

National programme in Turkey: Diabetes at School

Şükrü Hatun and Şeyda Özcan

In 2010, Turkey's Diabetes Program at School was developed as a joint protocol initiated by the Turkish Society of Paediatric Endocrinology and Diabetes in cooperation with the Ministry of Education and Ministry of Health. Objectives of the programme targeted school communities across Turkey in order to raise awareness about type 1 diabetes, provide better diabetes paediatric care, improve nutritional standards for school children and prevent obesity. In just two years, a number of trained teachers detected symptoms of diabetes in 40 undiagnosed children. Şükrü Hatun and Şeyda Özcan explain why and how they achieved so much in so little time.

All school children with diabetes deserve the same educational opportunities as their healthy peers. Teachers and school staff have the responsibility to create an equal opportunity learning environment for all children, including those with diabetes. Educating teachers about diabetes and organizing the school environment for better diabetes care will reduce the problems faced by children with diabetes in school and improve their quality of life. Providing diabetes awareness in the school environment may also assist with early detection and diagnosis.

Children and diabetes in Turkish schools: eliminating the avoidance of care

There are approximately 20,000 children, mostly of school age, living with diabetes (mostly type 1) in Turkey. Unfortunately, many children living with type 1 diabetes and their families encounter problems in accessing the school environment and participating in school programmes. According to a

recent study, upon returning to school, the HbA_{1c} of children with type 1 diabetes increased and they had problems with their diabetes care. Some children with type 1 diabetes are forbidden to participate in physical education and some activities such as school trips are off limits. It has been reported that some infant nurseries and kindergartens refuse registering children diagnosed with diabetes to avoid the responsibility of care. Children with type 1 diabetes are sometimes labelled as sick and are viewed as abnormal due to little awareness or facts about diabetes. On the contrary, children with diabetes should not only be allowed access, but also motivated to participate in all activities with their schoolmates. To accommodate students with diabetes, a school nurse or a counsellor should be trained on basic diabetes care. Other diabetes care requirements may include a private space for measuring blood glucose and injecting insulin as well as the provision of healthy school meals, refreshments and toilet breaks during



Soner Aydın, 13 years old, was diagnosed with type 1 diabetes because his teacher was aware of his symptoms.

Soner Aydın, 13-years-old, is an 8th grade student at Mehmet Soykan Primary School in Sakarya's Akyazı Kuzuluk Village.

In December 2012, Soner was diagnosed with type 1 diabetes at the Kocaeli Medical School Pediatric Service. Soner went to the hospital with his story about drinking excessive amounts of water, waking up at night to urinate, having to frequently 'lay his head on the desk' due to fatigue in the classroom and constantly asking his teacher for bathroom breaks during class. Soner's science teacher, Deniz Göktepe, directed him to the hospital because she had grown suspicious of his situation in school. Deniz weighed the available information and warned her student he might have diabetes, suggesting he have his blood sugar checked only to find out Soner's blood sugar was 384 mg/dl. Deniz relayed to those that thanked her that she had been informed because she attended the educational seminar organized by the Diabetes at School programme. She added that diabetes was a condition familiar to her family, how the latest seminar had helped her realize that Soner might have developed diabetes, and would also inspire her to prepare a meeting about diabetes in her school and become personally involved with Soner's case.

classes. Moreover, teachers should learn the signs of diabetes and be able to recognize symptomatic children earlier in order to avoid serious events such as diabetic ketoacidosis.

One third of children have also developed an increased risk for adulthood obesity and/or type 2 diabetes.

The diabetes care and detection concern in schools becomes even more complex with the growing problem of weight-gain and obesity in childhood. Obesity frequency among the age group of six to sixteen years has increased from 5% to 10.5% (16.3% among high income level group) in the last eight years in Turkey. One third of children have also developed an increased risk for adulthood obesity and/or type 2 diabetes. Childhood obesity is caused primarily by poor lifestyle habits including the consumption of high-calorie or processed junk food such as sugar-sweetened beverages, and physical inactivity. Preventing obesity in adulthood depends mainly on the efforts in childhood and around puberty. In recent years, the government has directed more attention to childhood nutrition, and the Radio and Television Supreme Council (RTÜK) has limited advertisements that promote high-calorie food. Turkey's Ministry of Education has also restricted sales of junk food and sugar-sweetened beverages at schools.

Aim of Diabetes Program at School

The Diabetes Program at School was developed as a joint protocol initiated by the Diabetes Working Group embodied in the Turkish Society of Paediatric Endocrinology and Diabetes in cooperation with the Ministry of Education

and Ministry of Health. Target groups of the Diabetes Program at School include all professional teachers across Turkey, teachers who currently oversee the education of children with diabetes, members of the paediatric diabetes medical team, local representatives of the Ministry of Education and Ministry of Health and school administrators.

The objectives of the programme are to:

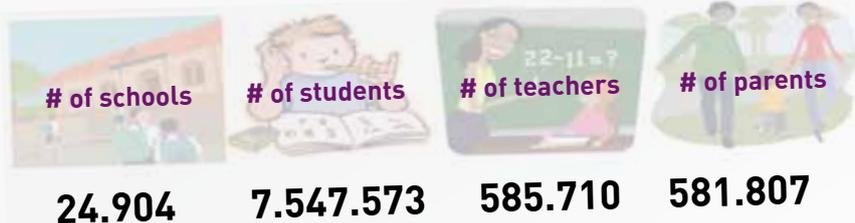
- Raise school community and teacher awareness about type 1 diabetes
 - ▶ ensure early diagnosis of type 1 diabetes and decrease the frequency of diabetic ketoacidosis among school children.
- Provide better care for children with diabetes
- Create a healthy nutrition attitude among school children
- Raise awareness about obesity

Diabetes Program at School materials and activities

The Diabetes Program at School, officially initiated on November 12th, 2010 in Istanbul, succeeded in drawing together a large group of teachers and securing broad coverage from the national press. Each of the teachers who participated in the national meeting went on to organise diabetes meetings in schools with the assistance of local authorities. In 2011, a one-day training meeting was organised across Turkey, which included teachers, government officials, and paediatric diabetes and obesity experts. By World Diabetes Day 2011, the entire campaign was launched and millions of school children and teachers joined the school training sessions that were organised within the scope of the programme and facilitated by diabetes health experts.

Awareness was further reinforced with a poster campaign, entitled, 'Does my child have diabetes?' and distributed to 60,000

Type 1 diabetes training in schools in numbers for the first year



schools across Turkey, reaching approximately 650,000 teachers and 16 million school children at primary and middle schools (figure 1). Two brochures on diabetes and obesity in childhood, a guide on diabetes care of the child at school and a training presentation for teachers were also provided. The Ministry of Education sent an official letter to provincial directorates about diabetes at school, and paediatric endocrinology clinics across the country developed a postal campaign directed to teachers and school administrators about caring for a child living with diabetes in the school environment. Film was utilized as a major component

of instruction for the Diabetes Program at School and four short films covered topics such as diabetes care management, prevention of childhood obesity, and voices of children living with diabetes. A programme website offering education materials and other forms of media was launched (www.okuldadiyabet.org) to expand information and awareness across all of Turkey.

Impact of the Diabetes Program at School

By the end of 2011, over 7.5 million students, and nearly 600,000 teachers were trained in 25,000 schools by a variety of diabetes healthcare experts. Since the first training in 2010, a large number of additional students and teachers joined the school training activities. In 2012, ‘Teacher Achievement Awards’ were established and given to seven teachers, each from a different region of Turkey.

To the credit of the programme, 30 teachers who had undergone diabetes training helped detect diabetes in 40 children.

Programme effectiveness evaluations were given before and after training to the teacher participants. After one initial survey, 85% of the surveyed teachers noted that they were satisfied with the

diabetes education, 89% noted that the programme was informative about the symptoms of diabetes and, in another surveyed group, 99% of teachers found the website useful for retrieving relevant information. The results of the survey showed that the online education platform and website helped teachers understand the symptoms of diabetes

and lead to increased awareness for early diagnosis. The teachers also reported greater understanding of the healthcare needs of students with diabetes at school, and the importance of healthy eating, such as avoiding junk food at school. To the credit of the programme, 30 teachers who had undergone diabetes training helped detect early diagnosis of diabetes in 40 children.

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Website: www.okuldadiyabet.org

Further reading

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Figure 1. Awareness poster regarding the symptoms of type 1 diabetes