

RELATIONSHIP WITH PEERS OF YOUNG SCHOOL-AGED CHILDREN WITH TYPE 1 DIABETES

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SUMMARY

Background: Functioning in a peer group plays an important role in child development. Building self-esteem of children depends on many factors such as physical health, self-evaluation of their physical performance, academic achievement, social support, family relationships, as well as relationships with peers and teachers. Importance of contacts with peers increases during school-age. At this time children are not able to reject the opinion of other people and subject their behaviour completely to the expectations of their peers. When the need for emotional contact is not satisfied, the complex of being different appears. Isolation within group causes a sense of inferiority, the child becomes passive and resigned. Children, who are chronically ill, rejected or isolated often follow negative emotions in their actions, they become aggressive towards other children or do not want to continue learning. Often the decision about an individual teaching plan results in further isolation of the child. The child's position in the peer group affects the developing personality, self-confidence and self-esteem.

Aim of the study: The aim of the study was to determine the interpersonal relationships of young school-aged children with type 1 diabetes in their peer groups.

Material and methods: The study was conducted on children with type 1 diabetes and their parents, who are supervised by Clinic of Diabetes, Regional Medical Center in Opole. The research tool used in both groups was a questionnaire consisting of open and closed questions elaborated by the authors of this study.

Results: 73% (41) of evaluated children declared that diabetes does not hinder their performance at school. 93% (55) children claimed that they do not hide their condition from their peers. In addition, 61% (34) talk about their illness with their peers and 69% (38) of them can count on their peers' help in self-control of diabetes. 71.9% (46) of parents of children with type 1 diabetes allow their children to participate in school trips and 68.8% (44) to participate in school competitions.

Conclusions: In most children, diabetes does not affect children's performance at school. They participate in classes, are accepted and liked in their peer group. Chronically ill children should be able to participate in all types of activities as much as their healthy peers. It seems necessary to continue studies on performance of young school-aged children with type 1 diabetes in their peer group.

KEYWORDS: diabetes, child, school, parent

BACKGROUND

In chronically ill children, being an active part of a group of peers, positive thinking and self-confidence are shaped and strengthened as children grow older and play an important role in their lives. Self-esteem in the eyes of children depends on and is based on: physical health, self-evaluation of their physical performance, academic achievement, social support, solving social problems, relationships at home and school with peers, and teachers. Chronic illness affects every one of these

areas of the child's life, hindering its performance in the peer group [1-3].

In the last decade it is possible to notice an increase in prevalence of type 1 diabetes among the population of children already suffering from this disease. In studies conducted in the Pomeranian Voivodeship, Mysliwiec et al. observed that between 1998 and 2006 the incidence of type 1 diabetes in children aged 15 and under increased almost twice. In 1998 the morbidity amounted to 10.4%, whereas in 2006 to 20.5% [4].

Diabetes is not noticeable to others, but awareness of the difference may cause isolation of children [5]. Due to the illness children are rejected by their peers. These children have difficulty dealing with new situations such as living with the disease and limitations that this disease causes at school. Diabetes requires a lot of self-control, respecting dietary restrictions and exercise, which is often incomprehensible to their peers.

The need for contact, acceptance and development of early-childhood emotional bounds is very strong in children and becomes dominant in their behavior. When the need for emotional contact is not satisfied, the complex of being different appears. [2,3] When the child becomes aware that it is not accepted in the peer group, it feels inferior which presents with passiveness, resignation, and a sense of somatic disease. Chronically ill children, who are not accepted by their peers, become aggressive and act out. In these pupils the fear of being punished or ridiculed often dominates. Children who are rejected or isolated by peer group everyday face negative emotions such as aggression towards other children and aversion to learning. At this point parents decide to teach the child individually, which results in further isolation. The child's position in the peer group affects the developing personality, self-confidence, self-esteem and emotional comfort in social relations [7].

Functioning in a peer group includes also a constant search for self-esteem and positive self-evaluation. It can affect the child's general emotional condition, determining the motivation to take actions typical for young school children. Chronic illness, meaning permanent loss of health, often leads to lower quality of life in children [2,3].

In Poland, there are currently only few studies examining the specific aspects of functioning of diabetic children in the society. Therefore, it is difficult to use previous conclusions for planning the study. Research conducted in this field may explore the area that is interesting from both a scientific point of view and practical one, as limitations resulting from a chronic disease shape relationships among peers. Similar studies were conducted in 2010/2011 by Małkowska-Szcutnik et al, but these studies focused on adolescents. They have shown that the self-esteem of adolescents with diabetes may be primarily reflect the ability to cope with the limitations resulting from the disease [1].

THE AIM OF THE STUDY

The aim of the study was to determine the interpersonal relationships of children with type 1 diabetes in the peer group in the early school age.

MATERIALS AND METHODS

The study was conducted in the Provincial Diabetes Outpatient Clinic, Regional Medical Center in

Opole. The study lasted 3 months, from October to December 2013.

The study group consisted of 59 children with type 1 diabetes, and 64 parents who were legal guardians of these children. In five cases, both parents participated in the study. In the study a diagnostic survey based on a questionnaire was used. The questionnaire was formulated by the authors. The questionnaire for children included questions about their functioning in the peer group, the practical aspects of life with disease and limitations caused by it. The questionnaire for parents included questions about the strategies adopted for raising an ill child, its functioning at school, and concerns of parents related to child's condition.

Children filled out questionnaires by themselves, after written parental consent.

Children in the largest group included in the study have been sick for 4–6 years (37%). 22% of children have been sick for 6–10 years, and the fewest children have been sick for less than a year. Children's age varied. Most of the evaluated children were 10 years old (67.8% (40)). Children aging 9 years 11.9% (7), 8 years 8.5% (5) and 7 years 10.2% (6) constituted a similar percentage. One evaluated child was 6 years old (1.7%). Girls accounted for the majority of the study population - 57.6% (40).

An MS Excel spreadsheet was used to compile the results.

RESULTS

The opinions of children with type 1 diabetes on their functioning in the peer group.

On the question of whether diabetes make their functioning at school more difficult, the vast majority of children (73% 43) responded that they do not feel limited by the disease. Only 20% (11) of the children declared to have such difficulties.

The most frequent answers to the questions about the situations when diabetes interferes with daily functioning at school included: the need to control blood glucose levels in classroom as it is a distraction; visiting a nurse during class; and breaks that are too short, as children have to measure glucose levels and eat a sandwich, which lasts the entire break. Children were also concerned about the injection or insulin pump falling out, need to take the pump out during physical education classes, as well as blood glucose tests and insulin injections during the class, when peers are around.

The answers to the questions "Did this happen to you that you couldn't do the following activities because of diabetes in last 6 months?" presented below aimed at evaluation of the scale of the problem caused by diabetes 1 in functioning in the peer group. The answers to this question were presented on the Fig. 1.

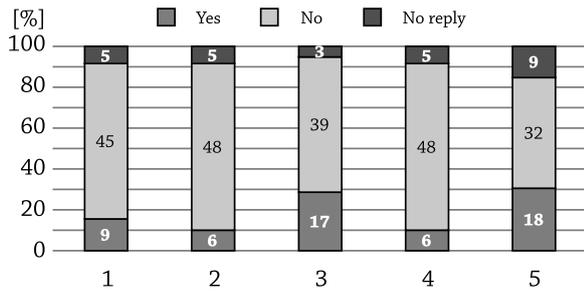


Figure 1. Limitations in children's functioning among peers. Did it happen to you that you couldn't do the following activities because of diabetes in last 6 months? 1 - Play soccer or other sport game 2-Go to your friend's birthday party, 3 - sleep at friend's house, 4 - play with friends, 5 - participate in the physical education class.

93% (55) of children do not hide their condition from their peers. In addition, 61% (34) talk about their illness with their peers and 69% (38) of them can count on their peer's help in self-control of diabetes. Nearly all children with diabetes report that they have a lot of friends - 93% (55). The question of whether they have a best friend with whom the child can talk about the disease and whom they may turn to when they feel worst, 86% (50) of surveyed children replied „yes”.

89% (52) of children answered that they feel most comfortable among people they know, and 91% (53) that they like making new friends. 80% of surveyed children (47) claimed that they go to school trips. 75% of children participate in extracurricular activities (44) and the majority of them take part in school celebrations, as co-organizers or participants - 66% (39).

Parent's opinion on performance of children with type 1 diabetes in the peer group.

The following analysis was conducted based on parent's answers to the question about their feelings, when they learned about their child's illness (Tab 1).

The table shows that fear was one of the parent's primary feelings when they learned about their child's disease. This was confirmed by 84.4% (54) of parents. As many as 95.3% (61) declared that they were not prepared for such information. 56.3% (36) of parents indicated that they also felt uncertainty. On the other hand 85.9% (55) declared determination.

Children right after diagnosis are hospitalized and connected to the pumps that administer insulin along with glucose to normalize blood sugar. It is not until the second day that insulin is administered subcutaneously with an insulin pen, and the child and parents are trained about type 1 diabetes. As many as 70% (45) of parents declared that their child had a break at school caused by a diagnosis of type 1 diabetes. Table 2 presents the school absence of children because of diabetes.

Another question included in the questionnaire focused about allowing a diabetic child to participate in certain events / situations. The answers to this question were presented in Table 3. The analysis of the parent's answers indicated how often their children sleep over, go to school trips, participate in sport competitions, go to mountain trips and go to their friend's birthdays by themselves.

Table 1. Parents' reactions to the information about disease of their child

Categories of questions	Categories of answers	No	%
Fear	No	10	15.6
	Yes	54	84.4
Uncertainty	No	36	56.3
	Yes	28	43.8
Decisiveness	No	61	95.3
	Yes	3	4.7
Sadness	No	26	40.6
	Yes	38	59.4
Determination	No	55	85.9
	Yes	9	14.1
Surrender to fate	No	60	93.8
	Yes	4	6.3
Other	No	64	100.0
	Yes	0	0

Table 2. The duration of school absence after diagnosing diabetes

No	Break in weeks	L	%
1	1	9	14.1
2	2	25	39.1
3	3	3	4.7
4	4	5	7.8
5	6	1	1.6
6	8	1	1.6
7	No answer	20	31.3
Total		64	100.0

Table 3. Would you allow:

No	Categories of questions	Categories of answers	No	%
1.	A sleepover at a friend's house?	No	28	43.8
		Yes	36	56.3
2.	Child's participation in a school trip	No	18	28.1
		Yes	46	71.9
3.	Your child's participation in sports competition	No	20	31.3
		Yes	44	68.8
4.	Child's participation in a trip to the mountains	No	23	35.9
		Yes	41	64.1
5.	Your child to go to their friend's birthday party	No	16	25.0
		Yes	48	75.0

When asked about the child's participation in various events out of home, most parents responded that they agreed to such participation. Considering sleeping over in a friend's house, 56.3% (36) of parents said that they would allow their children to stay over. As many as 68.8% (44) allow their children to participate in sport competitions and 64.1% of parents (41) to participate in a school trip to the mountains. 75% (48) of surveyed parents allow their children to attend birthday parties. When asked about the increased supervision during child's participation in events in peer group, 81% (51) of parents said „yes”. Only 8% (5) of respond-

ents said that the child does not need to be supervised by an adult.

The most frequently encountered answers to the question regarding child's contact with peers included: the child is liked and accepted, the illness does not affect child's relationships with peers, the child is treated like any healthy kid, the relationships are as they were before the disease was diagnosed.

The last question addressed to parents of children with diabetes was: "How did the head teacher and other school teachers respond to information about the child's illness?"

As many as 3 out of 4 parents declared that teachers of their child reacted with fear to their child's diabetes. In addition, 95% (61) of the surveyed parents responded that the teachers did not seem puzzled by their child's illness.

DISCUSSION

The results show that most children with diabetes do not feel limited by their condition at school. Bogumiła Pecyna claims that children with diabetes have an ambivalent attitude between anxiety, haste and the need for being left in peace and security with loss of autonomy and increased dependency [8]. A high percentage of positive answers to the question about acceptance and peer help suggest that there is no ambivalence among school children.

The answers regarding the procedures the pupil must do in order to control diabetes well suggest that the breaks between classes are too short to precisely perform blood glucose test, insulin infusion and eat the meal. Children also note that the pump that they carry with them 24 hours a day creates discomfort in physical education classes, which is not only caused by wearing it, but also the possibility of ripping the infusion needle out. These children also reported that insufficient self-control of type 1 diabetes during classes affects how they feel, which is reflected in their educational performance. The emotional state of a child caused by chronic disease determines the motivation to undertake actions that are characteristic of this child [1–3].

By issuing educational brochures, the Ministry of Health emphasizes: "*An independent excursion of the child with diabetes mellitus requires cooperation between the head teacher, parents and child* [9]". The results of the study indicate that children with type 1 diabetes are going on school trips and are eager to take part in organized extracurricular activities, which demonstrates their sense of security and good co-operation between parents, their children and head teachers.

Cytowska describes: "*For some children sport games and plays with peers become unavailable*". A chronically ill child may not be able to attend kindergarten or school and therefore, may feel isolated and different from its peers. "[10] The surveyed parents did not write a single sentence in the questionnaire about any lack of accept-

ance in the peer groups of their children. Summing up the above answers, it can be stated that children with chronic diseases, such as diabetes, have no problem in relationships with peers.

The same author also emphasizes that chronic illness, due to absences at school and low physical and mental capacity usually, is the cause of problems in compulsory education [10]. In the presented study, it was found that most of the children at the initial stage of the disease actually have a break, which results from e.g. a need to stay in the hospital and visit the clinic frequently. However parents cooperate well with the school and there are no educational problems in the studied population.

Parents are mostly responsible for supporting a child with diabetes in education and health care professionals and the school staff plays a secondary role. The standard care in children with diabetes involves teaching the child and parents about self-care and self-control (glucose measurement, subcutaneous insulin injection, estimation of energy demand and management of acute complications of diabetes, such as hypoglycemia and hyperglycemia). [9] Unfortunately, there are no regulations on those elements of childcare that are intended to keep the child healthy. It is assumed that the actions taken by the child's guardian at school should be analogous to those undertaken in urgent situations by the parents [9]. A different interpretation that a child's guardian at school would not be able to perform any of the activities ordered by a physician would put the child at risk of a loss of health or life, and encumber the guardian with a charge of poor childcare. The school should make it possible for diabetic children to participate in all kinds of activities on the same bases as their healthy peers, so they can feel good and function in full physical and intellectual capacity [11]. The ability to cope with illness in school and at home will have a tremendous impact on the treatment effect, health and quality of life of the child in the future.

Chronic illness is not a mystery for most parents, which is a very good thing especially when a child openly talks openly about its illness without making a secret of it. Such behavior allows the student to feel comfortable among his / her peers. The child does not have to hide the activities that involve self-control of type 1 diabetes, including control of sugar levels and insulin injections. The feeling of uncertainty related to child's illness can be explained by the parent's initial ignorance of the illness itself, the determination results from a feeling of responsibility for the sick child. The teachers did not seem to be puzzled regarding the child's disease, which is normal for a person, who wants to help a sick child in to function during class normally. The teacher, who spends several hours per day with a child, is the second most important guardian of the child.

The education of ill children, their peers, parents and teachers is an important element for functioning of a child with type 1 diabetes at school. Sochocka empha-

sizes the importance of communicating the knowledge of chronic illness among pupils, their parents and the school staff [12].

The results of this study are not fully representative due to the small number of respondents and therefore, should not be generalized. However, they can be used to formulate many conclusions. Studies on performance of young school-aged children with type I diabetes in their peer group should be continued, because still there are very few publications focusing on this subject. The knowledge of interpersonal relationships of children with type I diabetes in peers group should help to improve their psychosocial functioning, thereby improving health and the quality of life of both children and their parents.

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