knowledge score m±SD (95% CI)	7.33±2.61(7.31-7.35)	6.54±2.46(6.53-6.55)	4.95±2.46(4.91-4.95)	6.11±2.99(6.07-6.16)
Attitude score m±SD (95% CI)	6.11±1.92(6.10-6.13)	5.18±2.03(5.17-5.19)	4.45±1.93(4.44-4.47)	4.41±2.18(4.37-4.44)
Practice score m±SD (95% CI)	4.77±1.54(4.76-4.78)	4.54±1.51(4.54-4.55)	4.52±1.28(4.50-4.53)	4.82±1.62(4.79-4.84)

The factorial two way ANOVA , F=17.56, P<0.0001

Discussion:

The KAP questionnaire analysis shows mean of knowledge, attitude and practice scores of study participants as 6.48, 5.28 and 4.62 respectively; which are poor scores according to Hratayu et. al. 2012⁽⁷⁾. This poor score may be attributed to high proportion of illiterate patients and the lack of sufficient education programs about diabetes, complications and treatment.

The study participants shows higher KAP questionnaire scores of males than of the female, like what found by Balla *et.al.*, 2014⁽⁸⁾; this may be attributable to the fact that Males may had better opportunity to know about diabetes.

The present study showed that educated patients had significantly higher knowledge, attitude and practice scores than illiterate patients. This may be attributed to the fact that well educated people had stronger motivation toward exploring facts about their disease and its future complication. Also educated people had the opportunity to get learn about their disease and its treatment from social media. Also, Balla *et.al.* (2014)⁽⁸⁾, Saleh *et.al.* (2012)⁽⁹⁾ and Al-Maskari *et.al.* (2013)⁽¹⁰⁾, in agreement with the result of the present study, reported a highly significant in knowledge score in relation to level of education.

Our study shows higher KAP questionnaire scores of urban, employed and smoking participants when compared with rural, jobless and non smoker participants, (P <0.001). Younger patients and those with less duration of disease had significantly higher KAP Questionnaire scores than others; This was in agreement with Balla *et.al.* (2014)⁽⁸⁾ and Al-Maskari *et.al.* (2013)⁽¹⁰⁾.

Conclusions:

The study concluded that low/moderate knowledge, attitude and

practice of diabetes among the diabetic patients, which need more effort and role to be played by clinical pharmacist to fulfill this gap.

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