

Knowledge and Attitude of School Teachers toward DM Complications in Tabuk City

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Abstract: Diabetes is a growing health problem globally and particularly in Saudi Arabia. Unfortunately DM considered to be one of the most common cause for serious complications (either acute or chronic) that affecting a lot of organs all over the body. Public awareness and education about diabetes and its complications is the cornerstone in prevent progression of the disease and developing of complications. SO, considering this issue we conducted this study to assess school teachers knowledge and their attitude toward DM complications in Tabuk city while no similar study had been done in our region.

Methods: cross sectional study using structured self-administered questionnaire (containing 17 questions) distributed in random way among teachers at different schools in Tabuk city containing socio-demographics, attitude and knowledge toward DM complications. Anonymity of respondents, consent form, and other ethical issues were considered. The data gatherers were available to answer any questions. The target population size was 500, based on 50% prevalence and 95% confidence interval. The data collected from these questionnaires was entered in Microsoft Excel and the statistical analysis was done using SPSS version 21. Frequency tables and chi square test analysis was done.

Results: A total of 500 respondents were interviewed, 250 (50%) were male . only around 20 of them are not in 20-40 years age group and most of them are married and had bachelor degree. Hopefully 86 % of them believe that DM has serious complications as same as almost 377 (75%) of them follow malty ways together (medications , regular F/U, diet and life style modifications,..) to minimizing DM complications. Surprisingly, only 11% of them have no DM in their relatives. More than 50% are taking DM information's mainly from health providers and social medias. Half of our respondents think that there are many social difficulty among diabetic patients in their life and more than 450 out of 500 participants (93%) they complain of shortage of educational project towards DM complications. The level of agreement from our respondents Regarding the retinopathy, cardiovascular, nephropathy and peripheral neuropathy was (89.6%, 75.2%, 75.4%, 85%) respectively. 36 teachers (7.2%) don't believe that DM has role in foot amputation, approximately 14% and 18 % of total sample size don't know about diabetes effect on sexual activity and blood pressure .

Conclusion: The participants have somehow adequate knowledge of DM complications. But they are still in need effective health promotion strategies for the educational institutions and health program and camps should be conducted to make aware of community about the DM complications and how to try to minimize it .

Keywords: DM complications, health problem.

1. BACKGROUND

Type 2 diabetes mellitus occurs when the pancreas (an organ in the abdomen) produces insufficient amounts of the hormone insulin and/or the body becomes resistant to normal or even high levels of insulin(1).

Saudi Arabia is one of the 19 countries and territories of the IDF MENA region.

There were 3.4 million cases of diabetes in Saudi Arabia in 2015 (2).

Type 2 diabetes is thought to be caused by a combination of genetic and environmental factors.

Diabetes mellitus is a chronic condition that can lead to complications over time. These complications can include:

- ❖ Coronary heart disease, which can lead to a heart attack
- ❖ Cerebrovascular disease, which can lead to stroke
- ❖ Retinopathy (disease of the eye), which can lead to blindness
- ❖ Nephropathy (disease of the kidney), which can lead to kidney failure and the need for dialysis
- ❖ Neuropathy (disease of the nerves), which can lead to, among other things, ulceration of the foot requiring amputation

Many of these complications produce no symptoms in the early stages, and most can be prevented or minimized with a combination of regular medical care and blood sugar monitoring.

- EYE COMPLICATIONS (Retinopathy):

People with type 2 diabetes should have an eye examination by an ophthalmologist or optometrist when they are first diagnosed with diabetes. The reason for this is that blood sugar levels often increase over a period of several years before the person is diagnosed. Eye complications can develop during this time and often have no symptoms. Having an eye examination soon after diagnosis can help to determine if there are eye complications, the extent or severity of the complications, and if treatment is needed.

- KIDNEY COMPLICATIONS (Nephropathy):

Diabetes can alter the normal function of the kidneys. A urine test that measures the amount of protein (albumin) in the urine can determine if diabetes is affecting the kidney's filtering action. Microscopic amounts of albumin in the urine (microalbuminuria) can be an early indicator of diabetes-related kidney complications (called nephropathy). The amount of albumin in the urine can also help the provider determine if nephropathy is worsening.

People with type 2 diabetes at the time of diagnosis. If the test shows that there is protein in the urine, tight blood sugar and lipid (cholesterol and triglyceride) control are recommended.

- HYPERTENSION AND RELATED COMPLICATIONS:

A blood pressure reading below 140/90 and perhaps below 130/80 is recommended for most people with diabetes who do not have kidney complications; a lower blood pressure goal (less than 130/80) is recommended for people with diabetes who have kidney disease.

Diabetic foot:

Diabetes can decrease the blood supply to the feet and damage the nerves that carry sensation. These changes put the feet at risk for developing potentially serious complications such as ulcers. Foot complications are very common among people with diabetes, and may go unnoticed until the condition is severe (3).

- DIABETIC NEUROPATHY:

Neuropathy is the medical term for nerve damage. Neuropathy is a common complication of type 1 and type 2 diabetes; up to 26 percent of people with type 2 diabetes have evidence of nerve damage at the time that diabetes is diagnosed. A generalized type of neuropathy, known as polyneuropathy, is the most common type of diabetic neuropathy. Other types of neuropathy can also affect people with diabetes.

Diabetic neuropathy is diagnosed based upon a medical history and physical examination of the feet. During an examination, there may be signs of nerve injury, including:

- Loss of the ability to sense vibration and movement in the toes or feet (eg, when the toe is moved up or down)
- Loss of the ability to sense pain, light touch and temperature in the toes or feet
- Loss or reduction of the Achilles tendon reflex (4).

2. RATIONALE

Diabetes mellitus is systemic disease affected on many organs eg. Heart , kidney , brain , eye , neuro system. It is affecting one quarter of the Saudi population , about (25%) of general population and another(10%) of the general population will be affected in 10 years. There is One third of Diabetes patients are affected by retinopathy , and (10%) are blind , One third of Diabetes patients are suffering from nephropathy , and (1%) are on dialysis .

One quarter of the diabetic population are suffering from ischemic heart disease , and (10%) of total number of diabetics in the Gulf stats are dying every year .There is about (40%)to (70%) of Amputated foot because uncontrolled diabetic ,6000 amputated foot yearly in KSA.High financial cost in the treatment of diabetes Disease and its complications , about 11 Billion riyals .Diabetes is the second leading cause of death in Saudi Arabia after car accidents, and The first cause of death for the elderly.

Objectives:

To identify the knowledge of teachers about Diabetes Complication.

To identify the Attitudes of teacher about diabetes complication.

STUDY DESIGN:

The study will be a cross sectional community based Description Design.

Study area and setting:

Situated in north-western Saudi Arabia. It has a population of 534,893 (2010 census). There are seven major hospitals in Tabuk city and 19 primary health care centers . there are two universities .

Study population and target group:

We will apply our study on School teachers groups (Male and Female) during period of the study .

Sample size:

500 according to Raosoft Website Sample Size Calculator.

Sample technique:

The study will be random, total number of sample well be 500 teachers, 250 male and 250 female teachers.

Every 250 teachers will divided into 83 primary school teachers, 83 Intermediate school teachers,83 secondary school teachers.

Study variable:

- ❖ Gender
- ❖ Age
- ❖ Marital status
- ❖ Educational level
- ❖ Diabetes OR not
- ❖ Other chronic diseases
- ❖ Knowledge of the causes Diabetes
- ❖ Knowledge of complications of diabetes
- ❖ Prevention of diabetes complications
- ❖ Interesting the community for people with diabetes
- ❖ Sources to get the right medical information
- ❖ Measuring the need to educate the community

3. DATA COLLECTION TOOLS

The questionnaire is talking about Knowledge and Attitudes of Diabetic Complication among Teachers in Tabuk.

The work of this questionnaire by ourselves. This questionnaire is divided into two sections. The first section containing of personal information, and the second section is containing a general information concerning the subject of research .

Section I: Personal information:

We talked in this part about general questions, the sex of the participant in the research, age, marital status and educational stage.

Section II: research's subject:

We talked in this part about research subject, which are Other chronic diseases, Knowledge of the causes Diabetes, Knowledge of complications of diabetes , Prevention of diabetes complications , Interesting the community for people with diabetes . Sources to get the right medical information and measuring the need to educate the community.

We used in this purely understandable language and clear method that does not assume the multiple interpretations.

Data analysis plan:

IBM SPSS statistics chi square will be used for testing the significance P.value of ≤ 0.05 will be considered statistically significant.

Expected limitation:

- 1- A lack of cooperation from some of the people in the complete of questionnaires.
- 2- Lack of accurate answers to some questions in the questionnaire.

Ethical consideration:

Approval letters will be obtained from the school.

Consent will be used for the study subjects approvals.

Activities	February				March			
	1 st	2 ^{ed}	3 rd	4 th	1 st	2 ^{ed}	3 rd	4 th
Proposal writing	→							
Approvals		→						
Data collection				→				
Data analysis					→			
Report writing					→			

Research work plan:

Budget:

Item	Cost unit	No unit	Time	Total
Questionnaire	0,5	500	1	250
Data collector	200	4	3	2400
Research Design	100	1	1	100

Total: 2750 SR

REFERENCES

- [1] <http://www.uptodate.com/contents/diabetes-mellitus-type-2-treatment-beyond-the-basics>
- [2] <http://www.idf.org/membership/mena/saudi-arabia>
- [3] http://www.uptodate.com/contents/preventing-complications-in-diabetes-mellitus-beyond-the-basics?source=see_link
- [4] http://www.uptodate.com/contents/diabetic-neuropathy-beyond-the-basics?source=see_link