

Knowledge, Attitude and Practice of Diabetes in the Province of Kirkuk-IRAQ

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Abstract

Background: Diabetes is a chronic disease with high morbidity, increased susceptibility to other diseases, such as cardiovascular disease and premature death. The disease has two types, 1 and 2. Type1 has genetic predisposition factors leading to the immune system attacking and destroying pancreatic beta cells. The exact etiology of type 2 is unclear but environmental and lifestyle factors play a major role in susceptibility. According to government estimates, Iraq had 668,000 affected individuals in 2000. Recent estimates predict that by 2030, Iraq will have more than 2million of its population afflicted by diabetes. There is, therefore, an unmet need to explore how the healthcare system in Iraq currently manages and it is prepared to deal with diabetes at such a huge health problem.

Methods: This study was designed to examine awareness, attitude and the practice of healthy lifestyles to prevent and/or deal with diabetes in the province of Kirkuk-Iraq. A cross-sectional study was carried out to collect data from the general population through a random-sampling approach. We collected data from a cohort of 300 individuals. The data recorded through face-to-face interviewing and the completion of questionnaires.

Results: The study revealed that there is generally a poor knowledge of the disease in the population. About 36% of the cohort who were interviewed had no or little knowledge of the disease, its causes and management. 56% of those interviewed, however, were happy to abide by advice given to them by medical professionals to reduce the likelihood of them getting the disease. Knowledge of, attitude to and practical approach to deal with the disease varied according to age, educational standards but had no relations to gender or body mass index (BMI). Somewhat expectedly, knowledge of proper lifestyles including choice of diet was higher in those who had diabetes compared with non-diabetics.

Conclusion: Overall, appears to be a general lack of adequate knowledge in the cohort investigated about diabetes, susceptibility factors and impact on the wellbeing and long-term health. The study provides important data on attitude and approach to this disease in this microcosm of the population of the Kirkuk province in Iraq. In addition, provide an outline of actions that will be required to reduce or limit the impact rampant disease could have on the health, wellbeing and even the wealth of the population of Iraq by the end of this decade

Keywords : KAP : Knowledge, Attitude, Practice , Diabetes Mellitus, Kirkuk

Introduction:

The term "diabetes mellitus" describes a metabolic disorder of multiple etiologies characterized by chronic hyperglycemia with disturbances of carbohydrate, fat and protein metabolism resulting from defects in insulin secretion, insulin action, or both. Diabetes mellitus is believed to be the commonest and the most devastating chronic disease in human history, there is an emerging global epidemic of diabetes; particularly in developing countries. According to the WHO 347 million people worldwide have diabetes. In Iraq, diabetes affected 668,000 people in year 2000, and it's estimated that 2,009,000 people will have diabetes in 2030. ^[1] . More than 80% of people with diabetes live in low- and middle-income countries ^[2]

During the past 3 decades, the global population has undergone tremendous changes in life-style, primarily leading to decreased physical activity and unhealthy eating habits. As well, it increases the risk of heart disease,

stroke, and insufficiency in blood flow to legs.

. Cardiovascular disease is responsible for between 50% and 80% of deaths in people with diabetes. Diabetes is a leading cause of blindness, amputation and kidney failure.^[1]

Obtaining information about the level of awareness is the first step in formulating a preventative program for the disease. There is need to investigate KAP among the population to aid in future development of programs and techniques for effective health education. KAP surveys are effective in providing baseline for evaluating intervention programs.

Coordinated action is needed from the level of international and national policy to reduce exposure to the known risk factors for diabetes and to improve access to and quality of care.

Subjects and method:

The study was conducted from the general population (regardless of being diabetic or not) gathered from people waiting at the reception of Azadi teaching hospital, college students...etc, during the period of 4 months (October 2013-January 2014).

Data collection was by questionnaire forms administered through interviews. Literate patients filled out the questionnaires themselves while illiterate participants were interviewed by us.

All samples were selected by simple random sampling method and the sample size was 300 cases.

Instruments used were scale for weighing and tape measure for measuring the length of participants, from which the BMI was estimated.

Official agreements taken from the directory personal for the completion of study.

No financial support present neither governmental nor from privates for completing all steps of study.

Results and Discussion:

Studies from both developed and developing countries have reported that diabetes knowledge is generally poor among the general population; however it is difficult to compare our results with others.

Variation in findings among different studies done in different locations may be due to patient's educational qualification, receiving special training and education on diabetes from well organized diabetes camps and better healthcare facilities. These facilities are lacking in Kirkuk city which have contributed to low level of KAP in the present study.

Starting from definition of pathophysiology of diabetes, only (66%) know that Diabetes is the elevation of blood sugar, and (62%) stated that the body does not secrete insulin, while only (16%) stated that the body does not respond to the secreted insulin, this shows that although Diabetes is a common disease in the society but the general knowledge of it is low, especially type 2 Diabetes which is quite unknown. In comparison with another study done in Saudi Arabia who reported (90%) of respondents able to answer (50%) of knowledge questions correctly which implies that the diabetic knowledge level is good due to well organized health care facilities, government educational programs for improvement the diabetic knowledge which are lacking in our country.^[1] another study in south India reported that (46%) knew the pathophysiology of diabetes.^[3]

Concerning the risk factors of diabetes about (64%) of the participants answered family history, and another (55%) answered eating food rich in carbohydrates, while the other risk factors were chosen markedly less frequent, which may imply that they may have observed these in diabetic relatives and friends and it could run in their families too.

The present study showed that frequent thirst (79%) and urination (70%) as symptoms of diabetes, but it seems that most of them are unaware of diabetes being a syndrome of multi-systemic symptoms rather than isolated complaints.

This study also revealed that blindness (50%), kidney failure (39%) and foot ulceration (38%) are the most common known complications of Diabetes, but the most deadliest complications (heart attack & stroke) have

scored the lowest (19%) & (20%) respectively. Comparing this to a study done in south India, we find similar results since (50%) of the participants knew the complications of diabetes.^[3]

The present study shows that there is no relation between KAP scores and the gender and BMI of the participants, but there is an increase in diabetes knowledge according to educational level which reflects that literacy & education have a positive role in improving peoples' awareness about diabetes, but on the other hand the difference between diabetic and non-diabetics' knowledge is not as great as it should be due to lack of educational qualification in healthcare facilities.

In fact low educational level, lack of governmental programs for health education with poor healthcare facilities and inappropriate relation between physicians and their patients regarding education and advice about Diabetes, all have lead to decrease the diabetic knowledge level in the community. Comparing this with a study done in the UAE we find similar results, in which they found that (31%) had poor knowledge of diabetes.^[5]

Regarding the attitude, it showed generally acceptable results (average 56%). Most of the participants (78%) answered that diabetes complications can be prevented and Diabetes can be controlled by a healthy diet (81%) and taking medication at time (61%) these are acceptable ratios which reflect a good attitude towards the significance of diet and medications, and denies some mythologies related to insulin use and the role of folk medicine however reports from Saudi Arabia scored only (17.5%) of respondents able to answer (50%) of attitude questions which revealed that unhealthy diet and decreased physical activity were the main cause in decreasing attitude in managing the diabetes in Saudia. ^[3] Another study in South India showed similar results to ours that dietary modifications were relied more than exercises among the interviewed subjects.^[2] in a study done in UAE, the results were that (72%) had negative attitude towards Diabetes.^[5]

We have included a question "can a diabetic change the dose and time of insulin injections according to the diet?" to assess people s' knowledge of the regiments and method of using insulin, (49%) answered yes and (35%) answered I don't know, and it seems that there is a general confusion and uncertainty about it. ^{[2], [7]}

Regarding the practice, it showed the highest results (average 76%). People (especially those who are diabetic) have an excellent level in managing the diabetes by periodic screening of blood and urine glucose level, diet control and life style modification. ^[6]

Only (51%) replied that they have measured their blood or urine glucose levels while (49%) have not, which reflects that not all the participants have the adequate self-care actions for early detection of Diabetes, however this may be affected by the fact that (14%) of the participants were below the age of 20, but since It is a chronic disease in which care should be taken in early stage before it knocks the door.

Although only (10%) of the participants believe that diabetes can be prevented, but (81%) of them are trying to change their life-style which have a good impact on the general health of the body to avoid Diabetes. (95%) of the participants answered that it is very important to have family support for diabetic persons because it decrease the stress in life-style changes and diet restrictions, while in Saudi Arabia the practice score was only (49%) who answered above (50%) of practice questions which implies that poor practice level due to lack of self-care in periodic monitoring for blood and urine glucose level and decreased awareness in changing the life style and diet control for avoiding the diabetes. ^{[1], [9]}

Although other studies from Malaysia showed good knowledge with positive correlation regarding attitude and practice,^[10] in this study there is a positive attitude and practice in managing Diabetes, however there is need for a better knowledge level to increase the general awareness and to improve the measures in avoiding this chronic disease.

Table (1) : frequency & percentage of socio- demographic characteristics of the study participants.

Variable	no. (%)
Sex	
Male	148 (49%)
Female	152 (51%)
Age (years)	
<20	43 (14%)
20-30	99 (33%)
30-40	51 (17%)

40-50	46 (15%)
>50	48 (16%)
BMI	
Underweight	23 (8%)
normal weight	178 (59%)
Overweight	69 (23%)
Obese	30 (10%)
educational level	
no degree	5 (2%)
primary school	32 (10%)
secondary school	41 (14%)
preparatory school	66 (22%)
university degree	152 (51%)
higher studies	4 (1%)
whether diabetic or not	
non-diabetic	275 (92%)
type-1 diabetic	8 (3%)
type-2 diabetic	17 (5%)

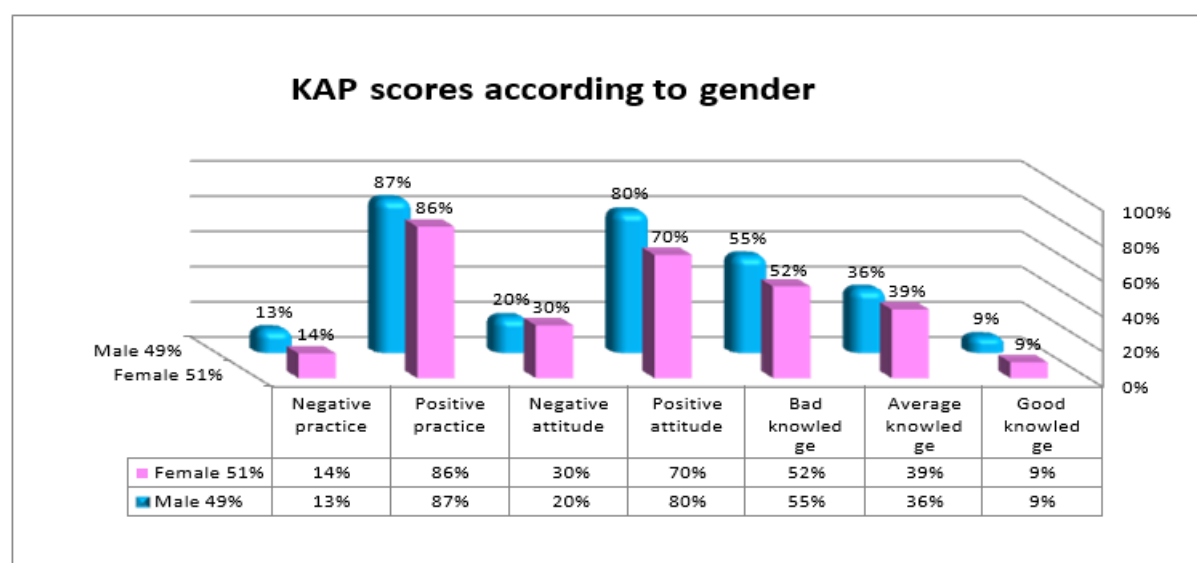


Fig. (1): Percentage of KAP scores according to **gender**

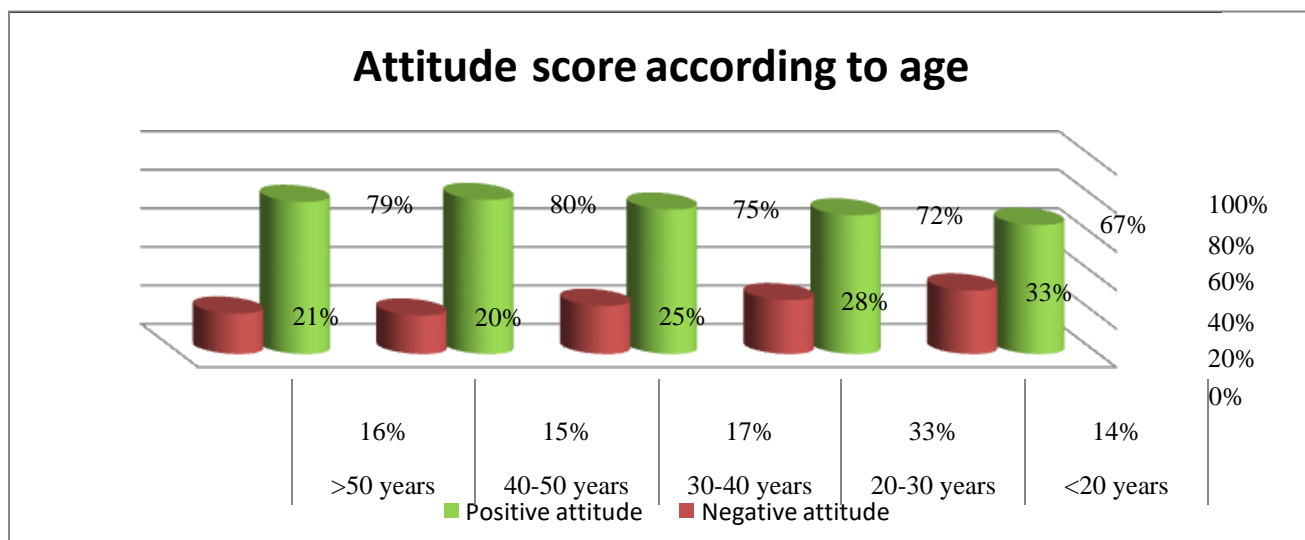


Fig. (2): Percentage of KAP scores according to **Attitude**

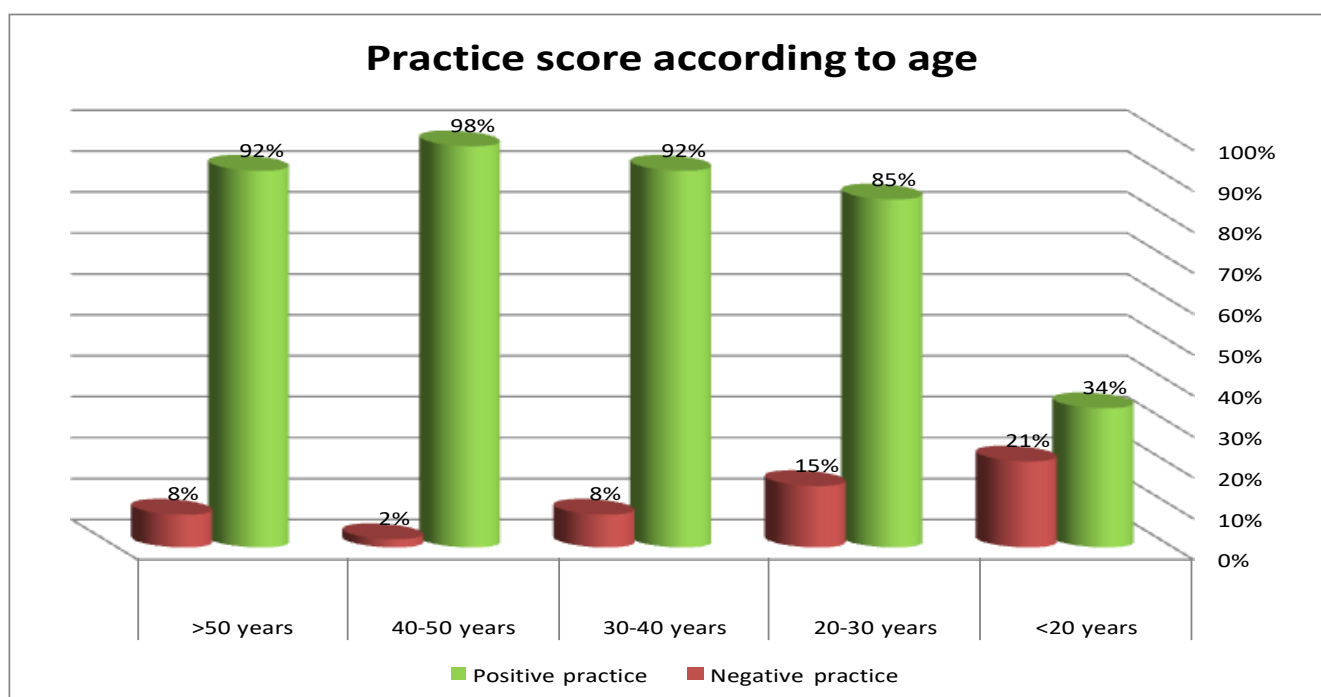


Fig. (3): Percentage of KAP scores according to **Practice**

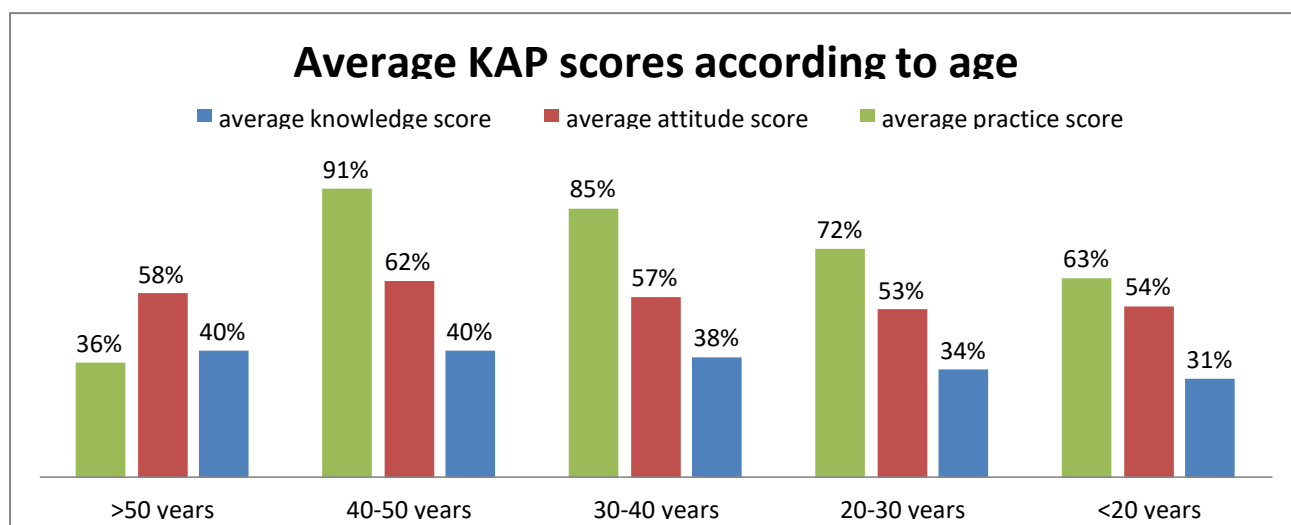


Fig. (4): Percentage of KAP scores according to **Age**

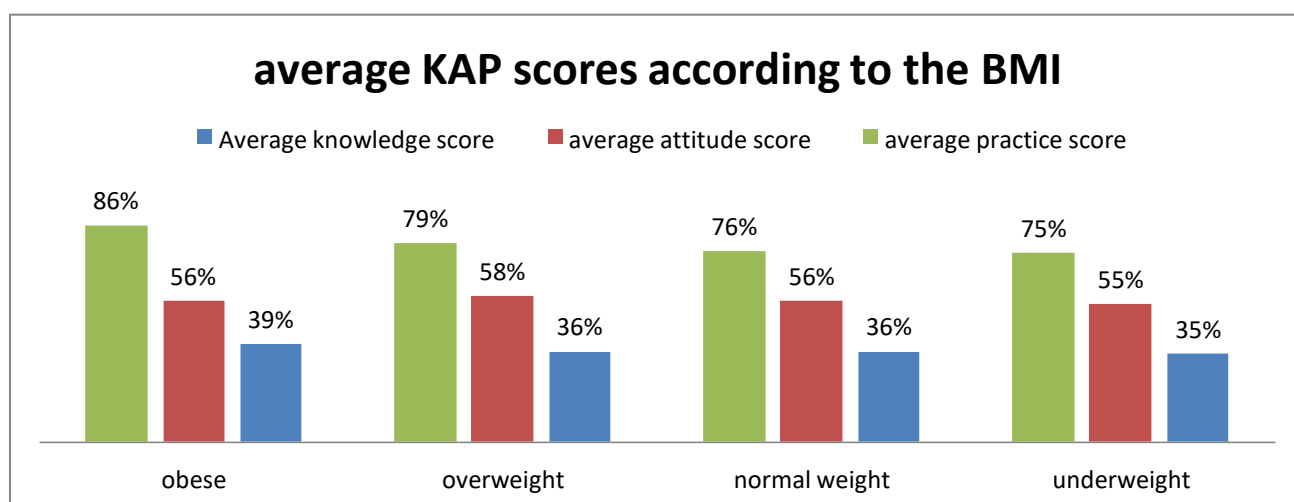


Fig. (5): Percentage of KAP scores according to **BMI**

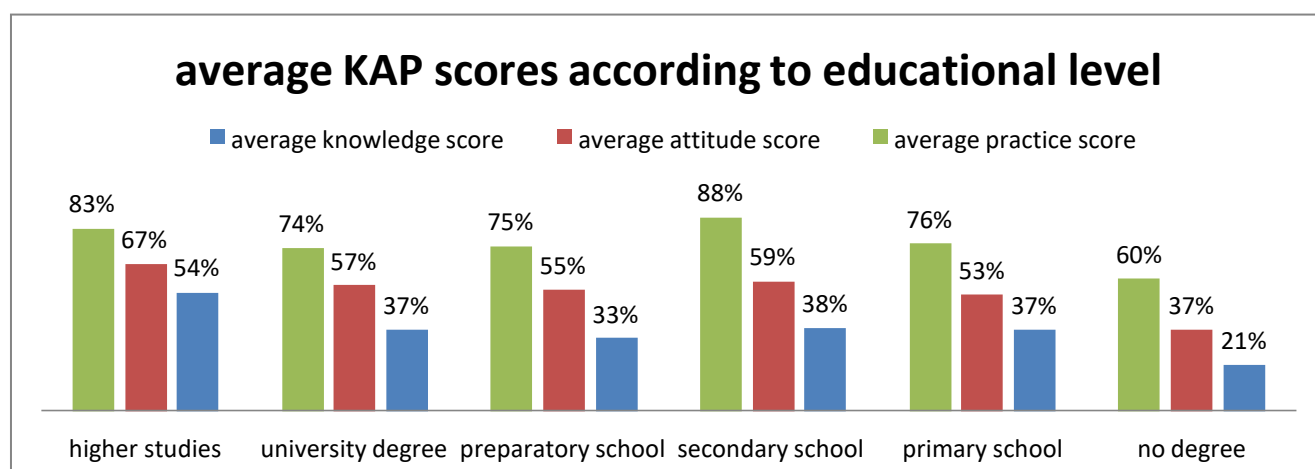


Fig. (6): Percentage of KAP scores according to **educational level**

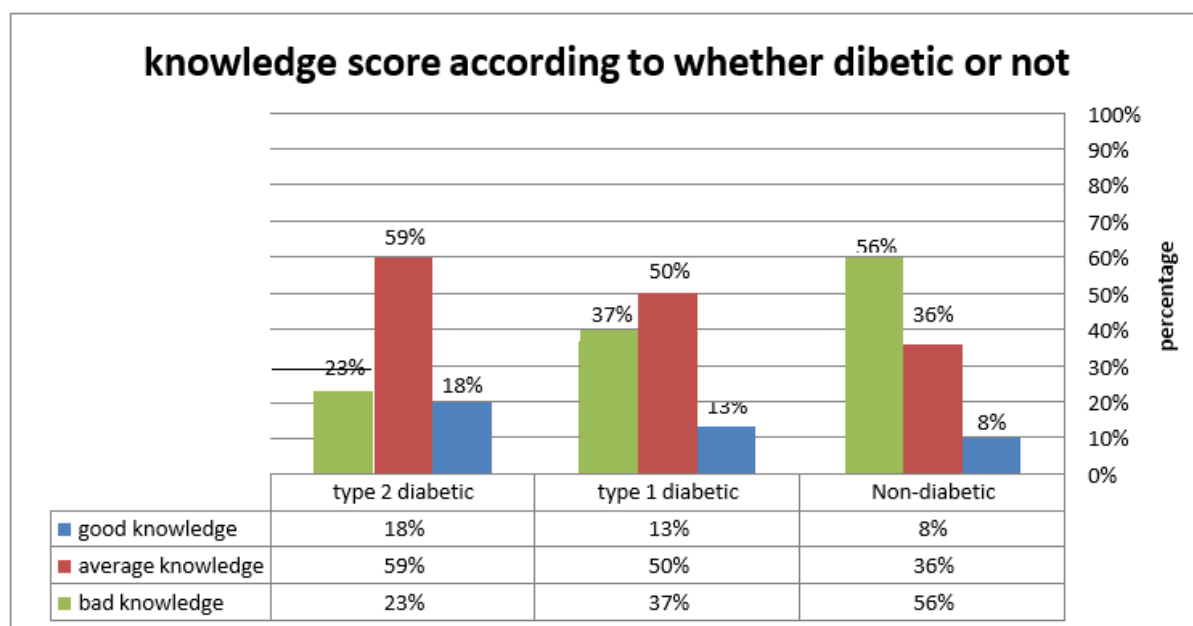


Fig. (7): Percentage of KAP scores according to **Knowledge**

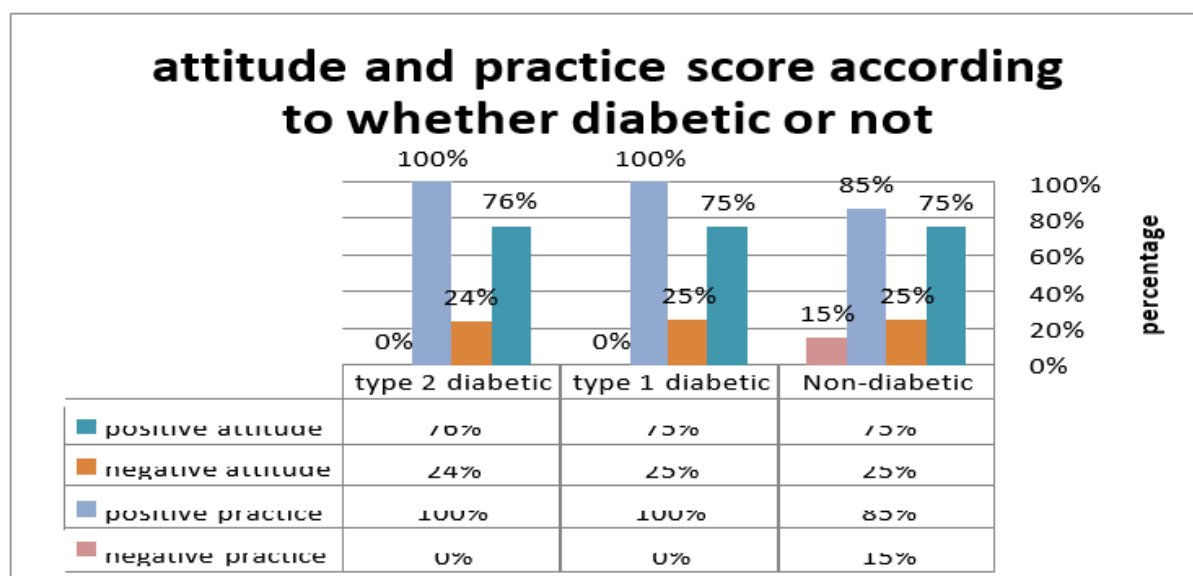


Fig. (8): Percentage of KAP scores according to **Attitude and Practice**.

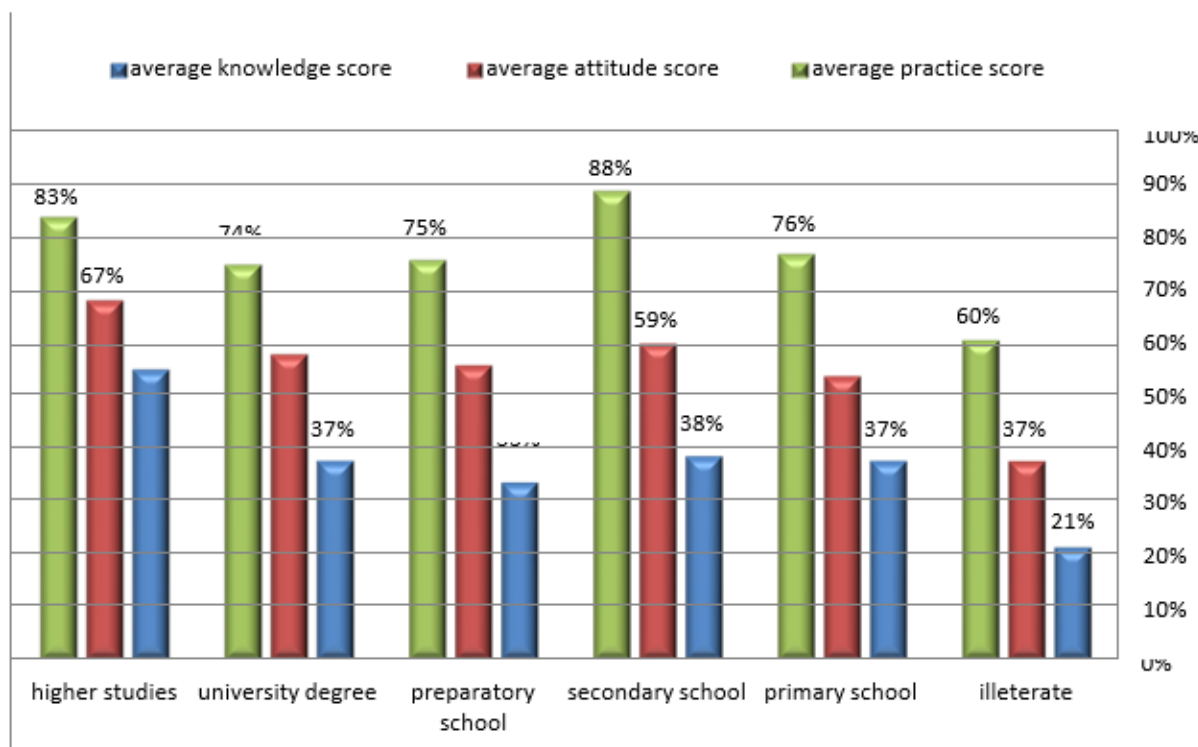


Fig. (9): Percentage of KAP scores according to **educational level**

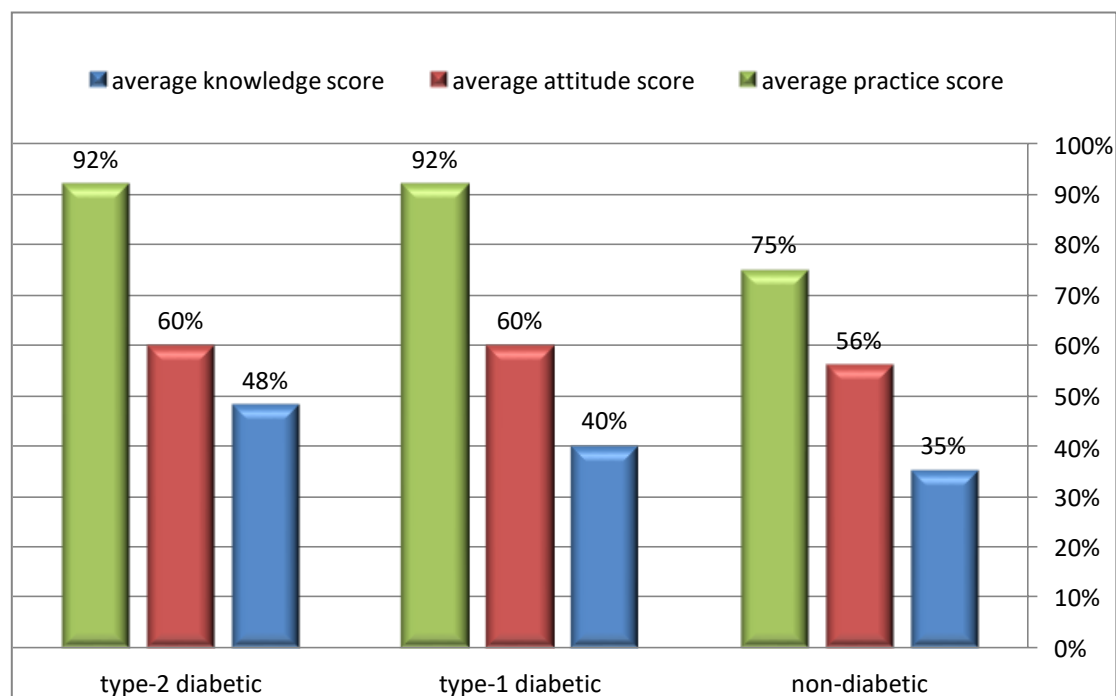


Fig. (10): Percentage of KAP scores according to **age**.

Conclusion:

- 1- Diabetic knowledge Level in Kirkuk city is very poor.
- 2- People have a good attitude in dealing with diabetes which maybe a good drive for reducing complications of Diabetes.
- 3- Diabetic persons have an excellent practice while non-diabetic still need more attention for prevention by periodic screening for Diabetes.
- 4- There is no great difference between diabetic and non-diabetic persons in diabetic knowledge, maybe due to lack of proper health-care facilities and patient-doctor relationship in improving their general awareness of their disease.
- 5- School education and government educational programs can increase peoples' awareness concerning knowledge, attitude and practice of diabetes mellitus.

Recommendations:

1. Emphasis on improving the literacy rate of the population.
2. Diabetes education must be impacted by every clinician as per standard.
3. Increase public awareness by government programs, media, health educators, and school teachers to improve the knowledge level of diabetes in the community.
4. Public awareness on benefits of periodic screening tests for early detection of the disease. Support and advise the diabetic patients in life-style changes and dietary restriction.

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