Evaluation of the knowledge, attitudes and concerns of the mothers of children who applied to the hospital during the COVID-19 pandemic

COVID-19 pandemi sürecinde hastaneye başvuran çocukların annelerinin bilgi, tutum ve kaygılarının değerlendirilmesi

Abstract

Aim: During the coronavirus disease 2019 (COVID-19) pandemic many families have faced difficulties such as using masks, maintaining social distancing, and isolating themselves to stop spreading the virüs. However, there is limited data about how mothers of affected children with acute/chronic diseases overcome this challenging and stressful process.

Methods: Between January 2021 and June 2021, mothers of 315 children aged 1-17 years admitted to the Pediatrics Outpatient Clinic of Inonu University were included in our study. Sociodemographic information, attitudes, and knowledge levels about the prevention of the disease towards COVID-19 were reviewed and the Stait-Trait Anxiety Inventory test was applied.

Results: The overall mean score of knowledge of the mothers for COVID-19 disease was 4.9 ± 1.4 (max=8). The low educational level and employment status of the father, the presence of any chronic disease in the family, and the presence of a chronic disease in their children increased the anxiety scores in those mothers.

Conclusion: Since COVID-19 still affect the community, it is very important to understand its psychological consequences on mothers who have children or close relatives with chronic diseases and to develop policies to improve their emotional and mental status.

Keywords; Anxiety; chronic disease; family; COVID-19; pandemic

Öz

Amaç: Aileler Koronavirüs hastalığı 2019 (COVID-19) pandemi döneminde virüsünün yayılımını durdurmaya yönelik maske kullanımı, sosyal mesafeyi koruma, izolasyon süreci gibi zorluklarla karşı karşıya kalmıştır. Ancak, akut/kronik hastalığı olan çocukların annelerinin bu zorlu ve stres yükü fazla olan sürecin nasıl üstesinden geldiğine dair sınırlı veri bulunmaktadır.

Yöntemler: İnönü Üniversitesi Tıp Fakültesi Çocuk Sağlığı ve Hastalıkları polikliniğine Ocak 2021 ile Haziran 2021 tarihleri arasında başvuran 1-17 yaş arası 315 çocuğun anneleri çalışmamıza dâhil edilmiştir. Sosyodemografik bilgiler ve COVID-19'a yönelik hastalıktan korunma tutumları ve bilgi düzeyleri öğrenilmiş ve 'Durumluk ve Sürekli Kaygı Ölçeği' uygulanmıştır.

Bulgular: Annelerin COVID-19 hastalığı bilgi düzeyi skoru genel ortalaması 4.9±1.4 (maks=8)'dir. Babanın eğitim düzeyinin düşük olması, babanın çalışmama durumu, ailede kronik hastalık tanısı ve çocuklarında kronik hastalık tanısının olması annelerin durumluk ve süreklilik kaygı puanlarını yükseltmiştir.

Sonuç: COVID-19 toplumda etkisini sürdürürken, çocuğunda ve ailede kronik hastalık tanısı olan annelerin üzerindeki psikolojik etkilerin anlaşılması ve onların duygusal ve ruhsal durumlarını iyileştirecek politikaların geliştirilmesi çok önemlidir.

Anahtar Sözcükler: Aile; anksiyete; COVID-19; kronik hastalık; pandemik

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INTRODUCTION

The new Coronavirus disease 2019 (COVID-19) was first reported in Wuhan, China at the end of 2019 and therefore the disease is called COVID-19. The disease affected the whole world immediately after it was seen in China, spread around the world in a short time, and was accepted as a pandemic by the World Health Organization (1). With the detection of the first coronavirus case in our country on March 11, 2020, the aim was to prevent the spread of infection to a large extent by taking measures such as maintaining social distance and observing a certain distance in interpersonal communication (2).

Families had to cope with difficulties such as using masks, maintaining social distance, being isolated, and adapting these practices to their daily lives to stop COVID-19 virus spreading, Along with difficulties such as ensuring the effectiveness and continuity of hygiene and maintaining physical distance in order to prevent getting infected with COVID-19 infection, many difficulties have been experienced due to reasons such as the measures taken did not comply with the usual lifestyle. It was also necessary to reveal how children with acute/chronic diseases affect primary caregivers in a difficult and stressful process that greatly affects life and requires such measures.

Pandemic diseases such as COVID-19 pose potential risks in many aspects such as childhood infection transmission and difficult access to health services, as well as restrictions applied for protection, social isolation, and increased stress levels of parents or caregivers (3). During the pandemic process, intense fear, panic, and anxiety prevailed all over the world. According to the research conducted by Wang et al. in China, this process caused moderate to severe psychological effects and people experienced depression, anxiety, and stress (4). It has been determined that anxiety disorders are among the most common mental problems during the COVID-19 process (5). Anxiety disorders have started to be seen more frequently due to the continuation of social isolation and the increase in the time spent in the quarantine (6). Situations such as the need to stay at home and the closure of schools have increased parental stress and especially affected mothers more, resulting in reduced mental health (7). During the pandemic, mothers were much more engaged in childcare and school than fathers, contributing to increased stress among mothers (8). In nearly two years of the COVID-19 pandemic, our understanding of disease presentation, management, and prevention has improved significantly. However, the psychological effects of the pandemic can affect the individual and society not only during the epidemic but also long after the epidemic was brought under control and life returned to normal (9, 10). In this context, our research aimed to examine the factors that can shape the knowledge levels and anxiety levels of mothers of children with acute/chronic diseases during the COVID-19 epidemic.

MATERIAL AND METHODS

The sample of the study consisted of children between the ages of 1-18 and their mothers who applied to the pediatrics outpatient clinic of a large university hospital in the east of Turkey. Those who refused to participate and could not read or speak Turkish adequately were excluded from the study. The reasons for their refusal to participate were mostly because they wanted to spend less time in the hospital and did not accept the interview due to COVID-19. Ethics committee approval was obtained from the University's Health Sciences Research and Publication Ethics Committee for the study (date: 24.11.2020, decision no: 2020/1101).

At the beginning of the interview, the first and second authors, who were the principal researchers, explained the purpose, content, and how to carry out the descriptive study to the mothers of the children who met the sampling conditions, the consent form was read and their written consent was obtained by asking whether they wanted to participate. A face-to-face interview was conducted by the researcher with the mothers who accepted the study. It has been clearly stated throughout the process that participation is voluntary. First of all, sociodemographic information and prevention attitudes towards COVID-19 disease and knowledge levels on this subject were learned. In the last part, the 'State-Trait Anxiety Inventory' containing 40 questions was applied. The interview took an average of 20-36 minutes. Research data were

Table 1. Descriptive Statistics

n (%)	Child's gender	Boy	156 (49.52)
		Girl	159 (50.48)
	Child with chronic illness		181 (57.5)
Median (IQR)	Age		8 (8)
	Order of child		2(2)
	Number of siblings		2(2)
n (%)	Caregiver	Mother	291 (92.38)
		Father	16 (5.08)
		Other	8 (2.54)
	Mother education level	Primary school	91 (28.89)
		Secondary school	63 (20.00)
		High school	78 (24.76)
		University	83 (26.35)
	Father education level	Primary school	75 (23.81)
		Secondary school	60 (19.05)
		High school	79 (25.08)
		University	101 (32.06)
	Mother working status	Working	70 (22.22)
		Not working	245 (77.78)
	Father working status	Working	271 (86.03)
		Not working	44 (13.97)
Median (IQR)	Mother age		36(8)
	Father age		40(9)
n (%)	Chronic disease status in the family		84 (26.67)
Median (IQR)	Number of people living at home		5(2)
n (%)	Family income level	Less than minimum wage	75 (23.81)
		Minimum wage	116 (36.83)
		More than minimum wage	124 (39.37)

IQR: Inter Quartile Range, n: Number

collected between January 2021 and June 2021. During this period, Turkey applied pandemic restrictions. It is thought that this period in which research data were collected is in the second phase of the COVID-19 epidemic in our country. All data were controlled by the researcher and transferred to the database.

State-Trait Anxiety Inventory

The inventory developed by Spielberger et al. in 1970 consists of two parts. The scale was adapted into Turkish by Öner and Le Compte. The state anxiety inventory consists of 20 items and was developed to determine how individuals feel at that moment. The trait anxiety inventory consists of 20 items and was developed to determine how individuals feel in general. It has been reported that the alpha reliability of the inventory is between 0.83 and 0.87, test-retest reliability is between 0.71 and 0.86, and item reliability is between 0.34 and 0.72 (11).

Statistical analyses

Qualitative variables were expressed as numbers (percentages). Quantitative variables were summarized as mean ± standard deviation and median (IQR: Interquartile range). Mann-Whitney U test was used where appropriate, t-test, one-way ANOVA, and

Table 2. Descriptive statistics on questions about COVID-19

Questions	Responses	n (%)
I definitely make my child wear the mask to protect him/her from COVID-19	Yes	276 (87.6)
	No	39 (12.3)
To protect my child from COVID-19, I often wash / tell her to wash his/her hands	Yes	248 (78.7)
	No	67 (21.2)
I clean their hands with wet wipes/hand sanitizer/cologne to protect my child from COVID-19	Yes	214 (67.9)
	No	101 (32.0)
I maintain social isolation/avoid contact to protect my child from COVID-19	Yes	214 (67.9)
	No	101 (32.0)
I take other measures to protect my child from COVID-19	Yes	34 (10.7)
	No	281 (89.2)
Did your children adapted to wear mask?	Not adapted	49 (15.5)
	Adapted	167 (53.0)
	Very adapted	99 (31.4)
Children over which age should wear masks?	1 year old	89 (28.4)
	2 years old	63 (20.1)
	5 years old	108 (34.5)
	10 years old	33 (10.5)
	Between 10-18 years old	20 (6.3)
Did you inform your child about the use of mask?	Yes	287 (91.4)
	No	27 (8.6)
Which mask do you use for your child?	Cloth	102 (32.9)
	Surgical	199 (64.1)
	N95	9 (2.9)

COVID-19: Coronavirus disease 2019, n: Number

Kruskal Wallis tests were used in independent groups. Multiple Linear Regression analysis was performed to identify predictors of state and trait scores. Univariate linear regression analysis was performed with the variables of the child's birth week, parents' education level, parent chronic illness, family income level, being worried about the transmission of the COVID-19 virus to the child, thinking that the COVID-19 epidemic affected the psychology of the parent and the child, number of siblings, number of people in the household, age of the child and the COVID-19 disease knowledge level score. Variables meeting the $p<0.15$ condition were included in the Multiple Linear Regression analysis. Statistical tests with a p-value below 5% were considered significant. All statistical analyzes were performed using Statistical Package for the Social Sciences software for Windows, version 26.0 (SPSS Inc., Chicago, IL, USA).

RESULTS

The sample of the study consisted of 315 children aged 1- 17 and their mothers. Of the children in the sample, 159 (50.48%) were girls and 156 (49.52%) were boys, with a median age of 8 (IQR: 8) years. One hundred eighty-one (57.5%) of the children had a chronic disease. The most common diagnosis among children diagnosed with chronic disease was type 1 diabetes (n (%): 22 (12.2%)). The median age of the mothers is 36 (IQR:8) years (min=18, max=56), and the median age of the fathers is 40 (IQR: 9) years (min=24, max=61). While 154 (48.9%) of the mothers had 8 years or less education, 161 (51.1%) had more than 8 years of education. On the other hand, 135 (42.9%) of the fathers received education for 8 years or less, while 180 (57.1%) received education for more than 8 years. It was determined that 70 (22.22%) of the mothers and

Table 3. Descriptive statistics on questions about COVID-19

Questions	Responses	n (%)
The virus can be transmitted by coughing, sneezing droplets from sick individuals, and from contaminated surfaces.	True	304 (96.5)
	False	4 (1.2)
	No idea	7 (2.2)
The mask is sufficient to cover the mouth to minimize direct transmission of infective agents and provide a barrier.	True	124 (39.3)
	False	154 (48.8)
	No idea	37 (11.7)
When putting on and taking off the mask, it must be put on and removed by holding the front of the mask.	True	133 (42.2)
	False	150 (47.6)
	No idea	32 (10.1)
The simple surgical mask is designed for one-way protection, used to prevent droplets that may spread from the wearer.	True	205 (65.0)
	False	36 (11.4)
	No idea	74 (23.4)
Masks may not be used for children who are afraid of wearing a mask.	True	28 (8.8)
	False	228 (72.3)
	No idea	59 (18.7)
It is mandatory for my child to wear a mask, so I insistently force him to wear the mask. This is very important to him.	True	252 (80.0)
	False	38 (12.0)
	No idea	25 (7.9)
Children are most affected by the COVID-19 outbreak.	True	78 (24.7)
	False	164 (52.0)
	No idea	73 (23.1)
My child needs to wear a mask. When he wants to take off the mask, I politely tell him to put it on.	True	298 (94.6)
	False	7 (2.2)
	No idea	10 (3.1)

COVID-19: Coronavirus disease 2019, n: Number

271 (86.03%) of the fathers were working in active jobs. It has been reported that the income level of 75 (23.81%) of the families is lower than the minimum wage, 116 (36.83%) of them have a minimum wage, and 124 (39.37%) of them have a higher than the minimum wage (**Table 1**).

Two hundred seventy-two of the mothers (86.35%) reported that they were worried about carrying the COVID-19 virus to their children, 127 of them stated that the epidemic affected their psychology too much, and 109 of them thought that the epidemic affected the psychology of their children too much. Three hundred and eight (97.78%) of the mothers stated that their daily lives were adversely affected and 300 (95.4%) stated that their plans for the future were also negatively affected. Mothers were asked questions about their children's use of mask and information about COVID-19 disease (**Tables 2 and 3**). The overall mean score of the COVID-19 disease knowledge level of the mothers was determined as 4.888±1.428 (max=8) (**Table 3**).

It was found that the state and trait anxiety scores of the mothers were higher in cases where the education level of the father is low, the father is unemployed, and there is a diagnosis of chronic disease in the family and their children. The state and trait anxiety scores of mothers who think that the COVID-19 epidemic affects their own and their child's psychology too much, and a statistically significant difference was found. Parents who were concerned about transmitting the COVID-19 virus to their child had a higher state anxiety score (**Table 4**).

A negative correlation was found between the COVID-19 disease knowledge score of the mothers and the trait anxiety score (r=-0.184, p=0.001), and a positive correlation was found between the number of people living at home and the trait anxiety score (r=0.124, p=0.028). Multi-linear regression analysis was performed for the state and trait anxiety scores. When the father's education level is undergraduate or graduate, the state score decreases by -3.3118 units. Having a parent's chronic disease increases the

Table 4. Results of statistical analyzes in terms of state and trait scores

		State Scores			Trait Scores		
		Mean±SD	**Median (IQR)**	**p**	**Mean±SD**	**Median (IQR)**	**p**
Mother education level	Primary School	44.4±8.7		0.32***	46.31±8.54		0.14***
	Secondary School	44.8±7.6			45.71±7.37		
	High School	44.8±8.2			45.76±8.22		
	University	42.6±10.0			43.61±8.14		
Father education level	Primary School	45.7±8.2[a]		**0.045*****	47.62±8.81[a]		**0.038*****
	Secondary School	43.9±8.2[a,b]			44.46±8.08[b]		
	High School	44.9±9.2 [a,b]			45.25±8.39[a,b]		
	Graduate	42.5±8.9[b]			44.25±7.26[b]		
Chronic disease in the family	No	43.4±8.7		**0.013***		44(11)	**0.001****
	Yes	46.1±8.5				48(7.5)	
Family income level	Less than minimum wage	44.5±8.1[a]		**0.048*****		47(12)	0.15*****
	Minimum wage	45.4±8.5[a]				46(10)	
	More than minimum wage	42.7±9.2[b]				45(12)	
Concern about carrying the COVID-19 virus to your child?	Yes		45(11)	**0.036****		46(11)	0.128**
	No		42(12)			43(12)	
Do you think COVID-19 outbreak has affected your psychology	None	38.3±9.7[a]		**<0.0001*****	41.08±8.57[a]		**<0.0001*****
	Slightly	43.8±7.4[b,c]			45.51±7.83[b,c]		
	Normal	41.8±7.7[a,b]			43.66±7.21[a,b]		
	Much	46.0±8.5[c,d]			46.6±7.05[c]		
	Too much	48.4±9.4[d]			48.14±9.92[c]		
How does the COVID-19 outbreak affect your child's psychology?	None	42.8±8.9[a]		**0.006*****		41(12)[a]	**0.001******
	Slightly	42.5±7.9[a]				45(10)[a,b]	
	Normal	43.4±8.2[a]				46.5(10)[b]	
	Much	45.1±9.2[a,b]				47(9)[b]	
	Too much	47.979±9.272[b]				47.5(9.5)[b]	
Diagnosis (child)	Chronic disease		49 (42,0)	**<0.0001****		48 (48)	**<0.0001****
	Acute disease		37,5 (29,0)			41 (39)	
Age (child)	Pre-school	44,8±8,6		0.249*		46 (41)	0.228**
	Post-school	43,6±8,8				46 (55)	
Mother working status	Working	43,4±8,6		0.454*	44,1±7,6		0.177*
	Not working	44,3±8,8			45,6±8,2		
Father working status	Working	43,7±8,8		**0.03***		46 (55)	**0.041****
	Not working	46,8±8,0				47 (34)	

COVID-19: Coronavirus disease 2019, n: Number, SD: Standard Deviation, IQR: Inter Quartile Range

* Independent sample t-test, ** Mann-Whitney-U test, *** One-way ANOVA, **** Kruskal-Wallis test

state score by 2.2366 units. The state anxiety score of mothers who think that the COVID-19 epidemic affects their psychology much increases by 7.69 units, and the state anxiety score of mothers who think that it affects their psychology too much increases by 9.3 units. Having a parent with a chronic illness increases the trait anxiety score by 2.62 units. The trait anxiety score of mothers who think that the COVID-19 epidemic affects their psychology is 4.65 units higher, while the trait anxiety score of mothers who think that it affects their psychology too much is 5.11 units higher. In addition, the presence of a chronic disease in a child increases the mothers' state anxiety score by 11.63 units and their trait anxiety score by 6.99 units compared to acute disease.

DISCUSSION

The aim of the current study is to examine the variables that predict the COVID-19 disease knowledge levels and anxiety levels of mothers during the pandemic period. It has been observed that the pandemic has a traumatic effect on humans and negatively affects the anxiety levels of individuals in the continuation of this process (12). It has been shown that the anxiety of individuals increases significantly with the stress that occurs against the uncertainty of this period. In Wang et al.'s study, which included 1,210 participants from 194 cities in China, during the initial phase of the COVID-19 outbreak, more than half of the participants rated the psychological impact of the outbreak as moderate or severe, and about a third reported moderate to severe anxiety symptoms. Many of them also expresses concerns about their family members getting COVID-19 (4). In our study, most of the mothers reported that they were worried about carrying the COVID-19 virus to their children. In addition, the majority of them reported that they thought that the epidemic had a negative impact on both their own and their children's psychology. A disproportionately increased burden of chronic disease, COVID-19 diagnosis, hospitalization, and mortality rates have been reported in some populations, including those of low socioeconomic status and certain racial and ethnic groups (13). These populations are at higher risk due to exposure to suboptimal social determinants of health (14, 15). In the study of Ghassabian et al., being Hispanic, having higher resilience scores, higher education levels, and having pre-existing social support were found to be highly protective against stress. Financial and familial/social factors related to the COVID-19 pandemic have been identified as the biggest contributors to the current stress (16). Economic status was associated with more depressive and anxiety symptoms during the pandemic (17). In our study, it was observed that the anxiety score was lower if the family's income level was high and the father was working. Another descriptive feature that increases anxiety is low education level (18). The high level of education plays a protective role against psychological problems and it is known that the protective effect of this situation continues over the years (19). In addition, it can facilitate individuals to develop effective coping mechanisms against possible problems and to produce effective solutions. The high level of education during the COVID-19 pandemic process can be protective against the anxiety that may occur by positively affecting the individual's ability to access information about the disease, make assessments on this subject, and incorporate newly emerging conditions into his/her life. In parallel with this, the fact that families are educated can enable them to live through the negative conditions they may experience in this process with less or without anxiety (20). In our study, it was determined that the mother's anxiety levels decreased with the high education level of the fathers and the increase in the knowledge level of the mothers about the COVID-19 disease.

During the pandemic period, children with chronic diseases are at risk not only from COVID-19 infection but also from the disruption of disease management. Diseases such as diabetes, cancers, neurological disorders, and chronic kidney failure in children may increase the risk of serious illness and death from COVID-19 (21, 22). In the study conducted by Atout et al. during the COVID-19 epidemic, semi-structured interviews were conducted with the mothers of children aged 1-12 with a diagnosis of leukemia, and the mothers mentioned that they faced various difficulties in order not to transmit the infection to their children (23). This period has also raised concerns about safe access to health care and reduced the ability to prevent or control

chronic diseases (24). This situation can increase the anxiety of families. In our study, the anxiety level of the mothers of children with chronic disease was found to be higher than the mothers who applied to the hospital due to acute disease. In the study carried out by the International Child and Adolescent Diabetes Association with health professionals from 215 diabetes centers in 75 countries, only 16.5% of the centers were able to continue face-to-face consultation with children with diabetes with appropriate personal protective equipment, and 22% reported delayed diagnosis of patients with new-onset diabetes, and 15% reported a higher incidence of diabetic ketoacidosis. It was also observed that 19% of the children under follow-up had problems with the supply of materials such as blood glucose sensors, insulin, and ketone strips (25). In the study of Kompaniyets et al., which included 43,465 children under the age of 18 who were diagnosed with COVID-19 between March 2020 and February 2021, it was determined that 28.7% of the patients had an underlying disease, and type 1 diabetes was the strongest risk factor for hospitalization. They mentioned close observation and careful clinical management of children with chronic disease in their study (26). In our study, when the anxiety level of the mothers of children with chronic disease was examined, it was determined that the mothers of children with Type 1 diabetes had the highest level of anxiety. It is known that the risk of disease due to COVID-19 increases in diabetes due to reasons such as impaired immunity, diabetes-related complications, or high blood sugar. This may have caused families to increase their anxiety (27).

In a qualitative study conducted with the mothers of twenty-four primary school first-grade students in the study by Özden et al., it was found that mothers were worried about their children's health and education, especially about hygiene, when they went to school during the COVID-19 period (28). In our study, no significant difference was found between the anxiety scores of mothers with school-age and preschool children. This situation may have been caused by the fact that schools continued online in our country during the pandemic process and mostly school-age children stayed at home. The parent who has a child in the preschool period may have a more intense workload during the pandemic process, on the other hand, the parent who has a child in a classroom preparing for the exam may experience more stress and anxiety due to the uncertainties experienced in the education period. Cluver et al. stated that during this period, families' child-related stress levels increased. (29). It has been revealed that mothers have a high level of anxiety about hygiene in the out-of-home environment. While the use of cologne and disinfectant is at the forefront of the measures they take, these measures are followed by mask and social distance rules (28). In the study by Demirbaş and Koçak, it has been shown that parents are worried about the uncertainties in their lives during the pandemic and they give great importance to social distance in interpersonal relationships (30). In our study, more than half of the mothers stated that they give great importance to mask and hygiene rules.

Göksu and Kumcağız in their study with 155 female and 148 male total 303 participants found that individuals' state and trait anxiety levels increased during the epidemic process. 84% of the participants stated that their anxiety increased during the COVID-19 outbreak (31). Our study is consistent with these results. 97.78% of the mothers stated that the epidemic negatively affected their daily lives, while 95.4% stated that it negatively affected their plans for the future. Most mothers also reported that they were worried about carrying the COVID-19 virus to their children. The information or explanations given almost all day about the virus in the media and other communication tools can also increase fear and anxiety about the disease.

The COVID-19 pandemic had direct and indirect effects, especially on people with chronic illness. Multanowska et al., in their longitudinal COVID-19 pandemic, study with 1618 parents using data from 13 waves collected between April 2020 and March 2021, emphasized that parents with chronic diseases are more vulnerable. They emphasized the necessity of considering chronic disease comorbidity as an additional risk factor when addressing the mental health outcomes of parents during pandemic-like events. They found that parents with chronic illnesses scored higher on measures of depression, stress, and anxiety and were more at risk for worse mental health outcomes than individuals without co-morbid physical conditions (27). In our study, it was determined that

the anxiety level of parents with chronic diseases was high. Parents with chronic health conditions may be more adversely affected during the pandemic due to the stratification of the risks of being a parent and having a chronic health condition, each associated with their stressors and risks of adverse development.

The study has some limitations. The study was carried out only with the participation of mothers who came to a single university hospital outpatient clinic in eastern Turkey. The involvement of fathers in this study may strengthen the research. Another limitation of the study is that the pre-pandemic status of the participants in terms of their measured anxiety levels is not known. Studies based on qualitative research methods may be more useful in terms of understanding in detail how parents are affected by the pandemic period. In addition, the stress experienced by a parent with a child with special needs may be different from other parents. In the future, studies can be conducted taking into account the age of the child and whether the child has any special needs. In this context, future studies should aim to develop the skills of parents to cope with their fears and concerns about COVID-19 in a healthy way. In addition, the cross-sectional nature of the study limits the generalizability of the study. It may be aimed that future planned studies may consist of a random sample and address the long-term effects of the pandemic process in more detail by using the longitudinal method.

The pandemic may reappear with new attacks in the coming period, but the psychological problems experienced by families, the consequences of these problems, research on possible risk and protective factors, and intervention programs for these problems have not yet become widespread. In the future, the problems experienced by the families due to the changes in their and their children's lives during this period may increase the mental problems of the parents. The research has been a guide in this manner.

A detailed examination and better understanding of familial and environmental factors is very important in order to protect and improve the health status of both parents and children during the COVID-19 pandemic process. From the findings, it is understood that while the COVID-19 pandemic is still in effect, it is necessary to develop policies and intervention strategies to protect and improve the mental health of parents with a diagnosis of chronic disease in their child and parents with a diagnosis of chronic disease. This will also lay the groundwork for the development of preventive intervention programs. It is important to be informed about the situations that arise in this process, to intervene effectively with the epidemic and to be prepared for possible problems.

Conflict-of-interest and financial disclosure

The authors declare that they have no conflict of interest to disclose. The authors also declare that they did not receive any financial support for the study.

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