

# The Effect of COVID-19 on anxiety levels of mothers and changes in the nutritional behavior of their children

## *O efeito do COVID-19 nos níveis de ansiedade das mães e mudanças no comportamento nutricional de seus filhos*

Sine Yilmaz<sup>1</sup> , Basak Can<sup>2</sup> 

<sup>1</sup> Ankara Medipol University, Faculty of Health Sciences, Department of Nutrition and Dietetics. Ankara, Turkey. Correspondence to: S YILMAZ. E-mail: <sine.yilmaz@ankaramedipol.edu.tr>.

<sup>2</sup> Istanbul Gelisim University, Faculty of Health Sciences, Department of Nutrition and Dietetics. Istanbul, Turkey.

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### ABSTRACT

#### Objective

This study aimed to measure the anxiety levels of mothers during the pandemic period and to investigate the correlation between anxiety levels and children's eating behaviors in Turkey.

#### Methods

Mothers with children aged 3-6 years (n=303) living in Turkey were recruited from different social media channels until February and March 2021 due to the pandemic. Mothers completed an online questionnaire that included the Child Feeding Questionnaire, Beck Anxiety Inventory, and Coronavirus Anxiety Scale. Pearson correlation analysis and Kruskal-Wallis tests were applied to determine the existing relationship between the scales.

#### Results

Although 21.2% of mothers had moderate and severe anxiety, only 0.3% of mothers had coronavirus anxiety. No significant correlation was found between any of the Child Feeding Questionnaire subscales and anxiety levels evaluated according to Beck Anxiety Inventory. Only a correlation was observed between the Beck Anxiety Inventory score and Coronavirus Anxiety Scale score ( $r=0.47, p<0.001$ ).

#### Conclusion

Although coronavirus anxiety was found in a small group in our study, more comprehensive studies are needed to see the effect of the anxiety created by the pandemic on child nutrition. Considering that human beings will face various pandemics in the coming years, the negative effects of the pandemic on the individual should be determined and precautions should be taken. In this way, it can be ensured that future generations are healthy in all aspects.

**Keywords:** Anxiety. Children. Coronavirus. Feeding Methods.

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## RESUMO

### Objetivo

Este estudo teve como objetivo medir os níveis de ansiedade das mães durante o período de pandemia e investigar a correlação entre os níveis de ansiedade e os comportamentos alimentares das crianças na Turquia.

### Métodos

Mães com filhos de 3 a 6 anos ( $n=303$ ) residentes na Turquia foram recrutadas em diferentes canais de mídia social até fevereiro e março de 2021 devido à pandemia. As mães preencheram um questionário online que incluía o Child Feeding Questionnaire, Beck Anxiety Inventory, e a Coronavirus Anxiety Scale. A análise de correlação de Pearson e os testes de Kruskal-Wallis foram aplicados para determinar a relação existente entre as escalas.

### Resultados

Embora 21,2% das mães tivessem ansiedade moderada e grave, apenas 0,3% das mães tinham ansiedade por coronavírus. Não foi encontrada correlação significativa entre nenhum dos subfatores do Child Feeding Questionnaire e os níveis de ansiedade avaliados de acordo com o Beck Anxiety Inventory. Apenas uma correlação foi observada entre o escore Beck Anxiety Inventory e o escore Coronavirus Anxiety Scale ( $r=0,47$ ,  $p<0,001$ ).

### Conclusão

Embora a ansiedade por coronavírus tenha sido encontrada em um pequeno grupo em nosso estudo, são necessários estudos mais abrangentes para ver o efeito da ansiedade criada pela epidemia na nutrição infantil. Considerando que os seres humanos enfrentarão várias epidemias nos próximos anos, os efeitos negativos da epidemia sobre o indivíduo devem ser determinados e precauções devem ser tomadas. Dessa forma, pode-se garantir que as gerações futuras sejam saudáveis em todos os aspectos.

**Palavras-chave:** Ansiedade. Crianças. Coronavírus. Métodos de Alimentação.

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## INTRODUCTION

The new Coronavirus Disease 2019 (COVID-19), has affected the whole world since December 2019, and caused sudden and great changes in the daily lives of families [1]. One of these is a total lockdown, one of the strict and unusual public health measures countries take to prevent infection. In addition to compulsory practices such as total lockdown, economic uncertainty and news of the spread of COVID-19 also caused various psychiatric problems such as anxiety, depression, and stress in healthy individuals [2]. Since it is known that psychiatric problems affect nutrition, the mental health of parents, who play a major role in the nutrition of children, is very important [3].

Various psychiatric problems of parents, such as anxiety, depression, and stress, play a role in childhood obesity. Family-based interventions have also proven effective for child weight management [4-6]. Accordingly, the stable and healthy psychiatric conditions of the parents ensure that the children have a healthy diet and that their holistic health is protected [7]. Various studies conducted during the COVID-19 pandemic have also highlighted the importance of the psychiatric conditions of parents and especially mothers in child nutrition [8-10]. For example, parents with high levels of parenting stress reported greater use of food during the pandemic to regulate their child's emotions and resolve conflict [9]. Or, food insecure families have been found to use more pressure to feed their child during the pandemic compared to food insecure families [1]. Thus, the mental health of the parents should be evaluated regularly, and in the presence of any psychiatric disorders, early diagnosis and treatment should be performed [4,11].

While the COVID-19 pandemic continues, many studies have been published on how the psychosocial states of individuals are affected [12-18]. Some of these studies found that during the COVID-19 pandemic, women had significantly higher levels of stress, anxiety, and depression than men [12-17]. This is one of the reasons that included only mothers in our study. However, no

study has been found on the relationship between psychiatric problems caused by the COVID-19 pandemic and child-feeding behaviors, especially in mothers with children aged 3-6 years, in Turkey.

Therefore, the first hypothesis of our study is that; the COVID-19 pandemic will increase the anxiety level of mothers, and mothers' anxiety will increase their "restrictive" eating behaviors while feeding their children. Our second hypothesis is that there will be correlations between the scores of the Coronavirus Anxiety Scale (CAS), Beck Anxiety Inventory (BAI), and Child Feeding Questionnaire (CFQ).

## METHODS

This study is a cross-sectional study conducted between February and March 2021, in Istanbul, Turkey. Mothers with children aged 3-6 years were included in the study. In Turkey, since the persons responsible for the care of children are usually mothers, other caregivers were not included in the study. Mothers were eligible if they were: 1) had a child aged 3-6 years, 2) preferred language was Turkish, and 3) willing to answer questions about their feeding practices and their child's eating behaviors. Mothers are ineligible in the following situations: 1) having had an illness in the last 3 months that would change their eating habits, 2) reporting that their child has been diagnosed with developmental delay. No payment was made for mothers to participate in the study. Participation in the study is completely voluntary.

The study was approved by Ankara Medipol University, Non-Interventional Research Ethics Committee and was carried out based on the Declaration of Helsinki (AMU-GOKAEK- n° 74791132-604.01.01/719) [19].

The anonymous survey questionnaire was designed with four modules to collect data on 1) demographic, anthropometric characteristics, and COVID-19 status; 2) CAS, which measures COVID-19 anxiety [20]; 3) BAI to measure general anxiety state and level [21]; 4) CFQ measuring mothers' attitudes and behaviors while feeding their children [22].

Due to the pandemic conditions, an anonymous online questionnaire created by the "Google Forms" program to collect data. Mothers were recruited through social media channels commonly used by individuals, such as Facebook, Instagram, WhatsApp, etc., to create a representative sample of mothers with children in the relevant age group. Each participant filled out the questionnaire once. Mothers with more than one child were asked to fill out the questionnaire according to the knowledge of one of their children between the ages of 3-6. Participants approved the first question of the questionnaire and reported that they voluntarily participated in the study.

The questionnaires are designed in a visual way that the participants can easily read and mark the questions. There is a short information letter at the beginning of the questionnaire.

The survey form consists of a section that includes the demographic characteristics and health information of the participants, the CAS, the BAI, and the CFQ. It takes approximately 15 minutes for the participants to fill in the questionnaire by phone or with their personal computers, while only data with a complete set of responses were included.

Due to the quarantine conditions, the body weight and height values of the individuals were self-reported by the participants. Body mass index was calculated by dividing the self-reported weight (in kg) by height (in m<sup>2</sup>). Participants were then classified into four categories, according to their body mass index: underweight (<18.5 kg/m<sup>2</sup>), normal weight (18.5-24.9 kg/m<sup>2</sup>), overweight (25.0-29.9 kg/m<sup>2</sup>), and obese (≥30.0 kg/m<sup>2</sup>) [23].

At the beginning of the questionnaire, a series of questions were included to evaluate some sociodemographic characteristics such as the age of the child, the education level of the mother, and how many children she had. In the last two questions of this survey; 1) when asked if there is anyone around the mother who has been diagnosed with coronavirus during the pandemic; 2) the mother was asked to evaluate herself according to her level of healthy nutrition.

Lee [20] developed the Coronavirus Anxiety Scale to identify possible causes of dysfunctional anxiety associated with the COVID-19 pandemic. It is a 5-point Likert-type scale. The scale consists of 5 questions and one dimension. Scoring of the scale; “never=0”, “rare=1”, “a few days=2”, “more than 7 days=3”, and “almost every day in the past two weeks=4” is carried out. The highest score obtained from the scale is 20. Scores of 9 and above can be interpreted as a high level of anxiety [20]. Biçer et al. [24] conducted the validity and reliability study of this questionnaire in our country.

The Beck Anxiety Inventory was designed as a tool to assess clinical anxiety and differentiate between anxious and non-anxious diagnostic groups, and its validity and reliability study in Turkey was conducted by Ulusoy et al. [21]. The 21-question scale mainly focuses on the physiological aspect of anxiety. Four items of the scale assess anxious mood, 3 items assess certain fears, and 14 items assess anxiety, disorder, and panic symptoms caused by autonomic hyperactivity and motor tension. Survey questions were rated on a 4-point scale ranging from 0 (not at all) to 3 (seriously – I could barely stand it). The total score range is between 0-63. A total score of 0-7 indicates minimal anxiety, 8-15 mild anxiety, 16-25 moderate anxiety, and 26-63 severe anxiety [21].

The Child Feeding Questionnaire is a self-report measure that evaluates parents’ beliefs, attitudes, and practices regarding child feeding by focusing on obesity tendencies in children. The CFQ is applied to children between the ages of 3-6. The original scale was developed by Birch et al. [25] and the validity and reliability study of this scale was conducted in 2014 [22]. The CFQ consists of subscales that evaluate parents’ beliefs and thoughts about their children’s predisposition to be overweight, and parents’ control and practices on child nutrition. These subscales are; 1) perceived responsibility for feeding a child, 2) perceived family body weight, 3) perceived child body weight, 4) interest in the child’s body weight, 5) restriction, eating pressure, and follow-up [26]. Responses were ranked on a five-point Likert scale and scores ranged from 3 to 15 for the “concerns about child weight” factor and 8-40 for the “restriction” factor. Total scores were calculated by summing and shaping individual responses appropriate to a separate score for each factor and their corresponding factor (concern about child weight and limitation) [7].

Descriptive analysis was performed to summarize and describe the data. Histograms, q-q plots, and Shapiro-Wilk’s test are examined to assess the data normality. As a result of the BAI score rating, according to the anxiety levels; The Kruskal-Wallis H test was used to compare the distribution between the BAI and CFQ subscales. Spearman correlation analysis was applied to define the correlation between BAI scores, CAS scores, and CFQ subscales. Significance was set at  $p < 0.001$ . The IBM®SPSS® version 24.0 was used for analyses.

## RESULTS

Basic demographic information and a summary of the assessments of the scales are shown in Table 1. There was a total of 303 mothers with a mean age of 35.37 ( $\pm 5.25$ ) included in this study. The majority of mothers (76.9%) had a high school degree or higher. While 43.6% of the mothers had only one child; 41.3% of them have two children. Only 15.2% reported having 3 or more children. The mean age of the children was 5.69 ( $\pm 5.00$ ). Their height is 116.58 ( $\pm 23.23$ ) cm and their body

weight is 24.59 ( $\pm 11.36$ ) kg. Around 65.7% of mothers have an acquaintance who has been diagnosed with COVID-19 54.8% of the mothers stated that they had a healthy diet; 6.6% reported that they were malnourished (unhealthy) (Table 1).

**Table 1** – Basic characteristics and scale evaluations of mothers and children participating in the study. Istanbul, Turkey, 2021.

Variables	Mean $\pm$ SD	n	Percent
<b>Childs' and mothers' characteristics</b>			
Child age (y)	5.6 $\pm$ 5		
Child height (cm)	116.5 $\pm$ 23.2		
Child weight (kg)	24.5 $\pm$ 11.3		
Maternal age (y)	35.3 $\pm$ 5.2		
<b>Number of Children</b>			
1		132	43.6
2		125	41.3
$\geq 3$		46	15.2
<b>Maternal Education</b>			
Primary school		18	5.9
Common School		11	3.6
High School		55	18.2
University		178	58.7
Postgraduate		41	13.5
<b>Can you evaluate your diet? (Evaluate in terms of being healthy)</b>			
Too bad		4	1.3
Bad		16	5.3
Middle		117	38.6
Good		137	45.2
Very good		29	9.6
<b>Is anyone around you diagnosed with COVID?</b>			
Yes		199	65.7
No		104	34.3
Questionnaires	Median $\pm$ SD	n	Percent
<b>CAS</b>			
CAS	0 $\pm$ 1.8		
No anxiety disorder		302	99.7
Anxiety disorder		1	0.3
<b>BAI</b>			
BAI	6 $\pm$ 9.9		
No anxiety		169	55.8
Mild anxiety		70	23.1
Moderate anxiety		39	12.9
Severe anxiety		25	8.3
<b>CFQ Score</b>			
Perceived responsibility	10 $\pm$ 2.6		
Perceived family body weight	8 $\pm$ 2.5		
Perceived child body weight	6 $\pm$ 1.3		
Interest in child's body weight	8 $\pm$ 2.6		
Restriction and eating pressure	32 $\pm$ 10.4		
Follow-up	12 $\pm$ 2.4		

Note: CAS: Coronavirus Anxiety Scale, BAI: Beck Anxiety Scale, CFQ: Child Feeding Questionnaire.

According to the results of the CFQ, 39.6% of mothers consider themselves overweight or obese. While 11.6% of mothers classify their children as underweight or 10.9% of mothers think their child is overweight or obese. 67% of mothers do not eat too many sweets in their children; 69.3% want to make sure they don't eat excessively fatty foods. While the rate of mothers who offer foods such as candy, ice cream, and cake as a reward is 44.5%, the rate of undecided mothers is 7.9%. More than half of the mothers (65.3%) think that if their children do not organize their child's diet, they will eat too much of their favorite foods (Table 2).

**Table 2** – Variance of mothers' responses to the Child Feeding Questionnaire. Istanbul, Turkey, 2021.

Perceived responsibility (%)	Never	Rare	Sometimes	Often	Always
When your child is at home, how often do you feel responsible for feeding them?	2.0	5.3	12.5	20.5	59.7
How often do you feel responsible when deciding whether your child eats the right foods?	1.0	4.6	11.2	25.4	57.8
How often do you feel responsible when deciding on the portion size your child eats?	3.3	11.9	17.5	23.4	43.9
Perceived family body weight	Skinny	Underweight	Normal	Overweight	Obese
In your childhood	10.2	25.4	56.8	6.9	0.7
In your adolescence (12-19 years)	7.3	20.8	53.5	16.5	2.0
In your 20s	26.7	-	60.1	11.9	1.3
You now	1.0	6.3	53.1	32.7	6.9
Perceived child body weight	Skinny	Underweight	Normal	Overweight	Obese
Your child's weight between 0-1 years	3.3	11.9	67.7	16.5	0.7
Your child's weight when they start walking	2.0	10.9	80.2	6.6	0.3
Your child's (current) weight in pre-school period	1.7	9.9	77.6	10.2	0.7
Interest about child body weight	Indifferent	A little indifferent	Interested	Quite interested	Very interested
How concerned are you with your child eating too much when he or she is away?	1.7	8.3	45.9	24.1	20.1
How concerned are you with diet so that your child can maintain their weight?	1.7	4.6	39.6	27.7	26.4
How concerned are you with your child's obesity?	3.0	6.6	37.6	25.7	27.1
Restriction and eating pressure	Not agree	A little disagree	Indecisive	Slightly agree	Agree
I have to make sure my child doesn't eat too much sweets (candy, ice cream, chocolate, cake, etc.)	4.3	8.9	3.3	16.5	67.0
Perceived responsibility (%)	Never	Rare	Sometimes	Often	Always
Restriction and eating pressure	Not agree	A little disagree	Indecisive	Slightly agree	Agree
I have to make sure my child does not overeat foods with high fat content	4.3	6.3	2.6	17.5	69.3
I have to make sure that my child does not overeat the foods she/he likes	7.9	8.9	8.9	23.1	51.2
I deliberately keep some foods away from my child's reach.	8.9	5.0	3.6	18.5	64.0
I offer candies (candy, ice cream, cake, etc.) to my child as a reward for good behavior	33.7	13.9	7.9	22.4	22.1
In exchange for good behavior, I offer my child the food she/he likes	24.4	13.2	12.2	26.1	24.1
If I don't organize my child's diet or guide her/him, my child eats too much junk food	16.5	8.3	9.2	13.9	52.1
If I don't organize my child's diet or guide her/him, my child eats her favorite foods too much.	17.2	8.6	8.9	16.8	48.5
My child should always eat all the food on their plate.	29.0	12.9	10.6	23.8	23.8
I have to be particularly careful to make sure my child eats enough	10.9	13.2	10.2	20.8	44.9
Although my child says that she/he is not hungry, I insist that she/he eat	44.6	14.2	8.9	18.2	14.2
If I don't organize my child's food or guide her/him, my child eats less than necessary	28.7	9.2	10.9	18.5	32.7
Follow-up	Never	Rare	Sometimes	Often	Always
How long do you keep track of the sugary foods (candy, chocolate, cake, etc.) your child consumes?	1.0	3.3	8.3	31.7	55.8
How long do you keep track of the snack foods (chips etc.) your child consumes?	0.7	2.6	7.3	29.4	60.1
How much do you keep track of the excessively fatty foods your child consumes?	1.7	2.6	9.6	30.4	55.8

Note: \*Mothers' answers are shown as percentages.

As shown in Table 3, there are significant positive correlation between BAI score and CAS score ( $r=0.47$ ,  $p$ -value  $<0.001$ ).

Table 4 shows the mean and p values of the CAS and CFQ subscales according to the BAI classification. According to this Table 4, only a significant relationship was found between the CAS score and the BAI classification.

In Figure 1, it is determined that the majority of children regularly consume breakfast (93.7%) and dinner (97.7%); it was observed that the consumption of snacks in the middle of the morning (21.8%) and at night snacks (15.8%) was low.

**Table 3** – Correlation matrix to show Spearman correlation coefficients (*r*) between the questionnaire measures

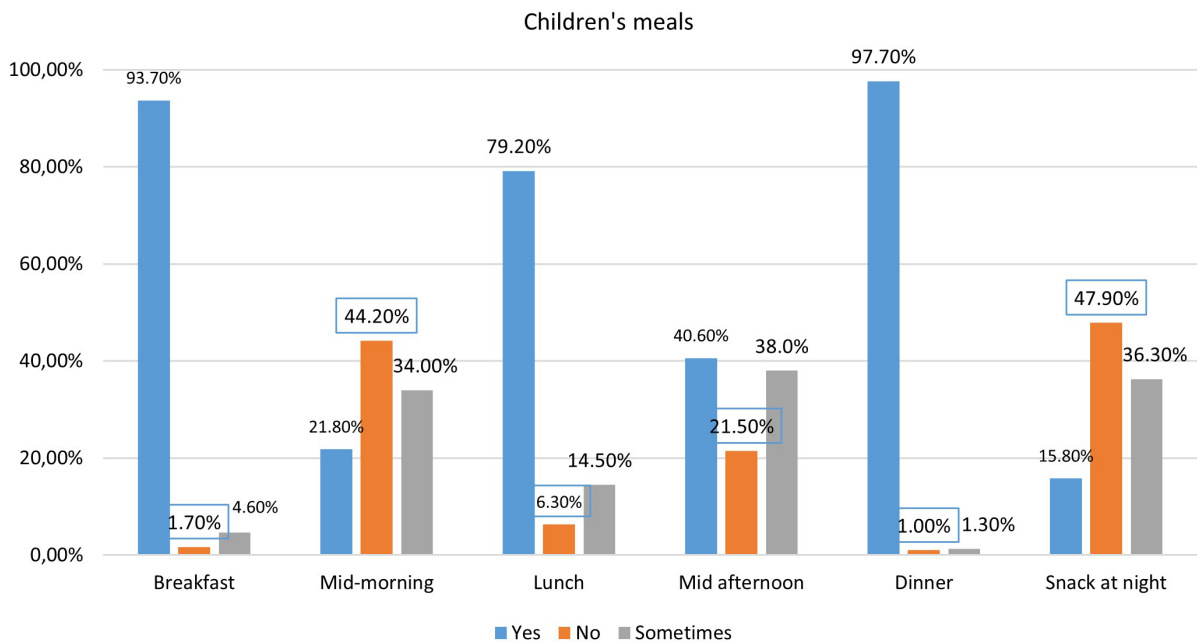
Variables	BAI Score	CAS Score	CFQ Total score
BAI Score	-	$r=0.47^{**}$ ( $<0.001$ )	$r=0.5$ ( $p=0.3$ )
CAS Score	$r=0.47^{**}$ ( $<0.001$ )	-	$r=0.6$ ( $p=0.2$ )
CFQ	$r=0.5$	$r=0.6$	-
Total score	$p=0.3$	$p=0.2$	

Note:  $^{**}p<0.001$  Table showing Spearman correlations (*r*) and associated *p*-values. BAI: Beck Anxiety Inventory, CAS: Coronavirus Anxiety Scale, CFQ: Child Feeding Questionnaire.

**Table 4** - Average and *p* values of CAS and CFQ subscales scores according to BAI groups. Istanbul, Turkey, 2021

Variables	No anxiety disorder	Mild anxiety	Moderate anxiety	Severe anxiety	<i>p</i> -value
Coronavirus Anxiety Scale	0.3±1	1.2±1.7	2.3±2	2.6±3.5	<0.001
Child Feeding Questionnaire	70.8±15.5	72.4±9.1	71.8±12.5	77±12.8	0.1
Perceived responsibility	9.3±2.9	10.1±2	9.2±2.6	10.3±2.3	0.1
Perceived family body weight	7.1±2.5	7.8±2.4	8.1±2.6	7.6±2.8	0.0
Perceived child body weight	5.9±1.1	5.9±1.3	5.7±1.7	5.6±1.6	0.9
Interest in child's body weight	7.8±2.6	8.1±2.5	7.61±2.73	8.5±2.6	.00
Restriction and eating pressure	30.4±11.7	30.07±7.3	31.1±9.2	34.8±9.8	0.1
Follow-up	10.2±2.5	10.30±2	9.9±2.3	10.1±2.4	0.7

Note: The analysis applied is the Kruskal-Wallis test.  $p<0.001$ .

**Figure 1** – Percentages of main meals and snacks of children according to the answers given by the mothers. Istanbul, Turkey, 2021.

## DISCUSSION

So far, few studies have examined associations between mothers' stress and child feeding behavior during times of crisis, such as a pandemic [27,28]. Therefore, this study aimed to measure mothers' stress and anxiety during the COVID-19 pandemic and to investigate its correlation with feeding behaviors.

Studies in the literature are already showing the negative effects of COVID-19 on global stress, depression, and anxiety. When these studies are examined, it is seen that women are generally more stressed and anxious than men [12,13,29]. This situation has not changed in cases of anxiety caused by the COVID-19 pandemic [9,12,30,31]. Although the opposite is the case in the study conducted in Israel [32], generally, anxiety and stress levels were found to be higher in women, especially mothers. In a study conducted in our country, it was determined that mothers' anxiety and stress levels were higher than fathers' [33].

Although it was determined that approximately 21.2% of the mothers participating in the study had moderate and severe anxiety; anxiety caused by COVID-19 was found to be quite low (0.3%). However, in another study, parental stress due to COVID-19 was found to be positively related to general anxiety [34]. The date range of the study is before the second wave of COVID-19 in Turkey. Accordingly, it can be predicted that mothers still do not realize the severity of the disease or they think that the disease will be brought under control in a short time. For these reasons; the percentage of coronavirus anxiety detected in mothers; compared to other countries such as Brazil [35], Canada [36], and Italy [37], which were caught in the second wave of COVID-19 before Turkey, is lower.

In our study, although the number of mothers with coronavirus anxiety was small, and found that the BAI score and CAS score correlated. This can be explained by the fact that the distressing and uncertain situation brought about by the pandemic in individuals with current anxiety also increases the anxiety of coronavirus due to the disease. If the sample of the study was larger, or the same study had been carried out after the second wave in Turkey, it could be predicted that the number of mothers with coronavirus anxiety would be higher. Indirectly, there could also be a stronger correlation between the BAI score and the CAS score.

Given the physiological impact of stress and anxiety on the body [38,39], minimizing stress and anxiety in parents should be one of the simultaneous interventions in COVID-19 response plans. With this intervention, while individuals' mental health is protected, their children's nutrition is not adversely affected by changing living conditions. Because there is evidence in the literature that the increase in controlled feeding practices may be caused by the psychosocial state of the mother. For example, parents with increased anxiety during the pandemic could have also increased their use of restrictive feeding practices [40].

Although we did not find any relationship between CFQ subscales and anxiety level in our study, it is known that parents will have more restrictive feeding behaviors when they are experiencing stress or depressive mood, it can be ensured that parents' mental health is examined during routine health checks of children. In this way, nutritional problems from parents can be prevented before they occur [18,28].

Although no relationship was found between the subscales of the CFQ and anxiety levels in our study, it was found in previous studies that the behaviors of compelling food to eat were associated with maternal stress [1,41,42]. However, with the COVID-19 pandemic, parents have started to spend more time at home with their children. The hours of cooking and eating together at home have increased. Some studies have found that parents are more tolerant and set fewer rules for their diets. It has been observed that children are freer [43]. However, with this freedom, it has been reported that children eat more snacks when they stay at home [9,36]. Therefore, the impact of COVID-19 on children's diets is open to debate, and more studies are needed.

Eating breakfast is very important for childhood obesity. While the rate of children aged 5-17 having breakfast in Italy during the COVID-19 period is 85.2% [44], it was found to be 93.7% in our study. While it was seen in our study that the majority of children consumed their main meals,



it cannot be said that the COVID-19 pandemic has harmed this issue in our country. It is seen that only snacks are consumed less than in other countries [1,9,43], even though children are at home.

Our study has several limitations, including that our data was acquired in a small sample from parent reports and that no quantitative measures of weight, or height. We couldn't evaluate the food consumption. After the COVID-19 pandemic, researchers who will work on pandemics can reach more comprehensive results by taking the frequency or record of food consumption.

## CONCLUSION

Although we could not prove it in our study, prolonged pandemics and changing living conditions can impair the mental health of individuals. This affects both their nutrition and the nutrition of the individuals they are responsible for, especially their children. To prevent this, governments and policy-making institutions need to take measures to protect the mental health of individuals. As an event that many people encounter for the first time in their lives, psychological support should be provided to families in extraordinary situations such as pandemics, especially since the pandemic psychologically affects the families responsible for the care of their children and the mothers. In addition, healthy nutrition and good nutritional status of individuals are important in terms of overcoming many diseases. Adequate and balanced nutrition will help to be prepared for diseases that may be encountered throughout life, and will also reduce anxiety about the effects of these diseases. Nutritional and mental health problems should be considered as a public health concern. Nutritional status of all individuals living in the community should be assessed at regular basis. Individuals should also be evaluated psychologically at regular intervals.

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## CONTRIBUTORS

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