

Araştırma Makalesi/ Research Article

The Needs of Primary School Children with Chronic Disease: Parents' and Teachers' Perceptions

Kronik Hastalık Tanısıyla İzlenen Çocukların Okuldaki Gereksinimleri: Ebeveyn ve Öğretmen Perspektifinden

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ABSTRACT

Objective: The study was conducted in Türkiye to determine the needs of primary school children with chronic diseases as reported by their parents and teachers.

Methods: This is a descriptive study. The study was conducted in 10 schools in Ankara between 02.05.2018-06.06.2018. The study sample consisted of 69 parents and 69 teachers of children with chronic diseases. The Parent and Child Descriptive Information Form, Teacher Descriptive Information Form and Determining the Needs of the Primary School Children with Chronic Disease Form were used to collect data.

Results: Children had been treated for an average of 4.63 ± 2.84 years with a diagnosis of chronic disease. 50.7% of parents and 75.4% of teachers stated that they did not feel sufficient to manage the child's chronic disease at school. Parents stated that all children who monitored blood glucose at school needed help with monitoring, and 71.4% of teachers stated that they did not have information about the blood glucose monitoring needs of children. While 17.4% of the teachers stated that children had problems with their teachers, the rate of parents who expressed this problem was 7.2%.

Conclusions: In conclusion, differences exist between parents and teachers when identifying the needs of children with chronic diseases in a school environment. Collaboration between parents and teachers is believed to help address children's needs at school.

Keywords: Child, chronic diseases, parents, school needs, teachers

ÖZ

Amaç: Araştırma Türkiye'de kronik hastalığı olan ilkökul çocuklarının ebeveynlerine ve öğretmenlerine göre okuldaki gereksinimlerinin belirlenmesi amacıyla gerçekleştirilmiştir.

Yöntem: Tanımlayıcı bir araştırmadır. Araştırma, Ankara'da bulunan 10 okulda, 02.05.2018-06.06.2018 tarihleri arasında yürütülmüştür. Araştırmanın örneklemini 69 ebeveyn ve 69 öğretmen oluşturmuştur. Verilerin toplanmasında, 'Ebeveyn ve Çocuk Tanımlayıcı Bilgiler Formu, Öğretmen Tanımlayıcı Bilgiler Formu, Kronik Hastalığı Olan İlkokul Çocuklarının Okuldaki Gereksinimlerini Belirleme Formu ve Okul Tanımlayıcı Bilgiler Formu kullanılmıştır.

Bulgular: Kronik hastalık tanısıyla izlenen çocukların ortalama tedavi süresi (yıl) 4.63 ± 2.84 'tür. Ebeveynlerin %50,7'si ve öğretmenlerin %75,4'ü çocuğun kronik hastalığını okulda yönetmek için kendilerini yeterli hissetmediklerini belirtmiştir. Ebeveynler okulda kan şekeri takibi yapan tüm çocukların takip konusunda yardıma ihtiyaç duyduğunu belirtirken, öğretmenlerin %71,4'ü çocukların kan şekeri takip ihtiyaçları konusunda bilgi sahibi olmadıklarını ifade etmiştir. Öğretmenlerin %17,4'ü çocukların öğretmenleriyle sorun yaşadığını belirtirken, bu sorunu dile getiren velilerin oranı %7,2'dir.

Sonuç: Sonuç olarak, kronik hastalığı olan çocukların okuldaki gereksinimlerini belirlemede ebeveynler ve öğretmenler arasında farklılıkların olduğu görülmektedir. Okul sağlığı hizmetlerinde ebeveynler ve öğretmenler arasındaki işbirliğinin çocukların gereksinimlerinin karşılanmasını sağlayacağı düşünülmektedir.

Anahtar Kelimeler: Çocuk, kronik hastalık, ebeveyn, okul gereksinimleri, öğretmen

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Introduction

A chronic disease is a condition which can be caused by pathological changes, may cause permanent insufficiency, and cannot spontaneously regress and heal completely. In chronic diseases, special treatment and training are required to rehabilitate the patient, and medical care, supervision, and control are required for at least 6 months (WHO, 2023). The number of children with chronic disease is presently on the rise (CDC, 2023; CDC, 2021).

Studies on the subject show that children with chronic diseases have different physical, emotional, psychosocial/behavioural, and academic needs in comparison with their healthy peers (Mardiyani et al., 2017; Sevilla, 2017; Quach and John, 2018). These needs are influenced by many factors, such as the child's age, developmental characteristics, disease, and diagnosis (McElfresh et al., 2011). In a child with chronic disease, education is one of the factors affecting his/her needs. While the child's needs are met by the family up to this period, they are met by the school staff or the parent when the child starts school (Amillategui et al., 2009).

Childhood chronic disease should be managed by a team. This team should include a school physician, school nurse, dietitians, teachers, school administration, parents, a social worker, a school psychologist, and a psychological counsellor (Best et al., 2012). Managing the care of children with chronic diseases in schools is one of the responsibilities of the school nurse. In schools where there is no school nurse, a significant part of the responsibility falls on parents and teachers (American Diabetes Association, 2009). It is essential that parents and teachers play active roles in the care of the child. It is very important that the parent and teacher inform each other and remain in contact (McElfresh et al., 2011). Cooperation between parents and teachers is essential for the healthy maintenance of children's physical, cognitive, emotional, and social development (Davis et al., 2021). Teachers should cooperate with parents in assessing the child's problems and the effectiveness of the child's care program (McClanahan et al., 2015). On the other hand, parents should also cooperate with the school management in order to ensure the best management of the child's chronic disease at school (AAP, 2014).

Children with chronic diseases have different physical, emotional, and psychosocial needs compared to their healthy peers. They may need medication and blood glucose, nutrition, and

excretion monitoring at school (Beacham et al., 2016; O'Connor et al., 2016). Taking medication on an as-required basis was reported as a barrier to access. The most common concern regarding taking medication was a lack of privacy. Adverse effects of medication were highlighted as a cause of both non-adherence and poorer school performance (Smith et al., 2008). Associations between chronic diseases and emotional, behavioural, social, and overall vulnerabilities were reported by teachers and children (Laurens et al., 2019). A review and meta-analysis showed that academic outcomes were worse among students with chronic disease compared with healthy controls. Children with chronic disease had higher rates of school absenteeism compared with their healthy peers or population norms. It was indicated that chronic disease may be associated with poorer school relationships compared with students without chronic illness. Classroom behaviour problems, including aggression, withdrawal, and lower energy levels were recorded (Lum et al., 2017). The need for school-based chronic disease support, including related policies, procedures, and education on chronic disease and first aid in primary schools, was described (Al Aoolo et al., 2017). Firstly, the needs of children in schools should be determined. It is then necessary to determine whether the child can meet these needs on her/his own or whether she/he needs help (McElfresh et al., 2011).

This study was conducted to determine the needs of primary school children with chronic diseases according to their parents and teachers. The research questions are: a) What are the physical needs of primary school children with chronic diseases according to their parents and teachers? b) what are the psychosocial needs of primary school children with chronic disease according to their parents and teachers? and c) what are the academic needs of primary school children with chronic disease according to their parents and teachers?

Methods

This is a descriptive study to determine the needs of primary school children (6-12 years old) with chronic disease according to their parents and teachers.

Sampling

The study was conducted at 10 primary schools of the Ministry of National Education, in one of the district centres of a metropolis in Türkiye. None of the schools included in the study had a school nurse, infirmary, or emergency action plan for chronic

diseases. Parents and classroom teachers of children with chronic diseases diagnosed by physicians, who were not absent for more than a month, who were literate, and who had no mental or psychological health problems were included in the study. The study population consisted of the parents and teachers of all children with chronic diseases in the selected primary schools. Sample selection was not performed in the study. The study sample consisted of the parents and teachers of children who were studying in selected primary schools, who had a chronic disease, and who attended school between 02 May 2018 and 06 June 2018.

Parents and teachers met the inclusion criteria of the study and agreed to participate in the study. There were a total of 158 children with chronic disease in 10 primary schools where the study was conducted. The study sample consisted of 158 parents and 109 classroom teachers. In the parental sample group, seven out of 158 parents could not be reached, one parent was excluded because of a mental health disorder and one parent refused to participate in the study. Therefore, 149 parents were given forms. In all, 74 of the forms (49.7%) given to parents were returned. Four of the 109 teachers in the sample group of teachers could not be reached and eight refused to participate in the study. One teacher had more than one child with chronic disease in his/her class. For this reason, a total of 149 forms were given to 97 teachers to be filled in separately for each student. In all, 69 of the forms (71.1%) given to teachers were returned. Data on 69 children provided by both parents and teachers were evaluated. Therefore, the study sample consisted of 69 parents and 69 teachers (Figure 1).

A power analysis was performed to determine the required sample size. Since a similar study could not be found, a power analysis was performed after the research was completed. As a result of power analysis using the Gpower 3.1 program, 69 samples were found to be sufficient with 5% error and 80% power.

Inclusion criteria for children

Having a chronic disease diagnosed by a physician,

No school absences for a month or more,

Inclusion criteria for parental

Literacy,

No mental or psychological health problems

Inclusion criteria for teacher

Child being a classroom teacher

Measures

Data were collected using the Parent and Child Descriptive Information Form, Teacher Descriptive Information Form, Form for Determination of Needs of Primary School Children with Chronic Diseases and School Descriptive Information Form.

Parent and Child Descriptive Information Form

The Parent and Child Descriptive Information Form was prepared by the researchers in the light of the literature (AAP, 2016; Bell et al., 2016; Berry et al., 2017; Forrest et al., 2011). The form consists of two sections. The first section contains descriptive information about the parents. In this section, there are six questions about the parents' sociodemographic characteristics, such as age, employment status, education level, socioeconomic status, and number of children, and two questions about the parent's ability to meet the child's health needs. In the second section, there are four questions about the sociodemographic characteristics of the child (gender, age, class, time spent in school). There are six questions regarding the diagnosis and treatment of the child (diagnosis, age of diagnosis, treatment, starting date of treatment, awareness of the child's disease, and whether the school administration and teachers have information about the child's disease).

Teacher Descriptive Information Form

The Teacher Descriptive Information Form was prepared by the researchers in the light of the literature (Amillategui et al., 2009; Miller et al., 2016). On the form, there are four questions about the sociodemographic characteristics of the teacher such as age, education, and working experience, and nine questions about the student with chronic disease.

Determining of Needs of Primary School Children with Chronic Diseases Form

This form is composed of three different sections. Within the scope of physical needs, there are questions regarding medication, monitoring, nutrition, and physical activity in the school. The section on psychosocial needs includes questions to determine the child's need to communicate with friends, teachers, and parents at school and participate in activities. Within the scope of academic needs, questions were asked about the child's school attendance and school success. At the end of all three sections, parents were asked about their child's physical, psychosocial, and academic well-being in the school. The data collection form is a tool with options related to the requirements or

answers such as yes / no / don't know (AAP, 2016; Al Aoola et al., 2017; Amillategui et al., 2009; Beacham et al., 2016; Bell et al., 2016; Berry et al., 2017; Best et al., 2012; Davis et al., 2021; Forrest et al., 2011; He et al., 2014; Kiliş-Pstrusińska et al., 2014; Laurens et al., 2019; Lum et al., 2017; Mardiyani et al., 2017; O'Connor et al., 2016; Quach et al., 2018; Sevilla, 2017).

The Determining of Needs of Primary School Children with Chronic Diseases Form was then sent to seven faculty members, four of whom are specialists in paediatric nursing and three in the field of public health nursing, who evaluated the questions and options on the data form. After expert opinions were gathered, the scope validity index was created by using the Davis Technique. It is recommended that items with a mean score of less than 0.70 be removed from the form (Davis, 1992). In our study, the scope validity ratio of each item was between 0.71 and 1.00. No item was removed from the data form sent to the experts. However, the wording of the third question in the physical needs section was changed. The first option of the 14th question ('I don't know' option) was omitted. In the 20th question, 'regarding breathing' was added. The question roots of questions 24, 25, 26, and 27 in the section on psychosocial needs have been changed. The options for the 34th question in the academic needs section were rearranged.

School Descriptive Information Form

The form is based on the literature and the researchers' own experiences. The School Descriptive Information Form contains a total of twelve questions regarding the name of the school, the number of teachers and students, the number of children with chronic diseases in the school, the emergency action plan, and the health personnel in the school (Davis et al., 2021; Lum et al., 2017; McClanahan et al., 2015).

Data Collection

The schools where the research was conducted were visited, and the administrators were informed about the study. In this interview, the School Descriptive Information Form was completed, and the school counsellor was interviewed to obtain a list of children with chronic diseases. In schools that did not have a list of students with chronic diseases, the list was created by the researcher. Appropriate days and times for the research were arranged with school administrators. Classroom teachers who taught children with chronic diseases were informed about the study. Written consent was obtained from teachers who wanted to participate in the study.

Teachers completed the Teacher Descriptive Information Form and the Form for Determination of Needs of Primary School Children with Chronic Diseases. It took approximately 15 minutes for the teachers to complete these forms at their schools.

Parents of some children with chronic diseases were contacted at school and informed of the study. Written consent was obtained from parents who wanted to participate in the study, and each was given a form. The Parents and Children Descriptive Information Form and the Form for Determination of Needs of Primary School Children with Chronic Diseases were completed by the parents. It took approximately 20 minutes for parents to complete the forms at their children's school or at home. The teachers handed the forms to the parents and returned them to the researcher after completion in cases where the researcher could not contact the parents. During the process of delivering the forms to the parents through the teachers, attention was paid not to disclose which children in the classroom had chronic diseases. In this context, the teachers personally provided the forms to parents who came to the school. If the parent could not be reached, the forms were placed in the child's school bag without informing the other children, and the parents were contacted. If the data collection forms sent to the parents and given to the teachers were not returned for any reason, such as being lost or forgotten, one reminder was given.

Data Analysis

The data obtained from the study were evaluated by using the SPSS 20.0 (IBM Corp. in Armonk, New York, USA) packaged software, and the values were expressed as numbers and percentages. The independent study variables were demographic characteristics such as age, diagnosis, duration of treatment of school children with chronic disease; age, educational status, income and working status of parents, and age, gender, and educational status of teachers. The dependent variables consisted of the children's physical, psychosocial, and academic needs according to their parents and teachers. Statistical analysis of open-ended questions was performed on the respondents in the study. Open-ended questions were grouped and coded by the researchers. While groups of open-ended questions were coded, similar answers were coded together.

Ethics Statement

Written permission was obtained from the Ethics Commission of the Gazi University (number: 77082166-302.08.01-E.88799, date: June 11, 2018) and the Ankara Provincial Directorate of National

Education (number: 14588481-605.99-E8311396, date: April 26, 2018) to conduct the research. Participants were informed about the aims of the study and then asked whether they agreed to participate in the study; each parent and teacher then signed an informed consent. Participants were told that they could withdraw from the study at any time and that all information would be kept strictly confidential. Identification information was not written on the data collection forms. Instead, they were numbered. Voluntary consent forms containing identity information and the data obtained were kept in a locked cabinet.

Results

Demographic characteristics

The mean age of the children was 8.71 ± 1.17 years (min 6; max 12), and more than half of them (53.6%) were male. Children had been treated for an

average of 4.63 ± 2.84 years with a diagnosis of chronic disease. The three most common chronic diseases in children were asthma (30.4%), ADHD (Attention Deficit Hyperactivity Disorder) (18.8%) and epilepsy (15.9). In all, 79.7% of children received regular medical treatment, and the most common medical treatment (78.2%) was medication. In all, 17.4% of children were not aware of their diseases.

The mean age of the mothers was 37.36 ± 5.65 years (min 26; max 51), and the mean age of the fathers was 41.10 ± 7.70 years (min 30; max 73). The majority of mothers (37.6%) were primary school graduates, and 34.8% of fathers were high school graduates. In all, 84.4% of the teachers were women, and the age range was 24-58 years ($44,50 \pm 6,13$). In all, 88.4% of the teachers had undergraduate degrees, and 94.2% of them had 10 years or more of work experience.

Table 1. Management of child’s chronic disease at school (n=69)

Characteristics	n	%
Parents waiting at school to meet the child’s needs		
No waiting	60	87.0
Waiting	9	13.0
Parent’s status to inform the school about the child’s disease		
Not inform	10	14.5
Informs classroom teacher	37	53.6
Informs the classroom teacher and the school administration	14	20.3
Informs the classroom teacher and school counselor	6	8.7
Informs principal/assistant principal	2	2.9
Parent’s sufficiency of child’s chronic disease management at school^a		
Not feel sufficiency	35	50.7
Feel sufficiency	34	49.3
Issues that parents feel insufficient (n=16)		
Inability to meet childcare needs at school	8	50.0
Insufficient school condition	8	50.0
Knowing whether the teacher’s student has a chronic disease or not		
Knows	66	95.7
Does not know	3	4.3
The teacher learned from the student’s chronic disease (n=66)		
Parent	61	88.4
Parent and school administration	4	6.1
School administration	1	1.5
Teacher’s sufficiency of child’s chronic disease management at school^a		
Not feel sufficiency	52	75.4
Feel sufficiency	17	24.6
Issues that teachers feel insufficient (n=52)		
Lack of information about the disease	29	55.8
Inability to meet childcare needs at school	10	19.2
Insufficient school conditions	4	7.7
Inability to cope with academic problems	4	7.7
Not knowing how to treat in a emergency	3	5.8
Inability to cope with behavioral problems	2	3.8

^a Parents and teachers were determined according to their own statements.

Management of chronic diseases in children at school

According to the information obtained, 13% of parents were waiting at school to meet the needs of their children. Of those who were waiting at school, 88.9% were mothers. In all, 50.7% of parents and 75.4% of teachers stated that they did not feel sufficient to manage the child's chronic disease at school. While 50% of parents thought they were insufficient to meet the child's care needs at school, 55.8% of teachers thought they were insufficient because they did not know about the disease (Table 1).

Physical needs of children at school

In all, 37.7% of parents and 10.1% of teachers stated that the children had emergency medication. However, 58.0% of teachers did not know whether children had emergency medication. Altogether, 15.9% of parents stated that children needed help while using the medicine at school, and 52.2% of teachers were not aware of the children's need for help. In total, 14.5% of teachers did not know whether children needed blood glucose monitoring at school. Parents stated that all children who monitored blood glucose at school needed help with monitoring, and 71.4% of teachers stated that they did not have information about the blood glucose monitoring needs of children.

Table 2. Parents' and teachers' perceptions of the physical needs of children at school

Characteristics/Needs	Parent		Teacher	
	n	%	n	%
Taking medication at school				
Not know	-	-	10	14.5
Not taking medication	56	81.2	49	71.0
Taking medication	13	18.8	10	14.5
The child's need for emergency medication				
Not know	-	-	40	58.0
No need	43	62.3	22	31.9
Needs	26	37.7	7	10.1
Need someone to take medication				
Not know	-	-	36	52.2
No need	58	84.1	20	29.0
Needs	11	15.9	13	18.8
Monitor blood glucose at school				
Not know	-	-	10	14.5
Not monitor	64	92.8	55	79.7
Monitor	5	7.2	4	5.8
Need someone to monitor^a				
Not know	-	-	10	71.4
Need	5	100.0	4	28.6
The child's need to eat snacks at school				
Not know	-	-	10	14.5
No need	60	87.0	52	75.4
Needs	9	13.0	7	10.1
Special dietary need				
Not know	-	-	10	14.5
No need	55	79.7	46	66.7
Needs ^b	14	20.3	13	18.8
Physical movement problems				
Not know	-	-	3	4.3
No	67	97.2	62	90.0
Movement restriction	1	1.4	3	4.3
Quickly fatigue	1	1.4	1	1.4
Excretory system				
Not know	-	-	2	2.9
No	63	91.3	62	89.9
Needs help on the way to the toilet	6	8.7	7	10.1
Respiratory system				
No	50	72.5	62	89.9
Yes	19	27.5	7	10.1

^a The percentages are based on n=5 for parents, n=14 for Teachers, ^b Dairy products, gluten-free, diabetic diet.

While 13% of parents stated that children should eat snacks, this rate was 10.1% for teachers. Moreover, 14.5% of teachers did not know whether their students should eat snacks. While 8.7% of parents stated that their children had problems with the excretory system, 2.9% of teachers did not know whether the children had excretory system problems or not. While 27.5% of parents stated that their children had respiratory problems, 10.1% of teachers indicated this problem (Table 2).

Psychosocial needs of children at school

Regarding children’s psychosocial needs 21.7% of teachers stated that children had problems with

their classmates, whereas 11.6% of parents did not know whether their children had problems with their friends. While 17.4% of the teachers stated that children had problems with their teachers, the rate of parents who expressed this problem was 7.2%. The proportion of children who always participated in extracurricular activities was found to be similar between parents (49.3%) and teachers (46.4%). Parents (69.6%) reported a higher proportion than teachers (58%), in the context of children who always played with friends (Table 3).

Table 3. Parents’ and teachers’ perceptions of the psychosocial needs of children at school

Characteristics/Needs	Parent		Teacher	
	n	%	n	%
Having problems with classmates				
Not know	8	11.6	1	1.4
No having	53	76.8	51	76.9
Having	8	11.6	17	21.7
Having problems with other friends				
Not know	8	11.6	-	-
No having	56	81.2	56	81.2
Having	5	7.2	13	18.8
Having problems with the classroom teacher				
Not know	2	2.9	-	-
No having	62	89.9	57	82.6
Having	5	7.2	11	17.4
Having problems with other teachers				
Not know	2	2.9	1	1.4
No having	62	89.9	62	89.9
Having	5	7.2	6	8.7
Having problems with other parents				
Not know	2	2.9	2	2.9
No having	65	94.2	61	88.4
Having	2	2.9	6	8.7
Participating in extracurricular activities				
Not know	5	7.2	-	-
Rarely	20	29.0	19	27.5
Often	10	14.5	18	26.1
Always	32	49.3	32	46.4
Play with friends				
Not know	2	2.9	-	-
Rarely	8	11.6	15	21.7
Often	11	15.9	14	20.3
Always	48	69.6	40	58.0

Academic needs of children at school

Of the parents, 23.2% stated that their children did not want to go to school. Of the teachers, 10.1% did not know whether or not the children wanted to

go to school. Disease complications were among the reasons for children not wanting to go to school. According to both parents (63%) and teachers (60.9%), the most important reason for absenteeism

was health checks. Of the parents, 75.4% stated that their children did their homework. This rate was

84.1% according to parents and 71.1% according to teachers. In all, 21.7% of teachers and 4.4% of parents defined the children’s school performance as poor (Table 4).

Parents' expectations in terms of their children's needs at school

In all, 50% of parents wanted teachers to be knowledgeable about their children's disease. All of the parents who expressed their expectations about nutrition expected that appropriate food was available in the school canteen. Moreover, 75% of parents expected the teacher to remind the child of the snack. Parents, in the context of their children's psychosocial needs, stated that their greatest expectation from the school administration (20%)

69.6% according to teachers. The rate of participation by children in project assignments was and teachers (55.6%) was preventing their children from being excluded by their friends. Half of the parents expected the school administration to cooperate with the family to reduce school absenteeism.

Although not included in the table, 73.9% of the teachers suggested that there should be a school nurse in the school and that 46.4% of them should be given education about diseases. The rate of teachers who proposed emergency action plans for chronic disease management in schools was 40.6%. The rate of teachers who recommended the improvement of counsellor services was 2.9%.

Table 4. Parents’ and teachers’ perceptions of the academic needs of children at school

Characteristics	M±SD		Min-Max	
School absenteeism (day) ^a				
According to parent	4.50±8.23		0-60	
According to teacher	4.78±5.91		0-60	
Characteristics/Needs	Parent		Teacher	
	n	%	n	%
Do not want to go to school				
Not know	-	-	7	10.1
Yes	53	76.8	52	75.4
No	16	23.2	10	14.5
Reasons for absenteeism (n=46)^b				
Not know	-	-	3	6.5
Health check	29	63.0	28	60.9
Complications and health check	9	19.5	9	19.6
Complications	5	10.9	4	8.7
Hospitalization	3	6.6	2	4.3
Take on responsibility				
<i>Homework</i>				
Do	52	75.4	48	69.6
Not do	17	24.6	21	30.4
<i>Project assignment</i>				
Participate	58	84.1	49	71.1
Not participate	11	15.9	20	28.9
School performance^c				
Great	23	33.3	19	27.6
Good	23	33.3	20	29.0
Mid	20	29.0	15	21.7
Poor	3	4.4	15	21.7
Influence of disease on school performance				
Not influence	41	59.4	37	53.6
Influence	28	40.6	32	46.4

^a The study was carried out in the spring term, so the autumn period was absent.

^b Only absent children were taken.

^c Determined according to teachers and parents own statement.

Discussion

In this study conducted to determine the needs of children with chronic diseases at school, the needs were categorized as physical, psychosocial, and academic. In our study, more parents than teachers stated that children took medication at school. There were teachers in the school who did not know whether the children should go to the infirmary to take their medication or if they needed help. Similar to our study, in a study conducted by O'Connor et al. (2016), 13.3% of teachers and 68.9% of parents stated that children with chronic diseases took medication at school (O'Connor et al., 2016). In our study, the rate of parents who stated that children needed a snack at school was higher than that of teachers. Some teachers were not aware of whether the child needed a snack at school. In one study, more than half of the teachers did not know the nutritional needs of children with chronic diseases (Baker et al., 2015). Some teachers in our study were unaware of their students' respiratory and excretory system problems. Similarly, in a study conducted by Amillategui et al. (2009), the rate of parents indicating the physical needs of children was higher (Amillategui et al., 2009).

In our study, the rate of stating that children had physical problems was found to be higher in parents than teachers. As can be seen from the results of our research and other studies, the physical needs of children in school are not fully met. It was also observed that the number of teachers who are aware of these needs was quite low. Parents and teachers need to be aware of the children's needs at school to support their prognosis, academic performance, and social relationships (He et al., 2014). Teachers' awareness of children's diseases and needs will lead to healthy child development and provide guidance to parents (O'Connor et al., 2016). Parents should inform teachers about the physical needs of their children, such as taking medication and monitoring blood glucose, nutrition, and breathing problems at school.

In our study, more teachers than parents stated that children had psychosocial problems. Lum et al stated that students with chronic illness experience moderate to high levels of emotional distress and have low social confidence. Students with chronic illness receive inadequate support to meet their academic and social-emotional needs or are absent from school at high rates (Lum et al., 2019). Teachers can observe and better analyse children's behaviour and interpersonal relationships, academic performance, changes in children, and differences

from peers. Parents are limited in their ability to observe their children during school hours. For this reason, parents should obtain information from the teacher about the child's relationships, emotional state, behaviour, academic status, and problems (McElfresh et al., 2011). If there is sufficient communication between the parent and the teacher, the child can be evaluated from a wider perspective.

In our study, more than half of the parents felt insufficient in managing their child's chronic disease at school. Half of the parents stated that they could not meet the care of their children in the school and the other half stated that they did not feel sufficient in the management of chronic disease in the school due to insufficient school conditions. Kiliş-Pstrusińska et al. (2014) stated that 25% of mothers and 34.5% of fathers had insufficient knowledge about their children's chronic disease (Kiliş-Pstrusińska et al., 2014). Nieto-Eugenio et al reported that parents feel insecurity, anxiety, fear, and anger when sending their children to school. This is due to a lack of coordination and ineffective management between the education and health systems. Within this system, parents try to solve their problems on their own (Nieto-Eugenio et al., 2020). When we examine the reasons why parents do not feel sufficient, we find that this is caused by situations that are out of their hands (insufficiency of school facilities, lack of health care professionals, etc.). At the same time, parents stated that there should be school-family cooperation in meeting the physical, psychosocial, and academic needs of their children. These results lead us to the following conclusion: in addition to increasing parents' knowledge of their children's disease, the physical conditions of the school should also be appropriate for the child with chronic disease, and cooperation between school staff and parents should be ensured. Thus, it is thought that parental competence will increase.

Children appreciate being supported by healthcare providers as they have to cope with the effects of illness at school (Lum et al., 2019; Shorey et al., 2020). The availability of health personnel at school has become an inevitable necessity for meeting the needs of children. The holistic approach and family-centred care philosophy should be adopted in the health care service to be provided in the school. It is the responsibility of the school nurse to meet the needs of children with chronic diseases. The nurse should support the physical, psychosocial, academic, and social development of children in collaboration with parents and teachers.

In our study, more parents than teachers identified children's physical needs, whereas more teachers than parents identified children's psychosocial and academic needs. These results indicate insufficient cooperation between parents and teachers. In order to meet the needs of children with chronic diseases, parents, teachers, and health professionals must act as a collaborative team. The health professional who will provide care on this team is the school nurse. The school nurse is responsible for the care, monitoring, and identification of the child's needs and for informing the parent and teacher about the child's disease and needs. A role that the school nurse should play is to ensure cooperation between the school/teacher and the parent, which is one of the important issues in the follow-up of a child with chronic disease. Employment of nurses in schools is mandatory to support the care and physical, social, and emotional development of children with chronic diseases.

Conclusion and Recommendations

Our study identified the physical, psychosocial, and academic needs of children with chronic disease. We found differences in the knowledge of parents and teachers about the needs of children in school. Parents have higher levels of awareness of children's physical needs. We found teachers to be more aware of children's psychosocial needs than parents. Parents' and teachers' approaches to the negative effect of chronic disease on children's school performance were similar. In line with the information obtained from parents and teachers, it can be stated that parent-teacher cooperation is not sufficient to meet the needs of children with chronic diseases at school, and professional support is needed. With this study, the need for case-process management of the school nurse emerges. The school health nurse acts as an effective expert in the promotion of children's health and the management of chronic diseases. Monitoring the physical, psychosocial, and academic conditions of children and determining their needs can be carried out. Community welfare can be increased with the contribution of school nursing practices to the national economy. It is thought that the employment of school health nurses is necessary in every school in our country as in the world examples.

Limitations of the Study

This study has some limitations. Our study results are limited to the findings of our participants and cannot be generalized to all children with

chronic disease. Determining of needs of primary school children with chronic diseases form used in the study is not a scale whose validity and reliability studies have been completed in the literature. The form developed by the researchers was validated by taking expert opinions. There is no scale study in the literature that determines the needs of children with chronic diseases. It is thought that a scale study will be useful.

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What did the study add to the literature?

- This study is the first to investigate parents' and teachers' perceptions of the needs of primary school children with chronic disease.
 - If the needs of children with chronic diseases are identified in the school, necessary monitoring of, for example, blood glucose can be undertaken, and guidance on determining the right approach will be provided. Moreover, knowing the needs of children with chronic disease at school will increase the success rate of chronic disease management.
 - If the physical, psychosocial, and academic needs of the children are met, a positive contribution will be made to the personality development of the children, and their school success will be positively affected.
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