ARAŞTIRMA / RESEARCH

The Effect of Self-Efficacy of Children and Adolescents with Asthma on Their Quality of Life

Astımlı Çocuk ve Adölesanların Öz-etkililiklerinin Yaşam Kalitesine Etkisi

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Abstract

Objective: This study was conducted to determine the effect of self-efficacy of children and adolescents with asthma on their quality of life.

Material and Method: This descriptive study was conducted with 137 children and adolescents between the ages of 10-18 who were followed up by the respiratory allergies clinic of a university hospital by using the Asthmatic Child and Adolescent Information Form, Asthmatic Child and Adolescent Self-Efficacy Scale and Pediatric Asthma Quality of Life Questionnaire.

Results: The study showed that 34.3% of the factors triggering asthma attacks in children and adolescents with asthma included in the study were pollen, 27.7% were house dust mites, 16.8% were animals and 46.0% of children and adolescents had an asthma attack after physical activities. Considering the sub-dimensions according to the children's quality of life score averages, the highest mean score was in the "symptom" group. While the total quality of life and its sub-dimension scores of children and adolescents with asthma were moderate and high, self-efficacy and its sub-dimensions scores were found to be moderate.

Conclusion: Pediatric nurses should support children and adolescents from the beginning of diagnosis in order to teach coping approaches, and increase their quality of life and self-efficacy levels during asthma attacks.

Keywords: Asthma, self-efficacy, quality of life, child and adolescent.

Öz

Amaç: Bu araştırma astımlı çocuk ve adölesanların öz-etkililiklerinin yaşam kalitelerine etkisini belirlemek amacıyla yapıldı.

Gereç ve Yöntem: Tanımlayıcı tipteki bu çalışma, bir üniversite hastanesinin solunum alerjileri kliniğinde Astımlı Çocuk ve Adölesan Bilgi Formu, Astımlı Çocuk ve Adölesanlar için Öz-Etkililik Ölçeği ve Çocuklar için Astım Yaşam Kalitesi Ölçeği kullanılarak, takip edilen 10-18 yaş arası 137 çocuk ve adölesan ile yapıldı.

Bulgular: Çalışmaya dahil edilen astımlı çocuk ve adölesanlarda astım ataklarını tetikleyen faktörlerin %34,3'ünün polen, %27,7'sinin ev tozu akarları, %16,8'inin hayvanlar olduğu ve çocuk ve adölesanların fiziksel aktiviteleri sonrasında %46.0' sının astım atağı geçirdiği bulundu. Çocukların yaşam kalitesi puan ortalamalarına göre alt boyutlara bakıldığında; en yüksek ortalama puanı "semptom" grubundadır. Astımlı çocuk ve adölesanların toplam yaşam kalitesi ve alt boyutları puanları orta ve yüksek düzeyde iken, öz-etkililik ve alt boyutları orta düzeyde olduğu saptandı.

Sonuç: Pediatri hemşireleri, astım atakları sırasında çocuklara ve ergenlere başedici yaklaşımlar öğretmek ve yaşam kalitelerini ve öz-yeterlik düzeylerini artırmak için tanı başlangıcından itibaren desteklemelidir.

Anahtar Kelimeler: Astım, öz-etkililik, yaşam kalitesi, çocuk ve adölesan.

1. Introduction

Asthma is a common disease from childhood. Despite advances in diagnosis, treatment, and care, it is a chronic disease that affects both the emotional and physical quality of life of children and their families, and disease expenses (1,2). With its significantly increasing prevalence in children, it imposes heavy burdens on both the family of the child and the society in which he or she lives (3-5).

Asthma progresses faster in children compared to adults due to anatomical and immunological differences and causes hospitalization more often. In children, symptoms such as shortness of breath, wheezing, cough, and chest tightness develop when the allergen is encountered (6-11). These symptoms experienced by a child with asthma lead to school absences and an inability to participate in sports activities at school (12). While asthma affects the daily needs of children (e.g., nutrition, sleep and hygiene), it also negatively affects the quality of life of the child and his/her family (13,14). All these negative effects of having a chronic disease cause the child with asthma to experience an inability to cope with events, a loss of autonomy and independence (13). To understand the disease behavior, psychological reactions, and adaptation difficulties experienced by children with asthma, the quality of life of the child should be evaluated. Self-efficacy perception is an important indicator in determining what children and adolescents with asthma would do in order to maintain and improve their health (13,15). The self-efficacy level of the child is important in determining the activities that he or she will perform or stay away from. As an individual's perception of self-efficacy increases related to a situation, so will their efforts (16,17). It is crucial for children with asthma to have a high level of self-efficacy in using their medication regularly, avoiding allergens, and coping with their daily behavior (13).

1.1. Aim

This study aims, it was aimed to determine the relationship between the quality of life and self-efficacy of children and adolescents with asthma.

Is there a correlation between self-efficacy and quality of life scale scores of children and adolescents with asthma?

2. Material and Method

2.1. Study Design

The sample consisted of children aged between 10-18 years, with normal growth and development, at least 6 months past the diagnosis of asthma, and without communication disability and any other chronic disease. A total of 245 children with asthma, who met the selection criteria and applied to the respiratory allergies outpatient clinic within six months, were included in the study. In this study the data were collected between January and May 2014 on Thursdays once a week. The "Asthmatic Child and Adolescent Information Form", which was prepared by the researcher and included questions on children or adolescents, and their families, "Asthmatic Child and Adolescent Self-Efficacy Scale (ACASES)" and "Pediatric Asthma Quality of Life Questionnaire (PAQLQ)" were used for data collection. Patients who did not meet the sampling selection criteria were excluded from the study.

2.2. Ethical Disclosure

Written permission for this study was obtained from both the Faculty of Nursing Ethics Committee for Non-Interventional Research (approval number: 24392268-22; 2013-62) and the institution where the study was conducted. To use "ACASES" and "PAQLQ" in this study written permission was obtained by e-mail from the researchers who developed the scales and from those who adapted it to Turkish. The purpose of the study was explained to the children and adolescents with asthma who volunteered to participate in the study and to their families, and their written and verbal consents were obtained.

2.3. Measurements/Instruments

2.3.1 Asthmatic Child and Adolescent Information Form: The form, created by the researchers, includes questions about children, adolescents, and their parents such as age, gender, educational status, number of family members, etc. and questions in regards to asthma such as the current status of asthma, presence of asthma in the family, hospitalization due to asthma, regular medication use.

2.3.2 Asthmatic Child and Adolescent Self-Efficacy Scale (ACASES): The scale was developed by Schlösser and Havermans in 1992 in the Netherlands to measure the self-efficacy perception of children and adolescents with asthma in the 10-18 age group and to facilitate coping with their illness (18). Cevik and Celebioğlu (13) performed its Turkish validity and reability study. The Cronbach's alpha coefficient of the scale is 0.89, which was also found to be the same value in this study. It is a 5-point Likert-type scale consisting of 22 items. Using this scale, the lowest score is 22 and the highest score is 110. Higher scores indicate higher self-efficacy perception among asthmatic children and adolescents. The scale has 3 sub-dimensions. These sub-dimensions are:

1. "Medical information" sub-dimension: 8 items (1,2,3,4,5,6,7,8)

2. "Asthma management skills for environmental factors", sub-dimension: 8 items (9,10,11,12,13,14,15,16)

3. "Problem-solving skills" sub-dimension: 6 items (17,18,19,20,21,22)

2.3.3 Pediatric Asthma Quality of Life Questionnaire (PAQLQ): It was developed by Juniper et al. in 1996 to measure the disease-specific physical, mental, and social symptoms of children with asthma in the 7-17 age group (19). It was adapted into Turkish by Yüksel et al. in 2009, and the Cronbach's alpha coefficient of the scale is 0.86 for emotional function field, 0.80 for activity restriction field and 0.90 for symptoms field (20). In this study, Cronbach Alpha values were 0.87 for emotional function, 0.60 for activity restriction, 0.92 for symptoms, and 0.84 for total score. The scale has questions about the experiences of children due to asthma during the last week. The scale consists of 23 items and 3 sub-dimensions. These sub-dimensions are:

1. "Activity limitation" sub-dimension: 5 items (1,2,3,19,22),

2."Symptoms" sub-dimension: 10 items (4,6,8,10,12,14,16,18,20,23),

3."Emotional function" sub-dimension: 8 items (5,7,9,11,13,15,17,21).

Each question on the scale is evaluated using a Likert scale of 1-7 points. The total score obtained from the scale is between 23 and 161. Higher scores from the scale indicate higher quality of life. The overall quality of life total score was calculated based on the total means of the items that make up the sub-dimensions (20).

2.4. Data Collection

The researcher explained the purpose and duration (15 minutes) of the study to all children and their families who came to the outpatient clinic. The researcher conducted face to-face interviews.

2.5. Data Analysis

The SPSS 25.0 for Windows was used for the statistical analysis of the data. In this study, percentage, mean and standard deviation were used to evaluate descriptive statistics. The normal distribution of the data was tested using the Kolmogorov-Smirnov test. Mann-Whitney U test was used to test the significance of the difference between two means in paired variable, and Kruskal-Wallis analysis was performed for groups with three or more. If the p value was less than 0.05 in the analysis of multiple groups, the Bonferroni test was used to evaluate the data to determine the group showing the difference. The dependent variables in this analysis are quality of life and self-efficacy scores. Independent variables are gender, age, and other clinical and demographic variables.

3. Results

The demographic characteristics of participating children and adolescents are provided in Table 1. According to the data, the mean age of children and adolescents with asthma was 13.7 ± 2.2 years (13-15) and 65.7% of them were male. When the descriptive characteristics of children and adolescents with asthma were analyzed, it was found that 52.6% of them had asthma in their families. It was determined that 77.4% of children and adolescents were followed up with a diagnosis of asthma between 1 and 50 months, and 81% of them did not have asthma. 33.6% of the children were hospitalized due to asthma. 89.8% of children and adolescents with asthma were found to use their medications regularly.

While 36.5% of them received education on asthma, 70.8% of those who received education stated that it was not sufficient. In children and adolescents with asthma included in the study, it was determined that 34.3% of the factors triggering asthma attacks were "pollens,", 27.7% "house dust mites,", and 16.8% "animals". 60.6% of the families of children and adolescents with asthma were found to take precautions against these stimuli (Table1).

35.8% of the children and adolescents with asthma had a cough as a symptom during "daytime" and 30.7% at "night". Due to these symptoms, 39.4% of them had decreased their daily activities and 46% of them were found to have attacks (i.e., cough, shortness of breath, wheezing) after running, exercising, and physical activity (Table 2).

Table 1. Descriptive Characteristics of Children and Adolescents with Asthma

	n	%
Gender		
Female	47	34.3
Male	90	65.7
Age group		
10-12	52	38.0
13-15	57	41.6
16-18	28	20.4
Mean age (years)	13.7 ± 2.2 (13-15)	
Educational status		
Primary education	17	12.4
High school	120	87.6
Family members with a history of asthma		
Yes	72	52.6
No	65	47.4
Asthma diagnosis (month)		
1-50 months	106	77.4
51-100 months	17	12.4
101-121 months and above	14	10.2
Asthma attacks (last 1 year)		
Yes	26	19.0
No	111	81.0
Admission to the hospital due to asthma		
Yes	46	33.6
No	91	66.4
Use of medication regularly		
Yes	123	89.8
No	14	10.2
Receiving education on asthma		
Yes	50	36.5
No	87	63.5
Sufficiency of asthma education		
Sufficient	40	29.2
Insufficient	97	70.8
Triggers of an asthma attack		
Pollen	47	34.3
House dust mite	38	27.7
Animals	23	16.8
Mold	10	7.3
Cigarette smoke	11	8.0
Air pollution	6	4.4
Humidity	2	1.5
Taking precautions for triggers of asthma		
Yes	83	60.6
No	54	39.4
TOTAL	**137**	**100.0**

Table 2. Symptom Characteristics of Children and Adolescents with Asthma

Symptoms of asthma		Yes		No	
		n	%	n	%
Daytime	Cough	49	35.8	88	64.2
	Wheezing	25	18.2	112	81.8
	Shortness of Breath	27	19.7	110	80.3
	Phlegm	33	24.1	104	75.9
Night	Cough	42	30.7	95	69.3
	Wheezing	23	16.8	114	83.2
	Shortness of Breath	20	14.6	117	85.4
	Phlegm	32	23.4	105	76.6
Activity limitation		**n**		**%**	
Yes		54		39.4	
No		83		60.6	
Asthma attack after physical activity*					
Yes		63		46.0	
No		74		54.0	
TOTAL		137		100.0	

** After running, exercising, and physical activity.*

In order to evaluate the quality of life of children and adolescents with asthma, "Symptoms" score (55.16±1.30), "Activity Limitation" score (23.35±5.03), "Emotional Function" score (45.73 ± 9.34), and the total PAQLQ score (124.24±24.64) were calculated. In order to evaluate the self-efficacy scale of children and adolescents with asthma, the "Medical Knowledge" score (26.00±7.62), "Management Skills Regarding Environmental Factors" score (30.53 ± 5.21), "Problem-Solving Skills" score(22.88 ± 4.69), and the total ACASES score (79.41 ± 15.65) were calculated (Table 3).

Table 3. Comparison of PAQLQ and ACASES Scores

PAQLQ	Min-max scores	X ± SD
Symptoms	10-70	55.16±1.30
Activity limitation	8-35	23.35±5.03
Emotional Function	9-56	45.73±9.34
Total PAQLQ	27-161	124.24±24.64
ACASES	**Min-max scores**	**X ± SD**
Medical information	8-40	26.00±7.62
Asthma management skills for environmental factors	8-40	30.53±5.21
Problem-solving skills	6-30	22.88±4.69
Total ACASES	22-110	79.41±15.65

The findings are summarized in Table 4. When the scale total scores and quality of life subgroup mean scores of children and adolescents with asthma were compared according to the gender variable, There was a statistically significant difference in the total mean scores of "Emotional Function", "Activity Limitation", "Symptoms" and "PAQLQ" between male and female (p<0.05) (Table 4).

Table 4. Quality of Life and Self-Efficacy Scale Scores of Children and Adolescents with Asthma According to Some Characteristics

Features	Emotional Function X±SS	Activity Limitation X±SS	Symptoms X±SS	PAQLQ X±SS	ACASES X±SS
Gender					
Female	43.54±9.51	21.54±5.46	50.30±14.34	115.39±26.48	80.04±15.61
Male	46.84±9.10	24.72±5.73	57.62±11.55	129.82±24.10	79.10±15.74
Test and p	z:-2.071	z:-3.311	z:-3.230	z:-3.228	z:-.043
	p:0.038*	p:0.001*	p:0.001*	p:0.001*	p:0.965*
Age group					
10-12 (a)	46.11±10.20	24.06±5.28	56.63±12.82	126.80±26.19	73.77±13.73
13-15 (b)	45.42±7.83	23.36±5.40	55.57±11.00	124.36±21.42	83.89±13.14
16-18 (c)	45.64±10.71	23.50±7.52	51.57±16.40	120.71±32.33	80.79±20.34
Test and p	x^2:1.801	x^2:0.229	x^2:1.947	x^2:1.116	x^2:17.899
	p:0.406	p:0.892	p:0.378	p:0.572	p:0.000 a<b=c
School achievement					
Good	47.06±8.23	24.43±5.56	57.29±11.21	128.78±22.44	80.08±16.62
Moderate+ Bad	43.55±10.63	22.47±6.12	52.10±14.89	118.11±29.26	78.23±14.20
Test and p	z:-2.812	z:-2.812	z:-2.812	z:-2.812	z:-2.812
	p:0.005*	p:0.005*	p:0.005*	p:0.005*	p:0.005*
Family members with a history of asthma					
Yes	44.86±9.69	23.02±5.67	52.45±13.44	120.34±26.25	78.14±15.85
No	46.69±8.93	24.35±5.95	58.15±11.84	129.20±24.36	80.83±15.41
Test and p	z:-2.037	z:-1.400	z:-1.838	z:-1.934	z:-1.006
	p:0.042*	p:0.161	p:0.066	p:0.053	p:0.315
Evaluate your health					
Good	46.51±8.49	24.35±5.10	56.96±10.79	79.26±15.74	127.83±21.77
Middle+ Bad	0.23±11.97	20.77±7.73	48.08±18.29	79.77±15.79	111.08±35.75
Test and p	z:-1.395	z:-2.064	z:-1.920	z:-1.793	z:-0.146
	p:0.163	p:0.039*	p:0.055	p:0.073	p:0.884
Receiving education on asthma					
Yes	44.42±9.76	23.06±5.45	53.92±12.38	121.40±25.89	79.78±14.82
No	46.48±9.06	24.00±6.03	55.87±13.32	126.36±25.51	79.21±16.18
Test and p	z:-1.515	z:-1.134	z:-1.517	z:-1.469	z:-0.284
	p:0.130	p:0.257	p:0.129	p:0.142	p:0.776
Sufficiency of asthma education					
Sufficient	46.35±7.89	23.68±4.53	55.45±10.16	125.48±20.57	84.55±12.20
Insufficient	45.47±9.89	23.65±6.29	55.04±14.02	124.16±27.58	77.30±16.46
Test and p	z:-0.078	z:-0.271	z:-0.763	z:-0.374	z:-2.384
	p:0.938	p:0.787	p:0.446	p:0.708	p:0.017*

*p<0.05, x^2: Kruskal Wallis test, z: Mann Whitney U test, Bonferroni test was used in multiple comparisons.

A negative statistically nonsignificant relationship was found between overall quality of life and its subgroup and self-efficacy in asthmatic children and adolescents and between total self-efficacy and its subgroup and quality of life (p<0.01) (Table 5).

Table 5. Correlation Coefficients Between PAQLQ and ACASES Scores

PAQLQ and its subgroup	**ACASES**	
	r	**p**
PAQLQ	-0.035	0.686
Symptoms	-0.083	0.337
Activity limitation	0.029	0.733
Emotional function	0.027	0.751
ACASES and its subgroup	**PAQLQ**	
	r	**p**
ACASES	-0.035	0.686
Medical information	-0.049	0.572
Environmental management skills	-0.002	0.984
Problem-solving skills	-0.027	0.754

*r, Spearman correlation test value, * p<0.01*

4. Discussion

Asthma causes physical, social, family, and school-related problems in children and adolescents, and the child's inability to cope and loss of self-confidence. These problems experienced by children with asthma negatively affect their quality of life and self-efficacy. The results of this study indicated that the self-efficacy perceptions of children and adolescents with asthma have important effects on their quality of life.

When the children and adolescents with asthma were examined in terms of gender variable, more than half of them were "male". This difference in our study is thought to be caused by the fact that male have narrower and higher airway resistance. The findings of this study are in line with previous studies in the literature (21-29). In our study, 52.6% of children and adolescents with asthma had a family member with asthma. The presence of asthma in the family is one of the risk factors for asthma in the child. If a family member has asthma, the incidence rate of asthma in the child is 30%. The incidence rate of asthma in children with asthmatic parents is 60-80%. (9) The result of our study is in line with similar studies (21,30,31). The children's school life, daily life and especially sports activities may be interrupted by the disease. Children with asthma are more likely to go to the hospital due to illness and, as a result, to fail in school (21). In our study, it was determined that the "PAQLQ" and "ACASES" scores of children and adolescents who expressed their school success as "good" were high. Because second to their home, school-aged children spend the largest portion of their wakeful hours at school. In our study, 89.8% of the children and adolescents with asthma were found to use their medications regularly. While 36.5% of them received education on asthma, 70.8% of those stated that the education they received was not sufficient. Regular use of medications by children with asthma increases the compliance to the treatment and independence of children by controlling asthma. Guidelines for asthma specifically emphasize the importance of correct medication use and the need to provide education to children before starting treatment (32). In the study conducted by Cevik and Celebioğlu (2015), children and adolescents with asthma were observed to use their medicines more regularly (30). However, study results revealed that children with asthma performed incorrect practices during the use of inhalers. This was because children with asthma were not given adequate instruction, only the first use of the inhaler was shown to the children, but then there were deficiencies in-home care and follow-up. This result is supported by the literature (14,21,33-35). In the study of Kan et al. (2020) a positive correlation has been found between the quality of life of children with asthma and parental self-efficacy (27). It has been revealed that parents with high self-efficacy scores know which medication to give to their children with serious respiratory problems. Therefore, the importance of child and family education, home care, and follow-up in asthma management should be adopted by pediatric nurses and care models should be developed.

When the factors that trigger asthma attacks were examined, 34.3% of them were found to be "pollens,", 27.7% "house dust mites,", and 16.8% "animals.". Also, 60.6% of the families of children and adolescents with asthma were found to take precautions against these stimuli. In the study of Cekingen and Büyükgönenç (2019), and Kocaaslan and Akgün (2019), house dust mites, animal hair, pollen, and cigarette smoke were determined to affect the asthma attacks of children (21, 36). In the study of Yıldız and Bayat (2016), cigarette smoke, odor, and house dust mites were found to be the factors triggering asthma the most. Adolescents in the experimental (66.7%) and control (33.0%) groups were determined to take precautions for the stimuli triggering the attack (31). Protection from allergens is an important component of asthma management. The environment of the child and adolescent should be arranged, considering the family's lifestyle and cultural characteristics.

In our study, it was determined that 35.8% of the children and adolescents with asthma had a cough as a symptom during "daytime" and 30.7% at "night", 39.4% of them had decreased levels of daily activities and 46% of them were found to have attacks (cough, shortness of breath, wheezing) after running, exercising, and physical activity. In our study, it was seen that those who evaluated their health as "good" had high "activity limitation" scores. We think that these children are afraid of doing activities because it will trigger asthma and they limit their activities. In the study of Çevik (2015), the frequency of asthma symptoms in children was found to be "many times a week" for 67.5% of them and "several times a week" for 45.0% of them. Also, it was observed that the cough symptoms experienced during "daytime" and at "night," and the rate of limitations in the daily activities of the children decreased significantly in the children and adolescents with asthma who received education and were regularly monitored (30). While children were observed to limit their daily life activities due to the fear of experiencing asthma symptoms and having an attack, studies have shown that in children who learn to cope with asthma, symptoms of the disease are alleviated, the number of attacks and fears are reduced, and their quality of life increases (21,37,38). We believe that these situations experienced by children and adolescents with asthma would affect their quality of life and self-efficacy levels during the school period, causing them to feel different from other children. In our study, the total score of the quality of life of children and adolescents with asthma was found to be (124.24 ± 24.64). When the sub-dimension mean scores were evaluated, the lowest mean score was found in the "Activity Limitation" sub-dimension, followed by the "Emotional Function" and "Symptoms". The results of the study conducted by Cekingen and

Büyükgönenç (2019) support our findings (36). In the study of González-Conde et al. (2019), it was determined that the most limited activities for children with asthma were determined to be "running" and "playing football,", and as a result of these limitations, the quality of life of children with asthma was found to be affected above the average in "Emotional Function" (84.7%), "Activity Limitation" (87.5%), and "Symptoms" (92%) sub-dimensions (24). Asthma was observed to affect the quality of life scale mean scores differently in children and adolescents, and this was observed to be due to the intervention differences applied to them (14,21,31).

In studies revealing the effect of education given to children, adolescents and families on the quality of life, it has been observed that interventions to improve the child's asthma increase the quality of life (21,32,33). With the data of this study, it is thought that the quality of life perceptions will be similar by using disease-specific quality of life scales and evaluating them for the children's disease. The level of self-efficacy, which plays an important role in providing a behavioral change in the management of chronic diseases, is very important in increasing the skills of children and adolescents for asthma control. In our study, the total self-efficacy and sub-dimensions scores of children and adolescents with asthma were found to be at moderate levels. No intervention was used to improve their self-efficacy levels. However, it was revealed that children and adolescents who had received asthma training and said they were "sufficient" had higher ACASES total scores. Yıldız and Bayat (2016) increased self-efficacy and compliance to treatment in adolescents with asthma by applying a motivational interview approach in their study (31). In the study of Kocaaslan and Akgün, the mean self-efficacy scores in adolescents with asthma increased significantly after receiving education (21). In the study of Cevik and Celebioğlu (2015), it was revealed that self-efficacy of children and adolescents with asthma was increased by providing them education through home visits (30). González-Condeve et al. (2019) in their study, determined that children with high levels of self-efficacy have a better quality of life and emphasized the importance of self-efficacy behavior in children's asthma management and in identifying children who need intervention to improve their quality of life. Interventions to increase self-efficacy in children and adolescents with asthma are necessary for the management of the disease (24). Therefore, pediatric nurses should ensure that children and adolescents use techniques helping with behavior change that increase self-efficacy in children and adolescents with asthma. Although increasing the self-efficacy level of children and adolescents with asthma is thought to increase the quality of life, no statistically relationship was found between self-efficacy and quality of life in our study. We think that this may be due to the fact that children and adolescents with asthma, in our study, did not receive any support or education about the negative changes (physiological, psychological, and social) brought by the disease. Yıldız and Bayat (2016) found a positive and highly significant relationship between the self-efficacy levels, with the effect of motivational interviews applied in their study, and the quality of life (31). In the study of Mosenzadeh et al. (2019), self-care education was shown to improve the quality of life in children with asthma (39). Cicutto et al. (2014) found that educational intervention provided a significant improvement in the quality of life of children with asthma, and there was a decrease in the number of school absenteeism in children (40). In another study conducted to determine the effect on self-efficacy and quality of life, interventions to increase coping skills were observed to significantly increase the mean scores and provide positive changes in asthma control (relief medication use, PEF values) (21). Education has been observed to increase the quality of life in children and adolescents with asthma. However, it is thought that other factors affecting self-efficacy levels should be taken into account and should be included in education. Therefore, there is a need for broader and comprehensive studies in order to determine the effect of asthma control, self-efficacy, and quality of life in adolescents.

5. Conclusion

Children and adolescents may limit their daily living activities, thinking that they would experience asthma symptoms and the fear of an asthma attack. This negatively affects the quality of life of the children. The pediatric nurse should encourage children and adolescents to develop their self-efficacy from the beginning of the diagnosis in order to support children and adolescents during asthma attacks and improve their quality of life.

Contribution to the Field

This study highlights the importance of empowering children and adolescents with asthma. The results of this study will contribute to the planning of training in this field by identifying and supporting the strengths of children and adolescents in asthma management, and evaluating their weaknesses.

6. Ethical Aspect of the Research

The principles of Helsinki declaration were taken into account in the study. The study was approved by the University Faculty of Nursing Non-Interventional Research Ethics Committee (approval number: 24392268-22; 2013-62) of a university and written institutional permission from the institution where the study was conducted was obtained to conduct the study. The purpose of the study was explained to the children and adolescents with asthma who volunteered to participate in the study and their families, and their written and verbal consents were obtained. The results can not be generalized because the study was carried out only in one institution. The results reflect self-declarations of the children and their parents.

The present study has some limitations. The results obtained from the present study are applicable only to the children and their parents who were Respiratory Allergies Outpatient Clinic in the hospital at the time of the study.

Conflict of Interest

This article did not receive any financial fund. There is no conflict of interest regarding any person and/or institution.

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