Title of the Research Project: A Study of Knowledge Attitude and Practices of Saudi women towards Diabetes Mellitus. A (KAP) Study in Al Qassim Region

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Abstract:

This cross sectional study describes the Knowledge, Attitude and Practice (KAP) among Saudi ladies attending the Mother and Child Hospital and Qassim University Clinic Buraydah from December 2008 to May 2009. KAP questionnaire was used for this purpose after getting permission from P and T journal Multi Media USA. The study was conducted with the aim to know the level of awareness regarding disease to aid in future development of programmes and techniques for effective health education. Results revealed that 56.14 % of respondents were able to score 100% in Knowledge questions. However 17.58% scored 100% in attitude part and 15.78%scored 100% in Practice questions. Over all KAP score had mean of 16 and SD 6.066. Respondents answering correctly the knowledge questions have Mean Score of 12.42 and SD 3.034. The respondents answering correctly attitude and Practice questions had a mean Score of 1.46±1.739 and 2.79±2.289 respectively. Only 20% were doing exercise. And only 48 % were taking a diet plan. 77% patients had a habit of missing their drugs. Results revealed good knowledge score but poor attitude and practice. This preliminary study may provide insight for the eventual lifestyle intervention study.

Key Words: KAP, Diabetes, Exercise

Introduction

Diabetes is a chronic metabolic disease forming a syndrome of other body complications like high blood pressure, retinopathy, renal disorder and diabetic foot leading to gangrene. More than 230 million people worldwide are living with the disease and this number is expected to rise to a staggering 350million within 20 years [(1)].

It is now a global epidemic with devastating humanitarian, social and economical consequences. It's a major public health problem that is approaching epidemic proportion globally. In International Journal of Human sciences Dr Tabish in his editorial labeled it as an epidemic of 21st century [(2)]

In KSA almost 1 Saudi in 4 above the age of 30 has Diabetes costing the Government 800 dollars /month according to WHO records [(3)]. The serious spread of disease can cripple the nations fiscal and human resources therefore it's the time to act now and do as much as possible to cover almost all aspects of the disease.

During the 12th Annual Pan Arab Conference hosted in Cairo Assistant Director of health Affairs for Primary Health care Makkah region said that prevalence of Diabetes mellitus in KSA has reached epidemic level soaring for 17-25% in Kingdom in the last 10 years [(1)].

The overwhelming burden of the disease threatens to stunt economic growth and undermine the benefits of improved standards of living and education. Proper education and awareness programmes developed according to the need of the society can improve the knowledge of patients and change their attitude

A study from Pakistan highlighted the fact that proper education and awareness programme can improve the knowledge of patients and change their attitude as a large gap was found between knowledge and attitude [(4)]. A study from Malaysia shows good knowledge attitude and practice of diabetic patients in this region [(5)]. However study from Nepal reports a poor knowledge and hence poor attitude of patients towards disease. These differences may be due to differences of literacy rate and information about diabetes [(6)].

Obtaining information about the level of awareness is the first step in formulating a preventive programme for the disease. There is need to investigate KAP among diabetic patients to aid in future development of programmes and

techniques for effective health education. KAP surveys are effective in providing baseline for evaluating intervention programmes [7]

Patients if given proper education and guidance towards diabetes care would be able to make a significant improvement in life style which is helpful for good glycemic control.

Education to diabetic patients would be more effective if we know the level of knowledge attitude and practice of our patients. This study was conducted to assess the general characteristics of diabetic patients and their baseline knowledge, Attitude and Practice towards Diabetes.

Objectives

1- To study the demographic details of diabetic patients
2- To assess the knowledge of diabetes among diabetic patients.
3- To evaluate their attitude towards disease.
4- To see the practices of diabetic patients regarding their disease management.

Materials and methods

Sample size

570 women from Alqassim region .

Setting: Qassim University clinic

Mother and Child Hospital Burayda

Type of the study: Cross sectional, Descriptive

Methodology : KAP questionnere developed by P and T Journal Multimedia USA was be used for this purpose. After getting their permission modified form of this questionneer with Arabic version covering 4 aspects of disease demographic factors, knowledge, attitude and practices of women towards diabetes was used. The interviewer did not in any way try to improve the knowledge of respondents. Arabic version of questionnaire was provided for uniformity.

Statistical analysis :SPSS-version 16 and Microsoft Excel spread sheet Microsoft office 2007, Window vista was used

Time and duration: 6months December 2008-May 2009.

Sampling technique: Convenient sampling

Inclusion criteria: .All Diabetic women residing in Qassim Region with Saudi Nationality

Exclusion criteria: Women residing in other regions of the Kingdom , Non diabetics and non Saudis

Ethical consideration:

Informed verbal consent was taken from the patients

RESULTS

Table-1 Demographic details of the patients

S/N	Variables	No of Patients	%age
1	**Types of Diabetes**	570	
	GDM	290	50.8
	Type-1	50	8.77
	Type 2	230	40.35
2	**Marital status**	570	
	Married	560	98.24
	Unmarried	10	1.754
3	**Educational status**	570	
	Illiterate	140	24.56
	Primary	20	3.50
	Secondary school	250	43.85
	Graduate	140	24.56
	Post Graduate	10	1.75
4	**Parity**	560	
	Below5	220	39.28
	50r above	340	60.71
5	**Age**		
	<20 yrs	0	
	20-30 yrs	180	31.57
	31-40 yrs	240	42.10
	40 or above	150	26.31

Table2- Response to Knowledge Questions

S/N	Questions	No of persons correctly answering	%age
1	Diabetes is a condition in which the body contains…	570	100
2	The major cause of diabetes is…	320	56.14
3	The symptom(s) of diabetes is/are…..	470	82.45
4	Diabetes, if not treated…….	520	91.22
5	The most accurate method of monitoring diabetes is...	500	87.77
6	In a diabetic patient, high blood pressure can increase or worsen….	510	89.47
7	A diabetic patient should measure his or her blood pressure…	490	85.96
8	The lifestyle modification(s) required for diabetic patients is/are…	450	78.94
9	A diabetic patient should have his or her eyes checked….	510	89.47
10	Regular urine tests will help in knowing…	550	96.49
11	The important factors that help in controlling blood sugar are	550	96.49
12	A regular exercise regimen will help in	560	98.24
13	The well-balanced diet includes……	550	96.49
14	Treatment of diabetes comprises……	510	89.49

Table-3 Response to Attitude Questions

S/N	Questions	No of patients answering correctly	%age
1	Do you exercise regularly……	200	35.087
2	Are you following a controlled and planned diet……?	480	84.21
3	Do you miss taking the doses of your diabetic medication……?	440	77.19
4	Are you aware of blood sugar levels falling below normal when you are taking drugs…….?	460	80.70
5	Do you keep in touch with your physician?	420	73.68

Table-4 Response to Practice Questions

S/N	Questions	No of Patients answering correctly	%age
1	When was your blood pressure Checked last?	250	43.85
2	When did you have your last eye Examination?	90	15.78
3	When was your last urine exam done?	390	68.42
4	When was your last visit with your physician?	280	49.12
5	When was your last blood sugar checked	390	68.42
6	When did you had your last lipids checked?	90	33.33

Figure-1 Frequency Distribution of Overall scores

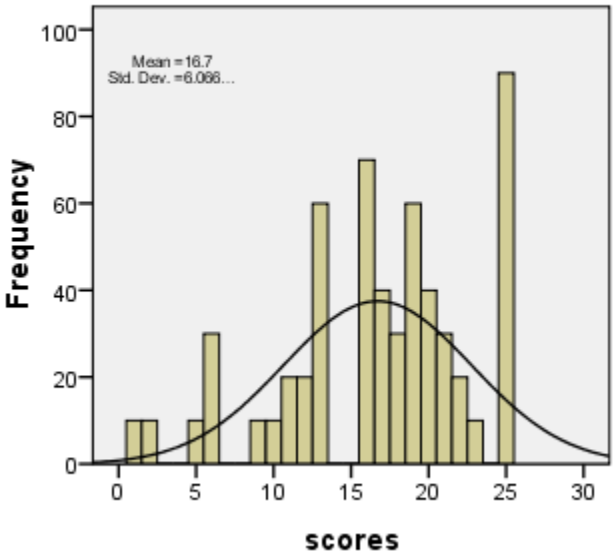


Figure-2 Frequency Distribution of knowledge Scores

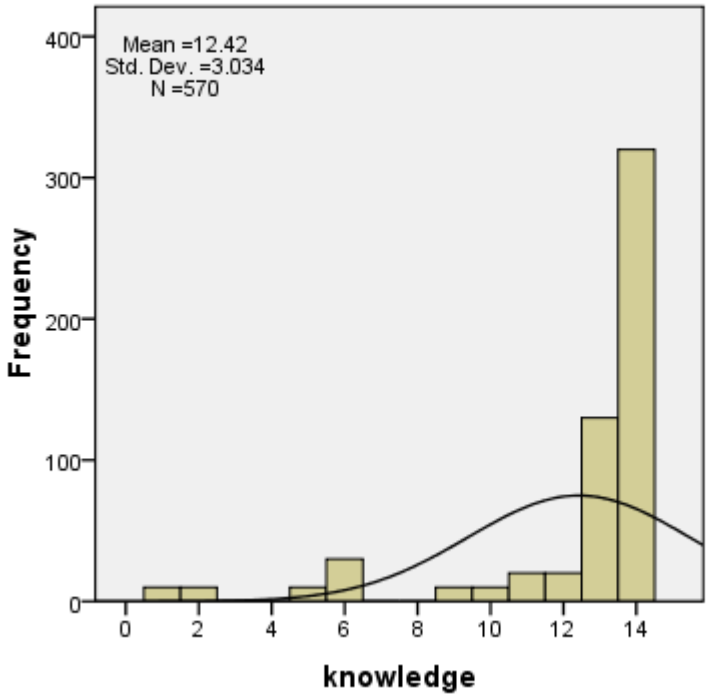


Figure-3 Frequency Distribution of attitude Scores

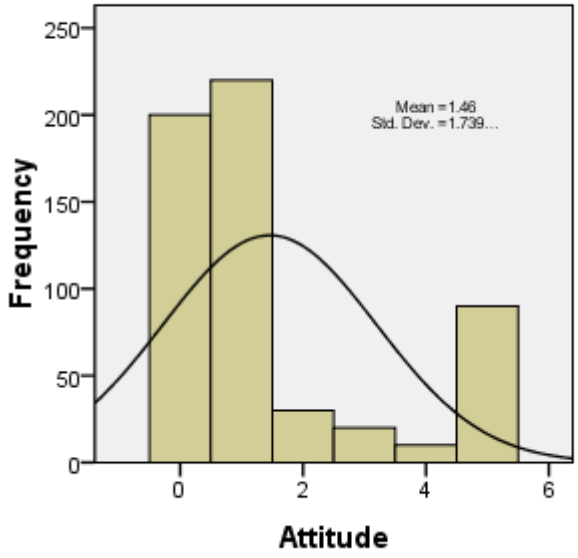
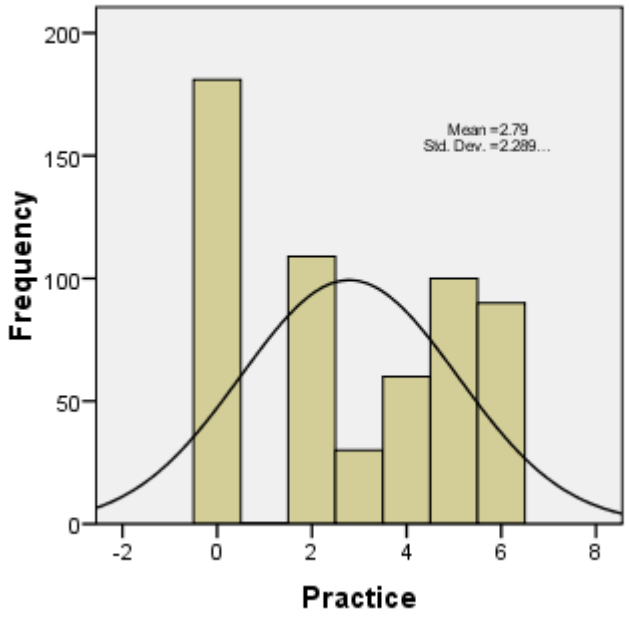


Figure-4 Frequency Distribution of Practice Scores



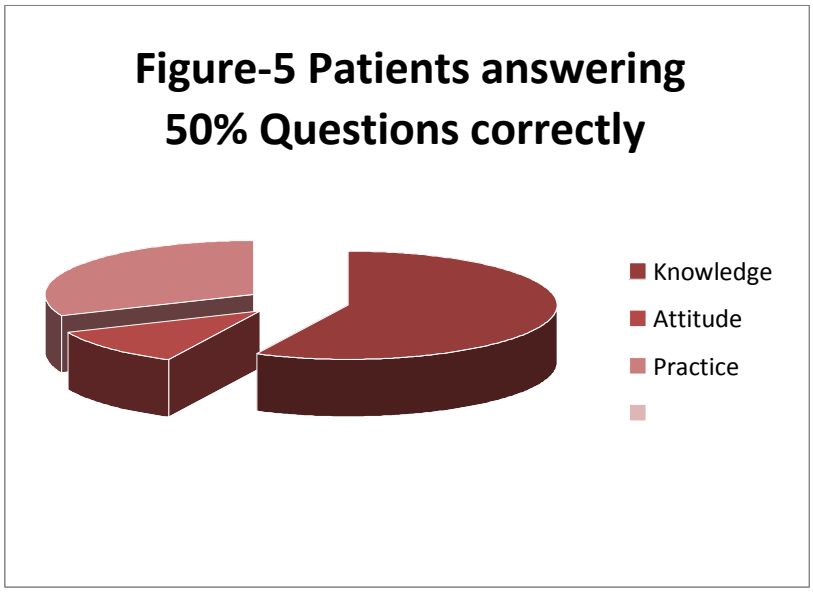


Table-5 Overall Statistics for KAP Scores

		Attitude	knowledge	Practice	Overall scores
N	Valid	570	570	570	570
	Missing	0	0	0	0
Mean		1.46	12.42	2.79	16.70
Std. Error of Mean		.073	.127	.096	.254
Median		1.00	14.00	2.00	17.00
Std. Deviation		1.739	3.034	2.289	6.066
Variance		3.025	9.207	5.241	36.800
Range		5	13	6	24
Minimum		0	1	0	1
Maximum		5	14	6	25

Results

Altogether 570 patients were enrolled in the study. The greatest number of patients were in the age group of 31-40years (table-1).The overall KAP Score had a Mean ± SD of 16.70±6.06. Knowledge score was 12.42±3.034; attitude 1.46±1.79 and Practice 2.79±2.28, with maximum possible scores for knowledge, attitude and practice patient being 14, 5 and 6 respectively-(Table-5).

Characteristics of the Subjects:

Most of the respondents (42.1 %) were aged 31-40 years, followed by those aged 20-30 years. Most of them 43.85% were educated uptill gradute level (table-1).

Source of information on diabetes

Respondents were asked to identify the one main source of information on diabetes. The major source of knowledge was medical staffs (68%) followed by Television (12%) and newspaper (10%). However 10% received information from friends and relatives

Questions on knowledge regarding symptoms of diabetes

The respondents were assessed on their knowledge regarding symptoms of diabetes cause and treatment.Table 2 shows the percentage distribution of Respondents by knowledge on different aspects of diabetes . Majority were aware about cause, symptoms and complications of the disease (Figure 2)

Questions on Attitude

Figure-3 reveals poor score in attitude part of the questionnaire only 35%were exercising and 77% had a habit of missing their drug doses (Table-3)

Questions on Practice

All patients who had their investigations done with in one month were given a score of one and if more than one month they were given zero score
Table-4 shows the percentage distribution of answers to the questions on practices. Figure -4 displays the frequency distribution of respondents' total practice score. Only 68% of patients had their blood sugar checked with in one month. Only 15% had eye examination done in last month. Only 17% of patients were able to answer 50% of practice questions correctly.

Discussion

The management of Diabetes Mellitus not only requires the prescription of the appropriate nutritional and pharmacological regimen by the physician but also intensive education and counseling of the patient [8].
Almost 56.14%patients got 100% score answering all the knowledge questions and 89.47% of patients answered 50% of the knowledge questions correctly (Figure-1) Still a large proportion of population that is almost 40.3% were not able to score above 10.This is comparable to the results of a study done in Malaysia by , Ranjini Subashini et al who reported 87% respondents able to answer 50%knowledge questions correctly [5]. In another study from Pakistan overall knowledge score reported was 54% [4]. The lack of proper knowledge of each patient should be given individual attention with clear view of its purpose, so that they understand and follow it in practice and fill the gap of this 10% to 100% as studies report that there is a positive correlation between knowledge and good attitude [5]. Improving the Knowledge of the diabetics in our society will not be an easy task. Great efforts would be needed by health teams to enhance education of the diabetic patient in order to promote compliance.

Regarding Attitude 17.5% scored above 50% in this study however reports from Malaysia revealed good attitude with 98% scoring above 50% [5]. Attitude towards Exercise was also found to be poor. Only a few 35% had habit of exercise. Many studies have confirmed the beneficial role of physical activity in improving glycemic control. Given the importance of physical activity to diabetes management, the low physical activity in this and similar studies should raise concerns among clinicians and it is necessary that all patients should be encouraged to increase their physical activity [9].

This study also highlights the need of having dieticians and educators alongside consultant diabetologists in our diabetes care centres to educate the patients about diet a as 16% were not at all following the dietry plan and also the large population of respondents was missing their drug doses revealing a casual attitude towards the disease (Ref-Table3). Beneficial effects of diet and exercise are out of question [10].
Over all 49% answered the 50% of Practice questions and only 15.74% Scored 100% only revealing poor score for practice Whereas Malaysian study revealed 99 % answering 50% questions correctly [5].

Monitoring of blood glucose is a simple and practical procedure acceptable for those patients who can afford it and facilitates the attainment of good glycemic control but unfortunately in our local population the practice was not good as 32% responded that their blood sugar level has not been checked in last week (Table-4) .

Education and counseling about all the aspects of diabetes is needed. Group education as well as individualized education programmes should be planned which can lead to better preventive and management techniques in diabetes.

Thus there is need for arranging large scale awareness programs for the general public and also to identify and use media to spread the message which could change the attitude of our public in the future.

Conclusion:
Beside good knowledge attitude and practice towards diabetes is low. Therefore there is a need for structured programmes to improve attitude and practice of our patients. This can be done at all levels including media, working centers and hospitals. Studies with wider scope and much large sample size is recommended to confirm findings and explore relevant features

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