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Parental Awareness and Anxiety During the Early Stage of the COVID-19 Pandemic: A Face-to-Face Study

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ABSTRACT

During the COVID-19 pandemic, lockdown and restraint measures caused an increase in various mental problems including anxiety, depression, and addictions in adults. The increased stress level and financial concerns of parents can lead to increased verbal aggression, abuse, and neglect towards children. This study aimed to determine the awareness and anxiety levels of parents about the pandemic, to investigate factors that could affect the care of children, and cause social, mental and physical negative effects on children. Two hundred seventy children and their parents (172 mothers, 98 fathers) participated in our study. It was reported that hand washing was the most frequently used protection method against the virus. Television was found the most frequently used news source, and 61.5% of parents reported that the possibility of their child getting sick due to coronavirus was the situation that worried them the most. The fathers' State Anxiety Inventory (SAI) scores than the mothers' scores and the Trait Anxiety Inventory (TAI) scores of the mothers than the fathers' scores were higher. There was a positive correlation between the SAI and TAI scores. The news source, the reason for bringing children to the hospital, illness of people aged >65 years, a decrease in income levels, the presence of a patient with COVID-19 in the family, and the coronavirus measures were the factors that affected parental anxiety. During the pandemic, psychosocial evaluations of parents who present to health institutions and taking measures for anxiety disorders are important for parent and child mental health status.

Keywords: COVID-19, Anxiety, Child, Parent, State-Trait Anxiety Inventory

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COVİD-19 Pandemisinin Erken Evresinde Ebeveyn Farkındalığı ve Kaygısı: Yüz Yüze Bir Çalışma

ÖZ

COVİD-19 salgını sırasında, tecrit ve kısıtlama önlemleri yetişkinlerde anksiyete, depresyon ve bağımlılıklar dahil çeşitli ruhsal sorunları artırmıştır. Ebeveynlerin artan stres düzeyi ve maddi kaygıları, çocuklara karşı sözel saldırganlıkta artışa, istismar ve ihmale yol açabilir. Bu çalışma, ebeveynlerin pandemi hakkında farkındalık ve kaygı düzeylerinin belirlenmesi, çocuğun bakımını etkileyebilecek ve çocukta sosyal, ruhsal ve fiziksel olumsuz etkilere neden olabilecek ebeveyn kaygısına etki eden faktörleri araştırılması amacıyla yapılmıştır. Çalışmamıza 270 çocuk ve ebeveynleri (172 anne, 98 baba) katılmıştır. El yıkamanın virüse karşı en sık kullanılan korunma yöntemi olduğu bildirilmiştir. Televizyon en sık kullanılan haber kaynağı olarak bulunurken, ebeveynlerin %61.5'i çocuklarının koronavirüs nedeniyle hastalanma ihtimalinin kendilerini en çok endişelendiren durum olduğunu bildirmiştir. Babaların Durumluk Kaygı Ölçeği (DKÖ) puanları annelerin puanlarından ve annelerin Sürekli Kaygı Ölçeği (SKÖ) puanları babaların puanlarından daha yüksektir. DKÖ ve SKÖ puanları arasında güçlü bir pozitif korelasyon vardır. Haber kaynağı, çocukları hastaneye getirme nedeni, >65 yaş kişinin hastalığı, gelir seviyesinin düşmesi, ailede COVİD-19 tanılı bir kişinin varlığı ve koronavirüs önlemleri, ebeveyn kaygısını etkileyen faktörlerdendir. Pandemi döneminde sağlık kuruluşlarına başvuran ebeveynlerin psikososyal açıdan değerlendirilmesi ve kaygı bozukluğuna yönelik önlemlerin alınması ebeveyn ve çocuk ruhsal durumu açısından önemlidir.

Anahtar Kelimeler: COVİD-19, Kaygı, Çocuk, Ebeveyn, Durumluk-Sürekli Kaygı Ölçeği

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INTRODUCTION

Coronavirus disease 2019 (COVID-19) first appeared in Wuhan, China in late 2019. In less than 3 months, the disease spread around the world through severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and became a pandemic (World Health Organization, 2023a). COVID-19 is transmitted from person to person mainly through respiratory secretions and droplets and by direct contact (Rothe et al., 2020). Mild symptoms occur in most adults and children, and severe clinical conditions and death occur in older people and those with chronic conditions (Li et al., 2020). Individuals should take preventive measures to protect themselves, such as washing hands frequently with soap or hand sanitizer, avoiding crowded gatherings, and wearing face masks when going outside (World Health Organization, 2023b).

The COVID-19 pandemic caused panic and global anxiety in society because of the high rate of transmission (Peeri et al., 2020). Previous studies showed that COVID-19 caused individual, physical, social, and mental problems (Shigemura et al., 2020). The anxiety of being sick, economic problems, and restrictive measures during the pandemic led to an increase in various mental problems such as anxiety, depression, post-traumatic stress disorder, alcohol problems, and eating disorders in adults (Xu & Liu, 2021). However, the internet and social media platforms sharing news about the pandemic caused fear, anxiety, and high levels of stress in people (Bendau et al., 2021). The pandemic caused a 27.6% increase in major depressive disorders and a 25.6% increase in anxiety disorders globally during 2020 (COVID-19 Mental Disorders Collaborators, 2021).

Anxiety is an organic response characterized by anxiety and increased surveillance in situations of uncertain danger or threat to the integrity of the person. State anxiety is a temporary emotional response that changes in intensity over time and is characterized by anxiety. Trait anxiety refers to a stable situation throughout life and is considered a relatively stable personality disposition (Vagg et al., 1980). The COVID-19 outbreak triggered or exacerbated various stress factors affecting children and parents (Fosco et al., 2022). A study showed that children and their parents were a risky group in terms of their ability to adapt to the lifestyle disruption caused by COVID-19 (Nobles et al., 2020). During the COVID-19 pandemic, more than 50% of parents were found to be very stressed (Calvano et al., 2022). Examining increases in family stress and distress associated with the pandemic is critical because these can lead to dysfunctional parent-child interactions that negatively impact children's health and development (Prime et al., 2020). Concerns have been raised about the increased risk of child maltreatment and impaired child-parent relationships during the COVID-19 pandemic due to a range of stressors such as increased loneliness, reduced physical activity, economic stress, social distancing, homeschooling, marital conflicts, and violence. Parents' increased financial concerns and worries increased verbal aggression and physical abuse towards children (Katz et al., 2021). In addition, high levels of parental stress may affect the ability of parents to cope effectively with difficulties, causing them to use inappropriate discipline strategies more towards their children, which can lead to abuse and neglect (Clément et al., 2016; Stith et al., 2009). Overall, parental well-being significantly affected children's mental health (Katz et al., 2021). However, there are limited studies evaluating parental anxiety during the pandemic.

This study aimed to determine the awareness and anxiety levels of parents, to investigate factors that could affect the care of children, disrupt parent-child bonding, and cause social, mental, and physical negative effects on children.

METHOD

Study Design

This study cross-sectional descriptive study was conducted at Cebeci Children's Hospital of Ankara University Faculty of Medicine from July 2020 to October 2020. Children who were first evaluated in the triage unit at the emergency department and showed no symptoms of COVID-19 were referred to the outpatient clinic. Participants were taken to a negative pressure interview room (Figure). The questionnaires and scales used in this study were administered to the parents. No questionnaires or scales were administered to the children.

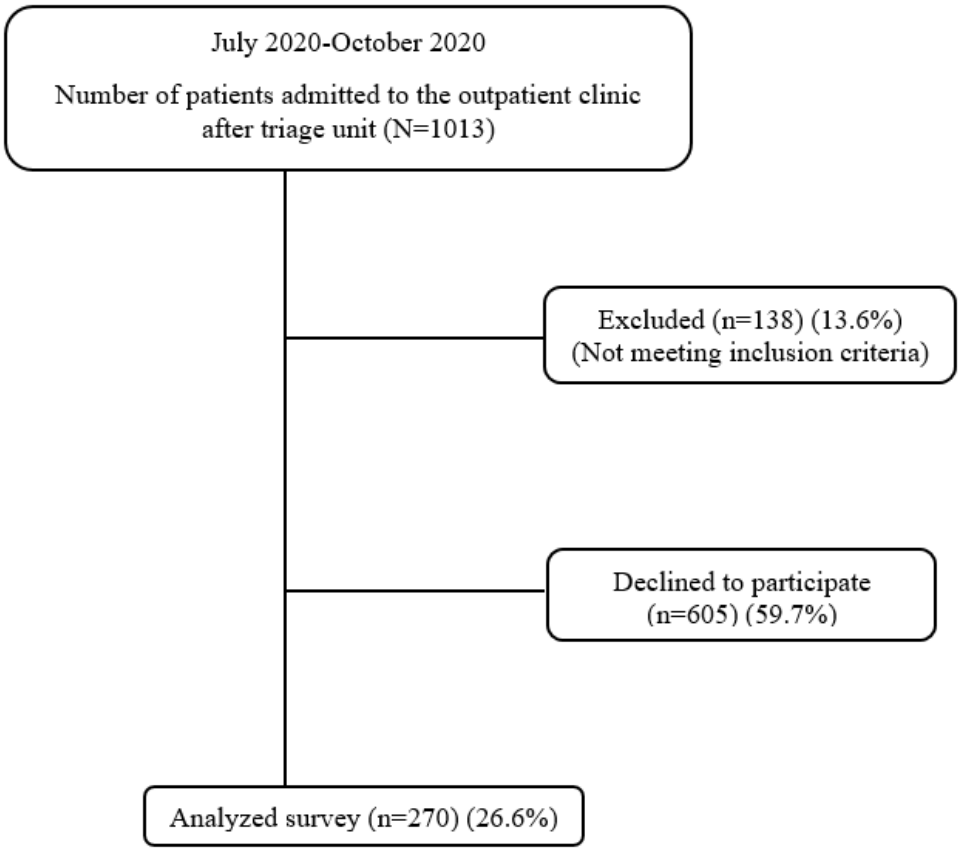

Figure. Study Summary in the Flow Diagram

Inclusion Criteria

For the children, they were as follows: not having a suspicion of COVID-19; being aged 0-18 years, being born at term; absence of a known chronic disease or drug use; and absence of a congenital, genetic or psychiatric disease. For the parents, they were as follows: not having a suspicion of having COVID-19, no history of suspicious contact with a person with COVID-19, absence of a known chronic disease or drug use or psychiatric disease, lack of mental retardation, and being literate.

Ethical Statement

The study was approved by the Ethics Committee of Ankara University (No: 09.07.2020/47837). Informed consent was obtained from the parents, and then the questionnaire and anxiety scales were completed through face-to-face interviews with each parent.

Measurement Tools

In the questionnaire, questions were included about the child's age, sex, symptoms that brought the child to the hospital, parent's age, education level, occupation, income status, number of siblings living at home, number of people aged >65 years, parent's dismissal due to pandemic, measures taken by parents, the level of knowledge about the COVID-19 pandemic, sources of information regarding the pandemic, and their reasons for anxiety about the pandemic.

State-Trait Anxiety Inventory (STAI)

The anxiety level of the parents was evaluated using the State-Trait Anxiety Inventory (STAI) (Spielberger et al., 1970). The Turkish validity and reliability study of the scale was performed by Öner and Le Compte (Öner & Le Compte, 1983). There are 40 items, 20 items in each subscale of the State Anxiety Inventory (SAI) and Trait Anxiety Inventory (TAI) in STAI. The SAI allows the individual to state how they feel "at a certain moment or condition," and the TAI allows them to state how they feel "generally." Participants answered each question on a 4-point Likert-type scale. The weight values of the answer options for both scales ranged from 1 to 4. The total point value obtained from each scale was between 20-80. High scores showed a high level of anxiety.

Data Analysis

All data were analyzed using the IBM SPSS statistical package (v21.0). The normality of the distribution of the variables was evaluated using the Shapiro-Wilk test. For non-parametric variables, Mann-Whitney U tests were used when comparing two groups. The effects of SAI and TAI variables on each other were evaluated using Spearmen's correlation test. Univariate and multivariate logistic regression analyses were used to explain the relationship between the variables leading to an increase in SAI and TAI scores. Odds ratios and 95% confidence intervals were determined for parental perception. The statistical significance level was accepted as $p<.05$.

RESULTS

A total of 270 children and their parents who met the inclusion criteria participated in the study.

The Characteristics of the Participants

The mean age of the children was 89.4±57.4 (range, 0.5-215) months, for the mothers it was 37.5±7.08 (range, 20-60) years, and for the fathers, it was 40.37±6.40 (range, 26-60) years. It was determined that 41.3% of the mothers and 54.1% of the fathers had a bachelor's degree and above. Most of the parents had to live the minimum wage as a monthly income. Approximately half of the mothers continued to work, 7% were dismissed, 96% of the fathers continued to work, and 5.1% were dismissed (Table 1.).

Table 1. Sociodemographic Characteristics of the Participants

Sociodemographic Characteristics	**N (%)**	
Sex of children		
Girls	128 (47.4)	
Boys	142 (52.6)	
Age groups of children	**Girls**	**Boys**
< 24 months	23 (18)	20 (14.1)
24-72 months	38 (29.7)	45 (31.7)
> 72 months	67 (52.3)	77 (54.2)
Sex of parent		
Mother	172 (63.7)	
Father	98 (36.3)	
Education level of parents	**Mothers**	**Fathers**
Primary school	21 (12.2)	2 (2)
Middle school	25(14.5)	9 (9.2)
High school	55 (32)	34 (34.7)
Bachelor's degree	58 (33.7)	40 (40.8)
Master's degree	13 (7.6)	13 (13.3)
Monthly income (Turkish Lira)		
<2300 (Low)	49 (18.2)	
2300-4600 (Low-intermediate)	114 (42.2)	
4600-10000 (High-intermediate)	78 (28.9)	
>10000 (High)	29 (10.7)	
Parents' working status	**Mothers**	**Fathers**
Continuing to work	85 (49.4)	94 (96.0)
Continuing to work place	58 (68.2)	63 (67.0)
Continuing to work from home	27 (31.8)	31 (33.0)
Dismissed	2 (1.1)	2 (2.0)
Retired	1 (0.5)	2 (2.0)
Housewife	84 (48.8)	-
Were you dismissed in the pandemic	**Mothers**	**Fathers**
Yes	12 (7.0)	5 (5.1)
No	160(93.0)	93 (94.9)
Number of children living at home		
1	101 (37.4)	
2	134 (49.6)	
≥3	35 (13.0)	

The participants were highly aware of precautionary measures such as hand washing (99.6%), mask-wearing (99.3%), avoiding crowded places (97.0%), not touching the face/eye area after contact with dirty surfaces (96.3%), social distancing (93.3%,) and using hand sanitizer (90.0%). The most important protection measure was found to be washing hands by both mothers and fathers. Possible sources of transmission of COVID-19 were contact with a suspected patient most frequently in mothers, and contact with a suspected patient and being in crowded environments in fathers. The news sources used by parents were as follows: 90% television, 83% internet news pages, 50.4% social media, 25.2% WhatsApp, 24.8% print media, 14.8% phone calls, and 8.5% radio. The situation that worried parents the most during the pandemic was that their child might become ill due to coronavirus (Table 2.).

Table 2. Parents' Thoughts, Awareness, Sources of Information, and Concerns About the COVID-19 Pandemic

Parents' feelings, thoughts, and behaviors about the pandemic	**N (%)**	
	Mothers	**Fathers**
The most important protection method that you know in the pandemic		
Washing hands	94 (54.7)	40 (40.8)
Mask-wearing	27 (15.7)	23 (23.5)
Paying attention to social distancing	19 (11)	15 (15.3)
Avoiding crowded environments	21 (12.2)	13 (13.3)
Avoid touching the face after contact with foreign surfaces	10 (5.8)	6 (6.1)
Using hand sanitizer	1 (0.6)	1 (1)
Possible source of infection according to parents		
Contact with a suspected COVID-19 patient	88 (51.2)	38 (38.8)
Being in crowded environments	55 (32.0)	38 (38.8)
Contact with dirty surfaces	22 (12.8)	22 (22.4)
From the surfaces of products purchased from the supermarket	7 (4.0)	-
Information sources regarding pandemic (most common)		
Television	105 (61)	54 (55.1)
Internet news portals	50 (29.1)	32 (32.7)
Social media (Facebook, Twitter, Instagram)	12 (7.0)	11 (11.2)
WhatsApp	3 (1.7)	1 (1)
Print media (newspaper, book, magazine)	2 (1.2)	-
Telephone	-	-
Radio	-	-

Table 2. Parents' Thoughts, Awareness, Sources of Information, and Concerns About the COVID-19 Pandemic – Continues

Parents' feelings, thoughts, and behaviors about the pandemic	N (%)	
	Mothers	Fathers
Thoughts about the danger of the pandemic		
I don't think the pandemic is dangerous at all	1 (0.6)	0 (0)
I don't think the pandemic is dangerous	4 (2.3)	4 (4.1)
I think the pandemic is dangerous	29 (16.9)	20 (20.4)
I think the pandemic is quite dangerous	31 (18)	32 (32.7)
I think the pandemic is very dangerous	107 (62.2)	42 (42.9)
Concern reason in the pandemic		
Child getting sick due to coronavirus	115 (66.9)	51 (52.0)
Re-increase of cases in the pandemic	20 (11.6)	13 (13.3)
Sickness of a person aged >65 years who does not live in the same house due to coronavirus	13 (7.6)	10 (10.2)
Getting sick yourself due to the coronavirus	11 (6.4)	6 (6.1)
Sickness of a person aged >65 years who lives in the same house due to coronavirus	5 (2.9)	9 (9.2)
Economic difficulties arising from the pandemic	3 (1.7)	8 (8.2)
Partner's illness due to coronavirus	5 (2.9)	1 (1.0)

Parents' Anxiety Status

It was seen that the mean SAI scores of the parents were higher in the fathers than in the mothers (40.24±4.92 vs. 38.63±4.46, p=.006), and the TAI scores of the mothers were higher than the scores of the fathers (45.97±5.29 vs 44.18±5.16, p=.009). There was a positive correlation between the SAI and TAI scores (r=.169, p=.008) (Table 3.).

Findings of Parental Anxiety Levels in Sociodemographic Characteristics

It was determined that the fathers' SAI scores who had children aged 24-72 months were higher than the mothers' scores (p=.027). The SAI scores of fathers who had daughters were significantly higher than those of the mothers (p=.023). It was detected that the mothers' TAI scores in the 30-40 years age group were higher than the fathers' scores (p=.004). The SAI scores of fathers aged >40 years were found higher than the mothers' (p=.015). It was found that the TAI scores of mothers with bachelor's degree education were higher than those of fathers, and fathers with master's degree education had higher SAI scores than mothers (p=.037 and p=.017, respectively). In families with income levels of 2300-4600 TL and >10.000 TL, fathers' SAI scores were higher than the mothers' (p=.012 and p=.005, respectively). In families with an income of >10.000 TL, mothers' TAI scores were higher than those of fathers (p=.029). The SCI scores of the fathers who continued to work during the pandemic were higher than the mothers and the mothers' TAI scores were higher than the fathers' (p=.018 and p=.037, respectively). In the group that had ≥3 children, the SAI scores of the fathers were higher than

those of the mothers, and in the group that had 2 children, the TAI scores of the mothers were higher than those of the fathers (p=.002 and p=.029, respectively) (Table 3.).

Table 3. Comparison of Parents' State and Trait Anxiety Inventory (STAI) Scores in Terms of Sociodemographic Characteristics

	SAI score ± SD (n)			**TAI score ± SD (n)**		
	Mother	**Father**	**p-value***	**Mother**	**Father**	**p-value***
Anxiety score	38.63±4.46 (172)	40.24±4.92 (98)	**.006**	45.97±5.29 (172)	44.18±5.16 (98)	**.009**
Age grouping of children						
<24 months	38.75±3.67 (32)	40.82±5.67 (11)	.450	45.84±6.62 (32)	43.45±3.58 (11)	.329
24-72 months	38.07±4.50 (46)	40.24±4.93 (37)	**.027**	45.72±5.16 (46)	43.68±4.88 (37)	.144
>72 months	38.87±4.69 (94)	40.12±4.85 (50)	.090	46.13±4.89 (94)	44.72±5.66 (50)	.067
Sex of children						
Girl	38.75±4.46 (83)	40.76±5.05 (45)	**.023**	46.63±5.33 (83)	44.73±5.97 (45)	.108
Boy	38.53±4.48 (89)	39.81±4.82 (53)	.116	45.35±5.21 (89)	43.72±4.36 (53)	.075
Age grouping of parent						
<30 years	38.06±4.29 (31)	38.75±7.41 (4)	.635	45.77±6.37 (31)	41.75±8.01 (4)	.352
30-40 years	38.72±4.94 (76)	39.76±5.10 (49)	.245	46.24±5.09 (76)	43.47±4.54 (49)	**.004**
>40 years	38.80±3.95 (65)	40.91±4.52 (45)	**.015**	45.74±5.03 (65)	45.18±5.46 (45)	.526
Education level of the parents						
Primary school	38.43±4.34 (21)	42.00±2.82 (2)	.228	45.95±4.30 (21)	45.50±7.77 (2)	.869
Middle school	38.00±4.02 (25)	40.22±5.33 (9)	.224	45.40±5.30 (25)	45.44±4.41 (9)	.906
High school	39.36±4.98 (55)	40.32±5.23 (34)	.367	47.00±6.11 (55)	44.41±4.37 (34)	.061
Bachelor's degree	38.33±4.37 (58)	39.73±5.29 (40)	.200	45.52±5.07 (58)	43.40±5.93 (40)	**.037**
Master's degree	38.46±3.66 (13)	41.38±2.75 (13)	**.017**	44.69±3.75 (13)	44.92±5.12 (13)	.918

Table 3. Comparison of Parents' State and Trait Anxiety Inventory (STAI) Scores in Terms of Sociodemographic Characteristics – Continues

	SAI score ± SD (n)			TAI score ± SD (n)		
	Mother	**Father**	**p-value***	**Mother**	**Father**	**p-value***
Income status (TL)						
<2300 (Low)	39.03±5.13 (36)	40.38±5.18 (13)	.376	46.56±5.87 (36)	44.38±5.83 (13)	.242
2300-4600 (Low-intermediate)	37.99±4.36 (71)	40.30±4.86 (43)	**.012**	46.24±5.28 (71)	45.23±4.79 (43)	.394
4600-10000 (High-intermediate)	39.24±4.38 (45)	39.03±4.52 (33)	.839	45.27±5.62 (45)	43.24±5.56 (33)	.101
>10000 (High)	38.85±3.61 (20)	44.22±4.89 (9)	**.005**	45.50±3.23 (20)	42.33±3.80 (9)	**.029**
Parents' working status						
Continuing to workplace	37.60±4.05 (58)	40.13±5.45 (63)	**.018**	45.22±5.01 (58)	43.94±5.25 (63)	**.037**
Continuing to work from home	38.85±3.75 (27)	40.52±3.91 (31)	.185	45.41±4.61 (27)	44.39±5.23 (31)	.302
Dismissal of one parent (Yes)	40.58±2.74 (12)	40.20±3.11 (5)	.721	46.50±8.52 (12)	45.60±4.21 (5)	.594
Number of children living at home						
1	39.84±4.47 (55)	40.72±5.36 (46)	.404	45.85±4.75 (55)	44.87±5.66 (46)	.298
2	38.19±4.30 (93)	38.95±4.33 (41)	.319	45.41±5.19 (93)	43.32±4.87 (41)	**.029**
≥3	37.58±4.62 (24)	43.09±3.80 (11)	**.002**	48.38±6.37 (24)	44.55±3.77 (11)	.068

**Mann-Whitney U*

Abbreviations: n, sample size; SAI, state anxiety inventory; SD, standard deviation; TL, Turkish Lira; TAI, trait anxiety inventory.

Results of the Parents' Anxiety Levels in Pandemic-Related Conditions

It was determined that the SAI scores of the fathers who thought that the pandemic was very dangerous were higher than the mothers (p=.007). It was found that mothers who used internet news pages as news sources had higher TAI scores than fathers, and fathers who used social media had higher SAI scores than mothers (p=.036 and p<.001, respectively). In fathers who were worried that a person aged >65 years living in their house would get sick due to coronavirus, SAI scores were higher than mothers, and in mothers who were worried about their child getting sick, TAI scores were higher than fathers (p=.038 and p=.027, respectively (Table 4.).

Table 4. Comparison of the parents' thoughts about the danger of the pandemic, sources of information, most worrying situations, and anxiety levels

	SAI score ± SD (n)			TAI score ± SD (n)		
	Mothers	**Fathers**	**p-value***	**Mothers**	**Fathers**	**p-value***
Is the coronavirus dangerous?						
I don't think so at all/I don't think about it	37.40±2.07 (5)	41.75±4.34 (4)	.211	47.20±3.34 (5)	43.25±0.95 (4)	.063
I think so	39.00±4.55 (29)	39.15±4.34 (20)	.822	45.52±4.23 (29)	43.00±5.21 (20)	.052
I think it is quite dangerous / I think it is very dangerous	38.60±4.51 (138)	40.46±5.10 (74)	**.007**	46.01±5.56 (138)	44.55±5.27 (74)	.089
Source of information						
Television	39.22±4.53 (105)	40.06±4.98 (54)	.477	46.11±5.35 (105)	44.63±5.14 (54)	.072
Internet news pages	38.44±4.32 (50)	39.31±4.51 (32)	.159	45.54±5.45 (50)	42.91±5.05 (32)	**.036**
Social media (Twitter, Facebook, Instagram, WhatsApp)	35.87± 4.24 (15)	43.58±4.73 (12)	**.000**	45.93±4.28 (15)	45.58±5.29 (12)	.961
Print media	33.50±0.70 (2)	-	-	49.00±8.48 (2)	-	-
Concerns during the pandemic						
Child getting sick due to coronavirus	38.78±4.72 (115)	40.41±5.15 (51)	.056	45.78±5.01 (115)	43.76±4.79 (51)	**.027**
Re-increase of cases in the pandemic	39.70±4.83 (20)	40.46±4.71 (13)	.553	46.70±6.81 (20)	45.31±4.28 (13)	.767
Sickness of a person aged >65 years who do not live in the same house due to coronavirus	36.85± 3.02 (13)	38.30±4.90 (10)	.474	44.08± 4.71 (13)	43.40±3.92 (10)	.640
Getting sick yourself due to the coronavirus	39.00±3.28 (11)	43.33±6.02 (6)	.106	46.73±6.72 (11)	47.50±8.87 (6)	.960
Sickness of a person aged >65 years who live in the same house due to coronavirus	35.20±1.30 (5)	39.78±4.81 (9)	**.038**	44.80±2.58 (5)	42.89±7.16 (9)	.124
Economic difficulties arising from the pandemic	38.67±4.50 (3)	39.63±3.24 (8)	.836	50.00±7.21 (3)	45.38±4.47 (8)	.410
Partner's illness due to coronavirus	38.20±2.58 (5)	39.00 (1)	.552	49.20±2.77 (5)	41.00 (1)	.143

**Mann-Whitney U*

Abbreviations: n, sample size; SAI, state anxiety inventory; SD, standard deviation; TAI, trait anxiety inventory.

Factors Associated with Parents' Anxiety

In the multivariate regression model, it was observed that the parameters other than the anxiety about the decrease in the monthly total income of the house maintained their significance (Table 5.). It was found that factors such as using social media for pandemic information and stating that crowded environments were the riskiest for coronavirus transmission were factors that increased state anxiety in mothers. Older people who did not live in the same house with the family were determined as the reason that increased the state anxiety level of fathers. For mothers, the most important reasons that increased trait anxiety were the illness of an older person who did not live in the same house, the child being brought to the hospital with cough symptoms, and the child being a girl. The child being brought to the hospital with cough and fever symptoms and having a patient with COVID-19 in the family were identified as causes of increased trait anxiety in fathers.

Table 5. Logistic regression analysis results of factors causing an increase in parents' State and Trait Anxiety Inventory (STAI) scores

			Univariate Regression		Multivariate Regression	
		Risk Factor	**OR (95% CI)**	**p-value**	**OR (95% CI)**	**p-value**
SAI score	**Mother**	Thinking that crowded environments are the riskiest for coronavirus transmission	.341 (.135-.864)	**.023**	.374 (.151-.928)	**.034**
		Social media being the most used information source during the pandemic	.435 (.210-.901)	**.025**	.464 (.226-.950)	**.036**
	Father	Concern about the illness of a person aged >65 years who does not live in the same house during the pandemic	2.650 (1.094-6.416)	**.031**	2.753 (1.146-6.612)	**.024**
		Using non-radio sources as information sources during the pandemic	.095 (.011-.809)	**.031**	.102 (.012-.854)	**.035**
TAI score	**Mother**	Concern about the illness of a person aged >65 years who does not live in the same house during the pandemic	3.801 (1.363-10.603)	**.011**	3.811 (1.387-10.472)	**.009**
		Bringing the child to the hospital with a cough	.220 (.058-.832)	**.026**	.253 (.068-.939)	**.040**
		Child sex, girl	.245 (.085-.703)	**.009**	.262 (.095-.721)	**.009**
	Father	Bringing the child to the hospital with a fever	.325 (.120-.883)	**.028**	.277 (.090-.851)	**.025**
		Bringing the child to the hospital with a cough	.233 (.064-.847)	**.027**	.163 (.040-.672)	**.012**
		Having a person diagnosed with COVID-19 in the family	.232 (.057-.946)	**.042**	.139 (.028-.702)	**.017**
		Concern about the decrease in the monthly total income of the house	.557 (.314-.988)	**.045**		

Abbreviations: CI, confidence interval; OR, odds ratio; SAI, state anxiety inventory; TAI, trait anxiety inventory.

DISCUSSION

COVID-19 is an emerging infectious disease that creates a significant threat to public health. In our study, it was reassuring to see that the prevention methods were widely known and applied. It was determined that television was the most frequently used news source. More than half of the parents reported that the possibility of their child getting sick from the coronavirus was the most worrying situation. It was observed that the fathers' SAI scores and the mothers' TAI scores were significantly higher. It was found that the news source, the reason for bringing the children to the hospital, the illness of a person aged >65 years who did or did not live in the same house during the pandemic, the decrease in the income level, the presence of a patient with COVID-19 in the family, and the coronavirus measures were the factors that affected parental concerns.

Parents' Characteristics

The most frequently applied protective measures during the pandemic are washing hands, avoiding crowded environments and wearing masks (Faqihi et al., 2022). In a study, it was reported that 20.6% of the participants were unemployed and 7% remained without income (Almeida et al., 2021). We showed that over 90% of the protection methods were applied, and hand washing was the most important protection method. Since the ban on dismissal was implemented in our country during the pandemic, the rates of dismissal among the parents were found to be quite low. Previous studies showed that low education levels were a risk factor for knowledge, attitude, and practice (Nor et al., 2020). In our findings, parental education status was mostly high school and above, suggesting that it may be effective in knowing and applying the prevention methods. In Thailand, social media was the most common news source, followed by television, and in Malaysia, television was the second most used news source (Mongkhon et al., 2021; Rahman et al., 2022). Unlike in these other studies, television was the most used news source for the parents in our study, followed by internet news pages. This may be related to the common presence of televisions in houses and the fact that accuracy-checked news is presented to the public.

Parents' Concerns and Anxiety Status

The data to date show that although the latest variants are more contagious and have led to a slight increase in hospitalization rates in children, the disease is relatively less common in children than adults and frequently asymptomatic in children, and it progresses more rapidly in people aged >65 years and those with chronic diseases (Karron et al., 2022). However, the most worrying situation for the parents in our study was that their children would become ill due to the coronavirus in the early stage of the pandemic. Although this is contrary to scientific data, we suggest that it was associated with parenting instinct and attachment. Although restrictive measures are necessary due to the unpredictable course of the pandemic, prolonged lockdowns can lead to increased financial burdens and unemployment rates, as well as individual stress, family problems, and increased substance and alcohol use (Jin et al., 2022). In the pandemic, in cases of high trait anxiety, state anxiety levels were found to increase, and SAI and TAI scores were found to be significantly higher in women (Alemany-Arrebola et al., 2020; Şahan & Tangılntız, 2022). Similarly, a strong positive correlation was found between the SAI and TAI

scores of the participants. Further, the SAI scores were found higher in the fathers and the TAI scores in the mothers (Liu et al., 2021; Şahan & Tangılntız, 2022). The high SAI scores of the fathers may be related to the loss of work/income during the pandemic and the fact that they thought that using public transportation to go to work might be risky. The increase in TAI scores in mothers was thought to be due to a previously observed increase due to the difference in stress response between the sexes (Afifi, 2007).

Comparison of Parents' Anxiety Levels According to Sociodemographic Characteristics

In our study, it was thought that the lack of a self-protection instinct in children aged 24-72 months was effective in the increase in their fathers' SAI scores. Although the SAI scores of fathers with daughters were found to be higher, the risk increased by 0.24 times in the TAI scores of mothers of girls. Studies conducted during the COVID-19 pandemic found that the younger people were, the more severe their mental symptoms, showing higher signs of depression and anxiety (González-Sanguino et al., 2020; Traunmüller et al., 2020). Although individuals aged >45 years have more life experience, it has been observed that financial anxiety is high and greater vulnerability is associated with fear and uncertainty about the spread of the virus (Applegate & Ouslander, 2020; Gambin et al., 2021). The significant increase in TAI scores in mothers aged 30-40 years in our study was explained by the higher overall scores in mothers, and the higher TAI scores in fathers aged >40 years were associated with changes in daily life, vulnerability to the virus, and possible financial difficulties.

During the earlier period of the pandemic, nearly 2 million adults were unemployed and family incomes were significantly reduced. These financial problems were thought to be an important cause of depressive symptoms in adults (Posel et al., 2021). In our study, the threat of job loss at the low-middle income level and the loss of the current welfare level at high-income levels were associated with an increase in fathers' SAI scores. Regression analysis indicated that the concern about the decrease in the monthly income of the house caused a 0.55-fold increase in the risk of fathers' TAI scores. The significantly higher SAI scores of fathers who continued to go to work might be due to fear of being infected because of leaving the house and using public transportation (Lee et al., 2016).

Previous studies during the pandemic showed that the risk of depression was higher in those with a higher educational status (Wang et al., 2021). High SAI scores and low TAI scores were found in parents with children, and the number of children was a factor regarding higher parental stress (Cusinato et al., 2020; Şahan & Tangılntız, 2022). In our study, SAI scores were found to be significantly higher in fathers with a master's degree. Further, we found that the number of children increased the SAI and TAI scores of the parents, and it was associated with difficulties experienced with child care.

Comparison of Parents' Anxiety Levels in Pandemic-Related Conditions

Although it is believed that individuals will acquire healthy behaviors by educating society, increased exposure to media notifications may be associated with increases in anxiety, insomnia, and depression (Bendau et al., 2021; Mongkhon et al., 2021; Siddiquea et al., 2021). It has been shown that television creates a 2.41-fold increase in SAI scores, and social media exposure is positively associated with anxiety and depression (Kılınçel et al., 2021). Our

findings showed that mothers who used social media had a higher risk of an increase in SAI scores. In addition, although they followed internet news pages less, the TAI scores of mothers and fathers who used social media were found to be significantly higher.

During the pandemic, a child's illness was found as the most important psychosocial factor that affected parental anxiety (Alemany-Arrebola et al., 2020; Magson et al., 2021). In our study, the fact that their children were sick worried the parents the most and this caused the higher TAI scores of the mothers. In the pandemic, fever and cough were found to be the most common symptoms of hospital admissions in adolescents, and in our findings, it was observed that bringing a child to the hospital with these symptoms caused an increase in the TAI scores of the parents (Çağlar et al., 2022). People with chronic conditions aged >65 years are prone to hospital and intensive care hospitalizations and higher mortality rates related to COVID-19; more than 95% of COVID-19–related death is attributed to this age group (Thienemann et al., 2020). Among our participants, it was observed that especially the fathers were worried about the illness of a person aged >65 years living in the same house. In the regression analysis, the anxiety of getting sick of a relative aged >65 years who did not live in the same house during the pandemic was associated with higher SAI scores of the fathers and higher TAI scores of the mothers. These results showed that parents were concerned that their elderly relatives (who may or may not live in the same household) might get ill due to COVID-19.

Strengths and Limitations: This study had some limitations. First, being in the hospital environment during our study may have increased the state anxiety. In addition, presenting to the triage unit in the emergency department due to various symptoms in their children may have affected the anxiety levels of the parents. Second, this is a cross-sectional study and a causal relationship could not be accurately drawn. Third, our sample is small and we do not have a control group. Fourth, care should be taken not to increase the workload of healthcare workers and the risk of infection when conducting a mental health assessment. Despite these limitations, this study had several strengths. The public's concerns were investigated face-to-face at the height of the pandemic. This study is one of the first to examine parental anxiety and influencing pandemic factors in the early period of the pandemic.

Along with the distressing situations of the pandemic and quarantine, the anxiety of family members getting sick or dying due to COVID-19 increases the anxiety levels of parents. In addition, financial instability and fear of losing a job are factors that increase parental anxiety. The anxiety of parents can affect the care and development of children, disrupt parent-child bonding, and cause physical and mental negative effects on children. During the COVID-19 pandemic, it would be appropriate for parents who present to health institutions to be evaluated psychosocially to recognize their anxiety symptoms early and apply appropriate coping interventions in the short term. Using communication channels, which are at the forefront during the pandemic, is important in terms of developing the right strategies. Information coming from social media and internet pages should be followed closely and publications that support society spiritually should be encouraged. Health education and information lead to positive results in the attitudes and practices of individuals regarding protection against COVID-19.

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