



Assessment of the Knowledge and Practices about Diabetes Mellitus among Governmental School Teachers in Uglat Asugour, Qassim, Saudi Arabia

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Abstract

Background: Knowledge and practice about diabetes mellitus (DM) are crucial among school teachers as they could not only be diabetic, dealing with diabetic children/adolescents, but they also share the responsibility of improving the awareness and practice regarding the epidemic disease in our community. **Objectives:** This cross-sectional study was done in a rural area, Uglat Asugour, to determine the awareness and practices considering DM among governmental school teachers, and, their relationship with teachers' sociodemographic, life style, and anthropometric indices, and, their history of DM. Furthermore, the study aimed to compare between awareness and practice among study participants and to identify risk factors and their relationship. **Participants and Methods:** The study anonymously enrolled all the voluntarily willing elementary, middle and high school male teachers during April 2018. Data collection tool was a structured self-administered Arabic-language questionnaire that contained a part for collection of the sociodemographic, life style and anthropometric characteristics and diabetes medical history of participants, part 2 has 15 items concerned with knowledge, and, part 3 has 4 items concerned with practice regarding DM. Absentees for any reason were excluded. **Results:** A total of 171 teachers were targeted. The response rate was 91.8% meaning that 157 teachers were included. Their age was 33.5 ± 06.4 (mean \pm SD) years. 5.1% were diabetic and 31.8% of them were having diabetic student(s). The knowledge regarding DM among them showed that 141 (89.8%) had good knowledge and only 16 (10.2%) were having poor knowledge. In regard to practice, 106 (67.5%) teacher were having good practice while 51 (32.5%) were having poor practice. Diabetic teachers and those with a family member with DM, ex-teachers on administrative jobs and teachers at elementary schools scored better than the others in both aspects. **Conclusion:** comparable to national and international reports, the majority of the targeted school teachers showed a good knowledge and exhibited a good practice regarding DM. Because the country suffers a diabetes epidemic, knowledge and practice require furthering programs that target school teacher in particularly.

Keywords: School teachers, Diabetes mellitus, Knowledge, Practice, Saudi Arabia.

Introduction

Diabetes mellitus (DM) is a common non-communicable disease with a prevalence of 8.3% worldwide and of 23.9% in Saudi Arabia.^[1] The disease has a functional or quantitative insulin deficiency leading to hyperglycemia. There are many risk factors for the disease; the strongest is the family history of DM.^[2] BMI, fat percentage, tobacco use, and even race is considered a risk factor for DM.^[3,4] Moreover, DM can lead to serious multi-systemic complications that include cardiovascular, renal, ophthalmic, and neural complications.^[5-8] Fortunately, DM can be averted and/or its complications delayed by following a healthy lifestyle such as balanced diet, regular physical activity and achieving normal body mass index, and, the disease vigilance with

good knowledge and practice for better management and quality of life.^[9]

Many studies evaluated the awareness of DM in the general population. A study in Qassim region found that 63.4% of the general population were aware of the risk factors and 80.8% were aware about the symptoms of DM.^[10] Another Pakistani study found that most of the general population participants had a moderate knowledge of DM, where, being female, living in urban areas, being of high socioeconomic status and having a better education are associated with better knowledge of DM.^[11] A study about diabetes knowledge and attitude included 3104 adults from the general population in a Bangladeshi rural area found that 93% of the participants heard about DM, and sedentary lifestyle was a known risk factor for 50% of them. Younger age (<35), male gender and higher educational level were associated with better

knowledge which deemed as poor in these rural areas.^[12] Among Kuwaiti governmental employees, only 6.1% correctly answered all questions about general information regarding DM while the rest could only answer half or less.^[13] A survey distributed among the visitors of the Primary healthcare Centers (PHCs) in Al-Khobar, Saudi Arabia, showed that only 42% and 41.7% of the sample knew about DM risk factor and prevention, respectfully.^[14]

The school teachers' knowledge about DM have been assessed in many studies. In a cross-sectional study done in among female teachers from Alkhobar city 73% claimed that they know about hypoglycemic symptoms but only half correctly answered related questions.^[15] Another study assessing the knowledge, management and attitude toward diabetic care among intermediate school teachers in Riyadh city had found that 78% of the participants had medium knowledge about DM. The least known was the normal ranges of glucose and knowledge about the treatment of diabetes was known to only 18.6% of the teachers.^[16] A Turkish study assessed the knowledge of diabetes mellitus among 1054 secondary school teachers and found that 47.6% of them were having a moderate knowledge of the disease, while the majority of the remaining (32.4%) were having poor knowledge. However, teachers with a diabetic family member had the best knowledge.^[17]

Patients with diabetes have to give more effort in maintaining their healthy lifestyle. Vigilance of the disease along with other modalities are necessary in helping patients to take care of their health and increase their quality of life. Knowledge about diabetes is crucial among school teachers as they could be not only dealing with diabetic children/adolescents but also share the responsibility of spreading awareness and better practice regarding the disease. This study was planned to determine the awareness and practices considering diabetes among governmental school teachers in the rural Qassim area of Uglat Asugour using a validated previously published structured questionnaire.

Participants and Methods

Setting: The study was approved by regional committee of bioethics (REC) at Qassim region (approval number: 560203 at 2018/4/28). The survey was distributed to the consented volunteering teachers in all governmental male school on Uglat Asugour during April 2018. The study was including all targeted population so it manages to involve 157 male teachers out of 171 teachers targeted (response rate was 91.8%). They comprised current and ex-teachers who are currently working in administrative jobs such as principles.

Data collection tool: a paper-based questionnaire was developed by A. Mohieldein^[15] which was adopted, modified and pre-piloted with 20 teachers to be suitable for targeted population. The first part of the questionnaire was for collection of the relevant sociodemographic, life style and anthropometric characteristics and diabetes medical history of the participants. The part of the data collection tool that evaluated knowledge about DM was composed of fifteen questions with "No", "Yes" and "I don't know" as the answer options. Points were given to the selected option in which 2 points were given for the correct answer, 1 for the incorrect answers and 0 for the option "I don't know". Final score ranging from 0 to 30 points were calculated for each response. Based on the

final score, level of knowledge was classified into: Poor knowledge with a score of 0-15 points and as good knowledge with a score of 16-30. The portion that assessed the practice regarding DM was composed of four questions with "No or decrease blood sugar", "Yes or increase blood sugar" and "I don't know" as the answer options. Similarly, 2 points were given for the correct answer, 1 for the incorrect answers and 0 for the option "I don't know". Final score ranging from 0 to 8 points was calculated for each response. Poor practice scored 0-4 points and good practice score is 5-8 points.

Statistical analysis: The data were analyzed using Statistical Packages for Social Sciences (SPSS) version 21. A p cut off value of ≤ 0.05 at 95% CI was considered significant. Stratified for their sociodemographic, life style and anthropometric characteristics, and, diabetes medical history of participants, the association with knowledge and practice regarding diabetes was analyzed using logistic regression analysis, Chi-square test and independent t-test as appropriate.

Results

Sociodemographic, life style and anthropometric characteristics of participants had been presented in Table 1. Numbers and percentages were used to summarize all categorical variables and mean \pm SD were applied for all continuous variables of one hundred and fifty-seven (157) who were voluntarily enrolled in this study. Mean age of the patients was 33.5 years (SD 06.4), mean weight was 76.2 kg (SD 21.2), while the mean height was 167.8 cm (SD 08.8) and the Body Mass Index (BMI) was 27.1 kg/m² (SD 07.6). BMI has been classified into three categories such as; underweight to normal (16 – 24.9 kg/m²), Overweight (25 – 29.9 kg/m²) and Obese (≥ 30 kg/m²). Based on the results, it shows underweight to normal were 62 (43.1%), Overweight were 52 (36.1%) and Obese were 30 (20.8%). Of the 157 participants 132 (84.1%) were non-smoker, while 13 (08.3%) were smoker and 12 (07.6%) were ex-smoker. With regards to physical activity of the teachers for at least 30 minutes, forty one percent had exercise for at least 1 - 2 days a week, twenty percent of them achieved exercise for at least 3 – 4 days a week, four percent of them carried out exercise for at least 5 - 6 days a week and another four percent doing exercise daily while twenty nine percent of them never exercise. Majority of the teachers teaches elementary school as 71 (45.2%), 43 (27.4%) of the teachers teaches middle school, while 23 (14.6%) were teaches at high school and 20 (12.7%) were previously teaching. These 20 participants who were previously teaching had been either promoted in a higher position or working with different position within the institution. More than a half of the teachers were in the field of literature with 83 (52.9%) while 74 (47.1%) were in the field of scientific. Only five percent of the teachers were diabetic while thirty-one percent of them had diabetic student. Forty-seven percent of the teachers stated that their parents have diabetes, nine percent of them said their brother or sister have diabetes while only one percent of the said their son or wife have diabetes. The prevalence of knowledge of teachers regarding DM shows, 141 (89.8%) for good knowledge and only 16 (10.2%) were poor knowledge. Considering the practices, the prevalence revealed that 106 (67.5%) were of good practices while 51 (32.5%) were of poor practices.

Table 1: Descriptive analysis for the socio-demographic, life style and anthropometric characteristics and diabetes medical history of the study population (n = 157). Data shown are mean \pm SD and frequencies; n (%).

Study Variables	Mean \pm SD or n (%)
Age in years (mean \pm SD)	33.5 \pm 06.4

Weight, kg	76.2 ± 21.2
Height, cm	167.8 ± 08.8
BMI, kg/m ²	
Underweight - Normal	43 (20.8%)
Overweight	62 (43.1%)
Obese	52 (36.1%)
Smoking status	
Smoker	13 (8.3%)
Non-Smoker	132 (84.1%)
Ex-smoker	12 (7.6%)
Physical activity at least 30 minutes	
Daily	7 (4.5%)
5 – 6 days per week	7 (4.5%)
3 – 4 days per week	32 (20.4%)
1 – 2 days per week	65 (41.4%)
Never	46 (29.3%)
The class you teach:	
Ex-teacher	20 (12.7%)
Elementary school	71 (45.2%)
Middle school	43 (27.4%)
High school	23 (14.6%)
What specialty do you teach? Scientific/Literature	74 (47.1%)/83 (52.9%)
Are you diabetic?	
Yes	8 (5.1%)
No	145 (92.4%)
I don't know	4 (2.5%)
Do you have a diabetic student?	
Yes	50 (31.8%)
No	84 (53.5%)
I don't know	23 (14.6%)
Family history of diabetes	
Parents	74 (47.1%)
Son	2 (1.3%)
Wife	2 (1.3%)
Sister/Brother	15 (9.6%)
Knowledge: Poor/Good	16 (10.2%)/141 (89.8%)
Practice regarding diabetes: Poor/Good	51 (32.5%)/106 (67.5%)

Figure 1 describes the sources of information of teachers regarding diabetes. Sixty-six percent of them had friends and relatives as their primary sources, fifty-six percent utilized internet, fifty-five percent used social media, forty percent said media, thirty-seven percent had chosen health institutes workers and nineteen percent picked book and magazine.

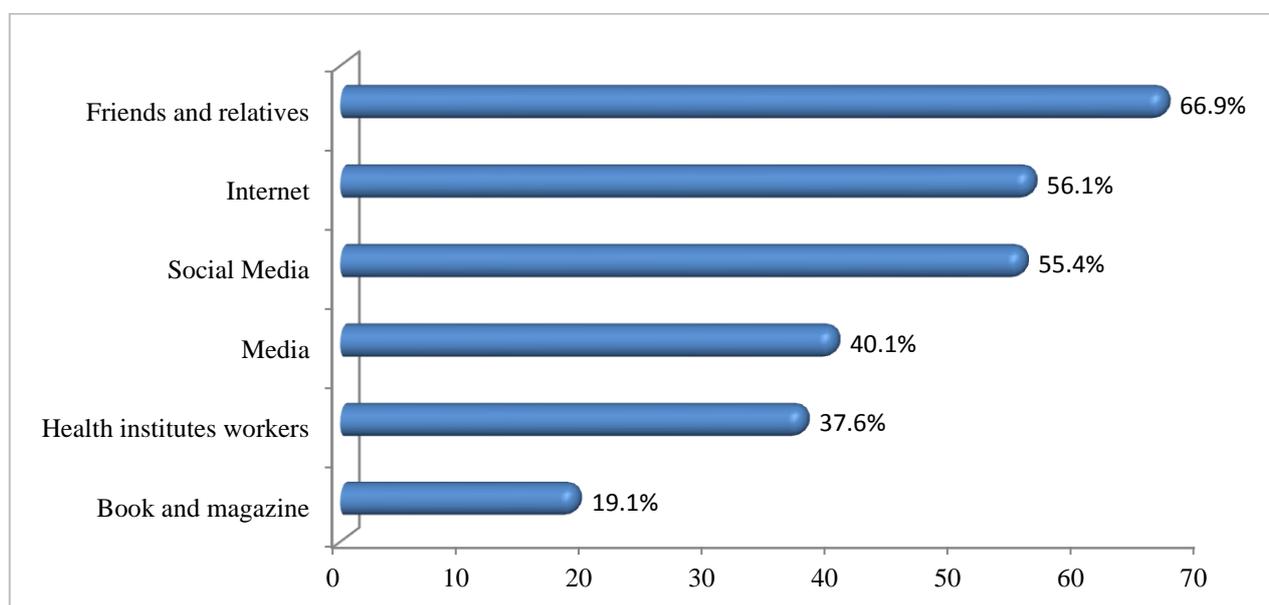


Figure 1: Distribution of the sources of information about diabetes among targeted school teachers.

The part of the data collection tool that evaluated knowledge items about DM is presented in Table 2, and those assessing the practice regarding DM related items are presented in Table 3.

Table 2: School teachers' knowledge about diabetes mellitus (DM; n = 157). Data shown are frequencies; n (%).

Statement	Yes	No	I don't know
1. Have you heard about DM	151 (96.2%)	4 (2.5%)	2 (1.3%)
2. Is DM a curable disease	37 (23.6%)	68 (43.3%)	52 (33.1%)
3. Is DM an inherited disease	106 (67.5%)	25 (15.9%)	26 (16.6%)
4. DM is about blood sugar being elevated	122 (77.7%)	18 (11.5%)	17 (10.8%)
5. DM is infectious disease	2 (1.3%)	148 (94.3%)	7 (4.5%)
6. DM is related to obesity	125 (79.6%)	20 (12.7%)	12 (7.6%)
7. DM disease starts in patients more than 40 years old	105 (66.9%)	36 (22.9%)	16 (10.2%)
8. Continuous feeling of thirst is a symptom of DM	119 (75.8%)	8 (5.1%)	30 (19.1%)
9. Increasing frequency of urination is a DM symptom	144 (91.7%)	2 (1.3%)	11 (7.0%)
10. Slow wound healing is a DM symptom	145 (92.4%)	2 (1.3%)	10 (6.4%)
11. Fatigue is a DM symptom	139 (88.5%)	4 (2.5%)	14 (8.9%)
12. DM patient could have eye and vision problem	133 (84.7%)	5 (3.2%)	19 (12.1%)
13. DM patient could have kidney issue	114 (72.6%)	11 (7.0%)	32 (20.4%)
14. DM patient could have hypertension	84 (53.5%)	23 (14.6%)	50 (31.8%)
15. DM student can participate in school activity	103 (65.6%)	33 (21.0%)	21 (13.4%)

Table 3: School teachers' practice about diabetes mellitus (DM; n = 157). Data shown are frequencies; n (%).

Statement	n (%)
1. Do you think diabetic student should have a special diet?	
Yes	146 (93.0%)
No	04 (02.5%)
I don't know	07 (04.5%)
2. In case a DM student has vomiting, abdominal pain and severe feeling of thirst, does he have:	
Decrease blood sugar	27 (17.2%)
Increase blood sugar	61 (38.9%)
I don't know	69 (43.9%)
3. In case a DM student has palpitation, sweating a lot and can't concentrate, does he have:	
Decrease blood sugar	79 (50.3%)
Increase blood sugar	30 (19.1%)
I don't know	48 (30.6%)
4. If it is available, will you join a special training program to learn how to deal with a DM student?	
Yes	128 (81.5%)
No	18 (11.5%)
I don't know	11 (07.0%)

Table 4 presents the assessed relationship between level of knowledge and the sociodemographic, life style and anthropometric characteristics of participants. Chi-square test and independent t-test were used. Analysis revealed that among these, only level of practice regarding diabetes showed significant relationship ($p < 0.001$).

Table 4: Association between knowledge about diabetes and the participants' sociodemographic, life style and anthropometric characteristics and diabetes medical history (n=157). Data shown are mean \pm SD and frequencies; n (%), and p value of chi-square test and independent t-test.

Characteristics	Level of Knowledge		P value
	Good (n = 141)	Poor (n = 16)	
Age, years	33.5 \pm 6.2	32.9 \pm 7.9	0.440
Weight, kg	75.9 \pm 19.1	78.2 \pm 35.0	0.308
Height, cm	167.5 \pm 9.1	169.7 \pm 4.8	0.130
BMI			
Normal and below	54 (87.1%)	8 (12.9%)	0.535
Overweight and obese	75 (90.4%)	8 (9.6%)	
Are you diabetic? [¶]			
Diabetic	8 (100%)	0	0.338
Non-Diabetic	130 (89.7%)	15 (100%)	
Smoking status			
Smoker	12 (92.3%)	1 (7.7%)	0.756
Non-Smoker	129 (89.6%)	15 (10.4%)	
Practicing physical activity			

Yes	100 (90.1%)	11 (9.9%)	0.856
No	41 (89.1%)	5 (10.9%)	
Teaching			
Ex-teacher	18 (90.0%)	2 (10.0%)	0.079
Elementary school	68 (95.8%)	3 (4.2%)	
Middle school	37 (86.0%)	6 (14.0%)	
High school	18 (78.3%)	5 (21.7%)	
Level of practice regarding diabetes			
Good	102 (96.2%)	4 (3.8%)	<0.001
Poor	39 (76.5%)	12 (23.5%)	

Don't know has been excluded from the analysis.

Table 5 presents the relationship between level of practice regarding DM vs. the sociodemographic, life style and anthropometric characteristics of participants. The analysis revealed that among these variables the teacher's height (p = 0.017) and the nature of the students' grade the teacher is teaching to (p = 0.010) had a significant relationship to level of practice regarding DM.

Table 5: Association between practice about diabetes and the participants' sociodemographic, life style and anthropometric characteristics and diabetes medical history (n = 157). Data shown are mean ± SD and frequencies; n (%), and p value of chi-square test and independent t-test.

Characteristics	Level of Practices		P value §
	Good (n = 106)	Poor (n = 51)	
Age, years	33.5 ± 06.5	33.3 ± 06.1	0.822
Weight, kg	74.7 ± 17.9	79.4 ± 26.9	0.410
Height, cm	166.3 ± 08.2	170 ± 09.0	0.017
BMI			
Normal and below	41 (66.1%)	21 (33.9%)	0.746
Overweight and Obese	57 (68.7%)	26 (31.3%)	
Are you diabetic ?			
Diabetic	05 (62.5%)	03 (37.5%)	0.701
Non-diabetic	45 (31.0%)	100 (69.0%)	
Smoking status			
Smoker	10 (76.9%)	03 (23.1%)	0.450
Non-Smoker	96 (66.7%)	48 (33.3%)	
Practicing physical activity			
Yes	76 (68.5%)	35 (31.5%)	0.692
No	30 (65.2%)	16 (34.8%)	
Teaching			
Ex-teacher	16 (80.0%)	04 (20.0%)	0.010 **
Elementary school	55 (77.5%)	16 (22.5%)	
Middle school	24 (55.8%)	19 (44.2%)	
High school	11 (47.8%)	12 (52.2%)	

§Don't know has been excluded from the analysis.

Table 6 shows the logistic regression analyses estimating the factors among participants' sociodemographic, life style and anthropometric characteristics that influenced level of their knowledge regarding DM subdivided as good and poor. Analysis revealed that among these characteristics, teaching for elementary school (odds ratio = 6.296 and p = 0.018) and level of practices regarding diabetes (odds ratio = 0.127 and p = 0.001) had statistically significant effect.

Table 6: Regression analysis to predict good knowledge regarding diabetes from the sociodemographic, life style and anthropometric variables and diabetes medical history of the participating teachers (n = 157). Data shown are odds ratio (OR), 95% confidence interval (CI) and p value.

Characteristics	OR	95% CI	P value
Age, years	1.015	0.934 – 1.103	0.728
Weight, kg	0.995	0.973 – 1.018	0.678
Height, cm	0.974	0.923 – 1.029	0.355
BMI; Overweight and Obese vs. Normal and below	0.720	0.254 – 2.038	0.536
Smoking; Non-smoker vs. smoker	1.395	0.169 – 11.497	0.757
Practicing physical activity; No vs. Yes	1.109	0.363 – 3.391	0.856
Teaching			
Ex-teacher	Ref		
Elementary school	2.500	0.428 – 14.607	0.309
Middle school	6.296	1.373 – 28.867	0.018

High school	1.713	0.460 – 6.372	0.422
Level of practice regarding diabetes; Good vs. Poor	0.127	0.039 – 0.419	0.001

Logistic regression analysis estimated the investigated factors that influenced level of practice subdivided as good and poor. The relationship with height (odds ratio = 0.927 and p = 0.005) and teaching at elementary school (odds ratio = 4.364 and p = 0.035) and middle school (odds ratio = 3.750 and p = 0.009) were found to be statistically significant.

Table 7: Regression analysis to predict good practice regarding diabetes from the sociodemographic, life style and anthropometric variables and diabetes medical history of the participating teachers (n = 157). Data shown are odds ratio (OR), 95% confidence interval (CI) and p value.

Characteristics	OR	95% CI	P value
Age, years	1.006	0.954 – 1.061	0.830
Weight, kg	0.990	0.975 – 1.006	0.217
Height, cm	0.927	0.880 – 0.978	0.005
BMI; Overweight and obese vs. normal and below	0.891	0.442 – 1.796	0.746
Smoking status; Nonsmoker vs. smoker	1.667	0.438 – 6.339	0.454
Practicing physical activity; No vs Yes	1.158	0.560 – 2.396	0.692
Teaching			
Ex-teacher	Ref		
Elementary school	4.364	1.112 – 17.128	0.035
Middle school	3.750	1.394 – 10.088	0.009
High school	1.378	0.499 – 3.805	0.536

Discussion

We assessed the knowledge and practices regarding DM among diabetic and non-diabetic governmental school teachers from Qassim area and found that 89.8% of the teachers had a good level of knowledge while the rest of them were poorly aware. The level of awareness was better among diabetic teachers and those with a diabetic family member. Nationally, these results are consistent to another study from Qassim by Moheildein et al. that targeted the non-diabetic public and found that 67.4% of them had good general knowledge.^[10] Salem et al demonstrated a good knowledge prevalence of 75% among the general population at Riyadh. However, such knowledge was poorer among diabetic participants that contrasted with our findings.^[18] This may resort on our participants being educated and educators. Internationally, a Bangladeshi study reveal a prevailing average level of knowledge (68%) among DM and non-DM patients (70%). Poor knowledge among both was comparable to our results.^[20] Moderate level of knowledge about DM constituted 47.6% among a Turkish population while the knowledgeable (well-established and very well-established knowledge) represented 15.6%.^[17]

The prevalence of good practice among teachers had 67.5% whereas poor practices had 32.5%. However, good practice among diabetic/with a diabetic family member teacher was double the level among non-diabetic teachers (62.5 vs. 31%), likewise the prevalence of their poor practice (37.5 vs. 69.0%). Lower figures were reported by Salem et al where 43% of respondents had good practices, with diabetic patients scoring slightly better practices (55 vs. 52%, respectively).^[18] In the Bangladeshi study, good practice among non-DM participants scored 33% while their majority had moderate practice (65%), while, the diabetic patients reported 16% good practice and a higher prevalence of moderate practice (72%).^[20] More urbanized country of UAE showed that general practice considering DM scored good in 37.8%, satisfactory in 46.9% and poor in 15.3% of the targeted population.^[19] The better figures in practice noted among our participants reflects their educated nature and the care of the health system to improve the awareness and practice against the epidemic disease.

Our school teachers sourced their information about DM in a decreasing weightage from friends/relatives, internet, social

media and healthcare professionals. Mohieldein et al stated that relatives and friends were the unanimous source of information followed by the media.^[10] in the Turkish study on the opposing view, the context of general knowledge was the major source (35.5%) whereas, TV accounted for 7.9% and healthcare professional accounted for 6.8%.^[17]

We found a strong relationship between knowledge and practice, which means that the knowledge is translated into a good practice. There was a significant positive relationship between each of participants' height and nature of the class taught (elementary) vs. level of practice. Our study is among the few studied relationships between knowledge and practice regarding DM and the population sociodemographic, life style, anthropometric and diabetes medical history in Saudi Arabia. Commenting on the height relationship to knowledge, in our closed society, a taller person would have higher trust and so would be keener to make himself knowledgeable. Logistic regression analysis confirmed a positive relationship between teaching at elementary schools and knowledge about DM. The latter consequently improved the level of practice where a positive relationship amongst the two of them was found. This notation is rational since they are exposed them most to the youngest DM student patients. Moreover, participant's height, ex-teaching and teaching at elementary schools revealed significant effects towards good practice. Several published studies reported significant relationship between knowledge and practice regarding DM and sociodemographic data.^[18-20] However, Mohieldein et al could not predict good knowledge from the sociodemographic characteristics of his population.^[15]

Conclusion

A majority of our participating school teacher had good knowledge and practice about DM. experiences ex-teachers on administrative jobs and teachers at elementary schools score the best amongst all. Diabetic participants and those living with a diabetic patient performed better compared to non-diabetic teachers. Although our population's scores in DM knowledge and practice are comparably good, the public community scores are expected to be lower. Therefore, furthering these scores is mandatory through education, PHCCs and healthcare campaigns.

Limitation

This study had some limitations in collecting data. It didn't include female teacher as it was difficult to reach female section because the lack of female data collectors. Some School managers refused to distribute the survey because they believed it was impeding teachers' work and it wasn't important. Some teachers weren't in the school when the survey was distributed. Lack of facilities in the Ministry of Education for those wanting to apply their research in schools. The difficulty of distribution to some teachers because they do not believe in scientific research.

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Conflict of Interest

No conflict of interest

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Appendices

• Consent form:

- هذا الاستبيان يهدف لمعرفة مدى وعي المعلمين في المدارس الحكومية في عقلة صقور بمرض السكري من أسباب ومسببات وأعراض وعلاج.
- لا يشترط كتابة الاسم
- لن يتم استخدام هذه المعلومات الا لغرض البحث الطبي فقط
- للمشاركة الحق التام بالمشاركة أو الرفض متى أراد
- يأخذ تحينة الاستبيان من ٤ إلى ٥ دقائق تقريباً
- طريقة التواصل مع القائمين بالبحث للمساعدة والاستفسار عن أي شيء:
▪ عمر أحمد التركي - رقم الجوال : ٠٥٤٨٨٧٨٤١٤
- البريد الإلكتروني : omaralturki13@gmail.com
- إذا كنت موافق على المشاركة في هذا الاستبيان فضع علامة صح في الخانة الآتية :

• Questionnaire

أفرا كل سؤال جيداً قبل الإجابة
اختر الإجابة التي تناسبك وتعتقد أنها صحيحة
الرجاء اختيار إجابة واحدة فقط لكل سؤال

١- العمر بالسنوات : () عاماً
٢- الوزن : () كجم
٣- الطول: () سم
٤- هل تلخن؟
() نعم () لا () أظنعت عن التلخين
٥- هل تمارس الرياضة على الأقل 30 دقيقة ؟
() يوماً () ٦-٥ مرات في الاسبوع () ٣-٤ في مرات في الاسبوع () ١-٢ مرات في الاسبوع
() أبداً
٦- المرحلة التي تقوم بتدريسها؟
() لا أنرس () الابتدائي () المتوسط () الثانوي
٧- هل تخصصك في مجال التعليم علمي او أدبي ؟
() علمي () ادبي

الأسئلة الآتية تتعلق بالسكري:

- ١- هل أنت مصاب بالسكري؟ () نعم () لا () لا أدري
- ٢- هل سمعت عن مرض السكري؟ () نعم () لا () لا أدري
- ٣- هل مرض السكري يمكن الشفاء منه تماما؟ () نعم () لا () لا أدري
- ٤- هل مرض السكري وراثي؟ () نعم () لا () لا أدري
- ٥- مرض السكري عبارة عن ارتفاع نسبة سكر الدم؟ () نعم () لا () لا أدري
- ٦- هل يعتبر مرض السكري من الامراض المعدية؟ () نعم () لا () لا أدري
- ٧- هل لمرض السكري علاقة بالسمنة؟ () نعم () لا () لا أدري
- ٨- هل مرض السكري يصيب من عمرهم فوق الأربعين أكثر من غيرهم؟ () نعم () لا () لا أدري
- ٩- من اعراض مرض السكري الشعور بالعطش المستمر؟ () نعم () لا () لا أدري
- ١٠- من اعراض السكري كثرة التبول؟ () نعم () لا () لا أدري
- ١١- من اعراض السكري بطء التئام الجروح؟ () نعم () لا () لا أدري
- ١٢- من اعراض السكري الشعور بالتعب والضعف؟ () نعم () لا () لا أدري
- ١٣- قد يعاني مريض السكري بمشاكل في العين والابصار؟ () نعم () لا () لا أدري
- ١٤- قد يعاني مريض السكري بمشاكل في الكلية؟ () نعم () لا () لا أدري
- ١٥- قد يعاني مريض السكري بارتفاع ضغط الدم؟ () نعم () لا () لا أدري
- ١٦- هل لديك طالب مصاب بالسكري؟ () نعم () لا () لا أدري
- ١٧- هل تعتقد أن الطالب المصاب بالسكري يستطيع أن يشارك بالأنشطة البدنية كأى طالب؟ () نعم () لا () لا أدري
- ١٨- هل تعتقد أن الطالب المصاب بالسكري يحتاج لغذاء بنظام خاص؟ () نعم () لا () لا أدري

١٩- في حال أن طالب السكري أصيب باستفراغ وألم في البطن وعطش شديد هل هو انخفاض او ارتفاع في السكر؟

() انخفاض في السكر () ارتفاع في السكر () لا أدري

٢٠- في حال ان طالب السكري اصيب بخفقان في القلب وتعرّق وتشتيت في التركيز هل هو انخفاض او ارتفاع في السكر؟

() انخفاض في السكر () ارتفاع في السكر () لا أدري

٢١- لو أتيح لك دخول دورات وبرامج للتدريب على التعامل مع حالات السكري فهل ستهتم بالالتزام لها؟

() نعم () لا () لا أدري

٢٢- هل يعاني احد المذكورين أدناه من مرض السكري ؟

() والدك أو والدتك. () ابنك. () زوجتك. () أخوك أو أختك.

٢٣- اهم مصادر معلوماتك عن مرض السكري (يمكن اختيار اكثر من اجابة)

() الاصدقاء والاقارب. () الكتب والمجلات والجراند. () الانترنت العام.
() وسائل التواصل الاجتماعي. () عاملين المجال الصحي.
() وسائل الاعلام المرئية والمسموعة .