Original Research Paper

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Community Medicine

KNOWLEDGE AND AWARENESS AMONG SCHOOL TEACHERS REGARDING TYPE-I DIABETES IN RURAL AREA OF JAIPUR.

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ABSTRACT

BACKGROUND: Keeping in mind the increasing trend of diabetes among Indian population, it is highly important to know the awareness of diabetes among school teachers and to educate them about the risk factors associated with it.

AIM: To study awareness and educate school teachers about risk factors associated with diabetes and its sign and symptoms so that awareness can be created at early age of life.

OBJECTIVE:

- To study knowledge of risk factors of diabetes among teachers
- To educate teachers for factors responsible for development of diabetes
- To educate teachers about sign & symptoms of type-I Diabetes

METHODOLOGY: A cross sectional study was conducted among 237 teachers of 19 schools ofAchrol, Jaipur with a predesigned questionnaire and statistical analysis was done by Microsoft excel.

Sampling technique

A Total population Sampling was done

RESULT: Among 19 schools 237 teachers took part in the study out of which 228/237(96%) were aware about Diabetes and out of 72/228(31%) were aware of both type-I and type-II diabetes and out of which 64/228(28%) were aware about risk factors, signs & symptoms of Diabetes.

CONCLUSION: Teachers participated in the study have moderate knowledge regarding risk factors, sign & symptoms of Diabetes, so more awareness should be created.

KEYWORDS : Diabetes, Teacher, Risk Factors

INTRODUCTION

Diabetes mellitus is a metabolic disorder in which there is a defect in the function of B-cell that located in the pancreas, this in turn results in insulin defection, so the level of glucose increases[1]. Type 1 diabetes, known as juvenile diabetes or insulin dependent diabetes, is a chronic condition in which a little/no enough insulin produced by pancreas[2]. Although type 1 diabetes usually appears during childhood or adolescence, it can also develop in adults. Lack of insulin causes an increase of the blood glucose due to subsequent reduction in glucose moving into cells. The classical symptoms are frequent urination, increased thirst, increased hunger, and weight loss. Additionally, other symptoms may include blurry vision, feeling tired, and poor healing[3,4]. Symptoms typically develop over a short period of time. There are several risk factors[5] for diabetes development including; obesity, eatingbehavior, physical activity [6] and socioeconomic factors[7] . In school age children, diabetes is one of the most common disorders among them[8] . Diabetes can result in critical complications such as problems with eyes, bones and joints, teeth and gums, blood vessels, kidneys, nerves, skin and feet[9,10]. Complications of diabetes can be delayed or prevented by good management and control [11] . Teachers are considered to be the first line of protection for school children. Apart from parents, school teachers are the main care-givers to these children . Knowledge is usually transferred to the children from their teachers either directly through teaching or, which is the most important, indirectly via teacher's attitude and practices. These children see their teachers as role models that they copy imitating their behavior and acquiring their knowledge

METHODS

This is a Cross-Sectional study which was conducted among 237 teachers from 19 schools of Achrol, Tehsil- Amer, Jaipur, Rajasthan. The survey was approved by the research ethics committee of NIMS University. Structured pre-tested self-administered questionnaire was utilized to collect information for this study. Questionnaire was divided into three parts; the first part was about the demographic information of the participant, the second part was asking about type 1 diabetes knowledge and awareness and the third part was on the source of information regarding diabetes. A Total population Sampling was done and statistical analysis was done by Microsoft excel

RESULT

Among 19 schools of Achrol 237 teachers took part in the study out of which 190(80%) were female, 47(20%) were male and 80% was in the age group of 30-40 years, 10% was in the age group of 20-30 years, 8% was in the age group of 40-50 years and 2% was in the age group of 50-60 and 41(17%) were high school graduates, 142(60%) were undergraduates, 54(23%) were post graduates and most of the participants were high school teachers(67%) and rest were primary school teachers(33%). Upon asking participants whether they are diabetic or not, 94% were non diabetic and 6% were diabetic. Assessing participants knowledge 228/237(96%) were aware about Diabetes as a disease and it is of non infectious origin, out of which 72/228(31%) were aware of the difference of both type-I and type-II diabetes and out of which 64/228(28%) were aware about risk factors (modifiable & non modifiable), signs & symptoms of Diabetes. The participants were asked about the source of information about diabetes 55% said they have there information from physicians, 32% from relatives who has diabetes, 10% from educational campaign and 3% from media

Table 1. Characteristics of participants

Characteristics	No.(%)
Gender	
Male	47(20%)
Female	190(80%)
Age group	
20-30	23(10%)
30-40	190(80%)
40-50	19(8%)
50-60	5(2%)
Level of education	
High school	41(17%)
Graduate	142(60%)
Post graduate	54(23%)
Level of school	
Primary school	78(33%)
High school	159(67%)
Personal	

Diabetic	14(6%)
Non diabetic	223(94%)

This table shows 80% participants are female. Majority of participants belong to age group 30-40 (80%). 60% of participants are graduate and 94% are non-diabetic.

Table 2: Teachers' awareness of DM type 1 among school teachers

Questionnaire	Aware (%)
What are the symptoms of low blood glucose?	
Feeling hungry,	5
headache,	2
dizzy,	10
shivering	10
Paleness,	1
unclear vision	10
Too much urination	25
I did not know	5
What is the first step you take in case of low blood glucose?	
Drinking juice or sugary water	15
Eating a snack	10
Stop taking glucose-lowering drugs or insulin injection	2
I did not know	15
Do you know diabetic students in your classroom?	
No	100
Yes	0
Do you read the medical report of diabetic students to know how to deal with?	
No	100
Yes	0
Are you ready to have a diabetic student in your classroom?	
No	25
I did not Know	35
Yes	40
Can the health supervisor at school measure glucose and give insulin injection?	
No	0
I did not Know	99
Yes	1
Does the school offer special meals for diabetic students?	
No	0
I did not Know	100
Yes	0
Do you think that low blood sugar can kill students if they did not receive fast treatment?	
No	15
I did not Know	10
Yes	75
If you see an unconscious diabetic student and you have no glucose meter, how do you deal with him/her?	
Giving him juice or sugary solution	65
Giving him glucose-lowering drug or insulin injection	5
Waiting till you get glucose meter	3
Waiting till a doctor arrives	15
I did not know	12

This table shows awareness regarding diabetes among school teachers. Dizziness shivering and unclear vision is enumerated as symptoms of low blood glucose level by 10% of respondents. 15% and 10% respondentsthat taking sugar drink and eating snack in case of low blood glucose level respectively. No teacher was aware of any diabetic student in their class. None is able to read lab results of diabetic test report. 40% participants of study were ready to have diabetic student in theirn class, 35% don't know if they are ready or not and 25% refused to admit diabetic student in their class. None of the participants are aware of of any diabetic meal provided by school. 75% 0f respondents said that low glucose can cause death. 65% of teachers said that unco nscious diabetic student should be given juice or sugary solution.

DISCUSSION

This study represents the first investigation about teacher's knowledge and awareness about diabetes in Achrol, tehsil-Amer, Jaipur, Rajasthan. This study has produced an up-to-date tool to assess type 1 diabetes awareness and knowledge among teaching staff. The results highlight the satisfactory 30% knowledge of the teachers about diabetes as compared to similar studies Johnson et al indicated that only 7% of teachers thought that their certification course work of chronic health conditions was adequate. The majority of the involved teaching staff in our study though were aware of diabetes, however the knowledge of the causes, signs and symptoms was not as high as expected. Better diabetic education and knowledge to control and treat diabetes at right time can minimize the chances to develop complications of diabetes and thus reduce morbidity and mortality in diabetics [8,9,13]. There are multiple medical and social myths associated with diabetes, especially T1DM, prevalent in society. People think that they cannot be affected with diabetes[12]. Diabetes management requires support and collaboration from family, school, and society, which is sometimes difficult, as they are more discouraging than positive[10].

CONCLUSION

This is the first report to check the knowledge about diabetes at school among achrol region. Our data shows that primary and High school teachers in Achrol region have enough general knowledge on diabetes regarding symptoms. However, they were deficient regarding diabetes complications and management. Furthermore, the majority of teachers did not receive training programs on diabetes at school, although majority of them expressed willingness to pay the required support to diabetic children and attend such programs. Therefore, our study suggests that more efforts should be paid to improve knowledge and awareness of diabetes at school setting and its associated compli cations among primary and High school teachers

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COMPETING INTERESTS :

The authors declare no competing interests.

REFERENCES

1. American Diabetes Association [ADA] (2013): Retrieved from http://www.diabetes.org
2. Diabetes Fact sheet N°312". WHO. November 2016. Archived from the original on 26 August 2013.Retrieved 29 May 2017. Available from: http://www.who.in t/news roo m/fact-sheets/detail/diabetes
3. International Diabetes Federation. Diabetes atlas.Seventh Edition. Brussels: Belgium, 2015
4. World Health Organisation. Noncommunicable diseases Fact Sheet.Se cond aryN onco mmunicable diseases Fact Sheet. 2015 http:// www. who.i nt/me diace ntre/f actshe ets/fs 355/en/
5. Government of India. Registrar General of India.Census of India 2001. New Delhi, India: Ministry of Home Affairs, 2001.
6. Greenhalgh S (1997): Improving school teachers' knowledge of diabetes. Prof Nurse, 13: 150-6
7. Fowler MG,Lubker BB, Johnson MP. Teacher needs assessment for the educational management of children with chronic illnesses. J Sch Health 1988;58:232-5.
8. Allen E,Christie D,Oliver S,Smith F, Strange V, Wong IC. et al. Maximising engagement, motivation and long term change in a Structured Intensive Education Programme in Diabetes for children, young people and their families: Child and Adolescent Structured Competencies Approach to Diabetes Education(CASCADE) BMC Paediatr. 2009;9:57
9. Deeb LC. Diabetes technology during the past 30 years: a lot of changes and mostly for the better. Diabetes Spectr. 2008;21:78–83
10. Azad K,Kalra S,Kumar KM, Zabeen B. Type 1 diabetes in children: Fighting for a place under the sun. Indian J EndocrinolMetab. 2012;16(Suppl 1):S1–3.
11. Prevention and early intervention for diabetes foot problems. Diabetes Monitor website. http://www.diabetesmonitor.com/learning-center/feet/prevention-and-early-intervention-for-diabetes-foot-problems-.htm.
12. Datta M,Kapur A,Mohan D, Raj D, Shanthirani CS,Unwin NC.et al. Awareness and knowledge of diabetes in Chennai-The Chennai urban rural epidemiology study [CURES-9]. J Assoc Physicians India. 2005;53:283–7. pmid:15987011
13. World Health Organization. Attaining the nine global non-communicable diseases targets; a shared responsibility.Global status report on non-communicable diseases. Geneva: WHO. 2014s