Sağlık Akademisyenleri Dergisi
http://dergipark.gov.tr/sagakaderg

Sağ Aka Derg, 2025; 12(3): 402-411

Research Article / Araştırma

Determination of Parents' COVID-19 anxiety, phobia, and traditional and complementary medicine practices used by parents: A descriptive study

Ebeveynlerin COVID-19 anksiyetesi, fobisi ve kullandıkları geleneksel ve tamamlayıcı tıp uygulamalarının belirlenmesi: Tanımlayıcı bir çalışma

Ayçin Ezgi Önel[1], Elif Bulut[2], İlknur Kahriman[3]

[1] RA. Ege University, Faculty of Nursing, Department of Child Health and Diseases Nursing, İzmir/Türkiye, aycinezgiakaydin@gmail.com, 0000-0002-4720-6685
[2] RA. Tokat Gaziosmanpaşa University, Faculty of Health Sciences, Child Health and Disease Nursing Department, Tokat/Türkiye, elf.bayrak@hotmail.com, 0000-0001-9124-2168
[3] Prof. Dr. Karadeniz Technical University, Faculty of Health Sciences, Child Health Nursing Department, Trabzon/Türkiye, ilknurkahriman@hotmail.com, 0000-0002-6968-9446

Key Words: Anxiety; Child; Complementary Medicine; COVID-19; Parents; Traditional Medicine

Anahtar Kelimeler: Anksiyete, COVID-19, Çocuk, Ebeveynler, Geleneksel Tıp, Tamamlayıcı Tıp

Corresponding Author/Sorumlu Yazar: Arş. Gör. Tokat Gaziosmanpaşa University, Faculty of Health Sciences, Child Health and Disease Nursing Department, Tokat/Türkiye, elf.bayrak@hotmail.com, 0000-0001-9124-2168

DOI: 10.52880/sagakaderg.1679084

Received Date/Gönderme Tarihi: 18.04.2025

Accepted Date/Kabul Tarihi: 07.07.2025

Published Online/Yayımlanma Tarihi: 30.09.2025

ABSTRACT

Aim: To determine COVID-19 anxiety and phobia of parents with children aged 6-18 years and the preventive, traditional and complementary medicine practices of parents to protect their children against the risk of COVID-19. **Methods**: The study was conducted between July and September 2021 with 220 parents using the snowball sampling method. The research data were collected through an online survey using the "Child-Parent Introduction Form, Parents' Preventive, Traditional and Complementary Medicine Practices Form, Coronavirus Anxiety Scale and Coronavirus-19 Phobia Scale". Descriptive statistics and correlation analysis were used to analyze the data. **Results**: 55.5% of parents (n=122) utilized Traditional and Complementary Medicine (T&CM) practices to protect their children during the pandemic. The most common practice used by parents during COVID-19 is to ensure that the child drinks plenty of fluids (81.4%; nutrition-based). The mean total score of the Coronavirus Anxiety Scale was 2.05±3.23 and the mean total score of the Coronavirus-19 Phobia Scale was 45.59±15.93. Parents who benefited from T&CM to protect their children had higher mean scores on the Coronavirus Anxiety Scale than parents who did not benefit from T&CM, and the difference between them was statistically significant (t=2.988; p<0.01). **Conclusion**: In this study, the use of traditional and complementary medicine practices by parents during the pandemic was influenced by their emotional responses, particularly anxiety and phobias. It is essential to address the psychosocial needs of parents in order to promote the well-being of both parents and children in times of crisis.

ÖZ

Amaç: 6-18 yaş arası çocuğu olan ebeveynlerin COVID-19 anksiyete, fobi düzeyleri ve ebeveynlerin çocuklarını COVID-19 riskine karşı korumak için yaptıkları önleyici, geleneksel ve tamamlayıcı tıp uygulamalarını belirlemektir. **Yöntem**: Çalışma Temmuz-Eylül 2021 tarihleri arasında kartopu örnekleme yöntemi kullanılarak 220 ebeveyn ile gerçekleştirilmiştir. Araştırma verileri "Çocuk-Ebeveyn Tanışma Formu, Ebeveynlerin Koruyucu, Geleneksel ve Tamamlayıcı Tıp Uygulamaları Formu, Koronavirüs Anksiyete Ölçeği ve Koronavirüs-19 Fobi Ölçeği" kullanılarak çevrimiçi bir anket aracılığıyla toplanmıştır. Verilerin analizinde tanımlayıcı istatistikler ve korelasyon analizi kullanılmıştır. **Bulgular**: Ebeveynlerin %55,5'i (n=122) pandemi sırasında çocuklarını korumak için Geleneksel ve Tamamlayıcı Tıp (GETAT) uygulamalarından yararlanmıştır. COVID-19 sırasında ebeveynler tarafından kullanılan en yaygın uygulama, çocuğun bol miktarda sıvı içmesini sağlamaktır (%81,4; beslenme temelli). Koronavirüs Anksiyete Ölçeği toplam puan ortalaması 2,05±3,23 ve Koronavirüs-19 Fobi Ölçeği toplam puan ortalaması 45,59±15,93'tür. Çocuklarını korumak için GETAT'tan yararlanan ebeveynlerin Koronavirüs Anksiyete Ölçeği puan ortalamaları GETAT'tan yararlanmayan ebeveynlere göre daha yüksekti ve aralarındaki fark istatistiksel olarak anlamlıydı (t=2.988; p<0.01). **Sonuç**: Bu çalışmada, pandemi sırasında ebeveynlerin geleneksel ve tamamlayıcı tıp uygulamalarını kullanmaları, anksiyete ve fobi gibi duygusal tepkilerinden etkilenmiştir. Kriz zamanlarında hem ebeveynlerin hem de çocukların refahını desteklemek için ebeveynlerin psikososyal ihtiyaçlarının ele alınması çok önemlidir.

Atıf | Reference : Önel, A.E., Bulut, E. & Kahriman, İ. (2025). Determination of Parents' COVID-19 anxiety, phobia, and traditional and complementary medicine practices used by parents: A descriptive study. *Sağlık Akademisyenleri Dergisi*, 12(3), 402-411

INTRODUCTION

The COVID-19 pandemic emerged in China in 2019, sparking an unprecedented health crisis on a global scale. With the World Health Organization declaring it a pandemic, the speed and impact of the disease's spread has radically changed not only healthcare systems, but also the daily lives and habits of individuals (Sharma et al., 2021; Liu et al., 2020).

The concept of coronavirus phobia or 'coronaphobia' has entered our lives with the COVID-19 pandemic. It is a term that can be used to describe intense fear or anxiety about COVID-19 and can lead parents to be hypersensitive to the risk of the virus spreading, fearful of losing control and in a constant state of worry (Asmundson & Taylor, 2020). Parents experience intense anxiety and phobia about the health and safety of their children due to reasons such as the rapid spread of the disease, the possibility of becoming infected and transmitting it to the child, the diversity of symptoms, the potential to be fatal, the unknown diagnosis-treatment methods at the beginning, the lack of vaccination and the effects of the media(Chung et al., 2020; Lee et al., 2020). A systematic review of the literature revealed that outbreaks lead to significant anxiety and depression in parents (Araújo et al., 2021). A study conducted by Uzşen et al. (2023) investigated how coronavirus-related phobia and anxiety levels among parents of children aged 2-6 influenced their parenting attitudes. The findings revealed that a majority of parents experienced high levels of anxiety, while a portion displayed moderate levels of COVID-19-related phobia. The study by Soyanit et al. (2022) examined the anxiety levels of parents with school-age children during the COVID-19 pandemic. They found that although parents experienced low levels of anxiety about COVID-19 itself, they were significantly concerned about their children's health. In a study by Güner and Ayar (2022) involving 264 children aged 4-10 years and their parents, it was found that parents' levels of coronavirus-related anxiety were above average.

Social measures have been taken in many countries around the world to protect against COVID-19. The fact that vaccination against COVID-19 has been found through studies, but a definitive treatment method has not been found, has pushed parents to take extra precautions to protect their children from the virus. In addition, parents had to choose between many different medical and non-medical approaches. Thus, traditional and complementary medicine (T&CM) practices have come to the agenda (Karacan et al., 2023; Özdemir & Pala, 2020; Seifert et al., 2020)

T&CM practices have been used for centuries for the treatment of diseases in all societies all over the world. Today, in addition to medical treatment, its use continues to increase for reasons such as strengthening the immune system, reducing the side effects of drugs, cost effectiveness, providing easy access, preventing and controlling the disease (Işık & Can, 2021). In the literature, it has been found that many traditional and complementary medicine practices such as herbal medicines, ayurveda, unani, reiki, homeopathy, aromatherapy, food supplements, cupping, acupuncture, special nutritional mixtures, energy healing therapies and traditional Chinese medicine prescriptions are used to relieve COVID-19 symptoms and prevention the disease (Dehghan et al., 2022; Kretchy et al., 2021).

The COVID-19 pandemic has profoundly affected not only physical health, but also the mental states and health-related behaviours of individuals. In this context, this study, which examines the relationship between the anxiety and phobia levels experienced by parents during the pandemic process and the preventive, traditional and complementary medicine (T&CM) practices they apply to protect their children, offers important contributions to the field (Chung et al., 2020; Çiçekci et al., 2023). This issue, which has been addressed in a limited number in the literature, has a unique value, especially in terms of shedding light on the indirect effects of parental psychology on child health. While the findings reveal that parents' anxiety levels may increase the tendency towards alternative health approaches during crisis periods such as pandemics, it also emphasises the necessity of establishing effective communication with families, sharing accurate information and supporting conscious practices for health professionals. In this respect, the study contributes to both the theoretical and practical field in terms of developing preventive mental health services, planning family-based interventions and structuring health education (Gao et al., 2020; Güner and Ayar, 2022; Özdemir and Pala, 2020; Seifert et al., 2020).

Research Questions

What are the anxiety and phobia levels of parents regarding the COVID-19 pandemic?

What are the preventive, traditional and complementary medicine practices used by parents during the COVID-19 pandemic?

Do the anxiety and phobia levels of parents vary according to their status of applying traditional-complementary medicine paractices?

AIM

To determine COVID-19 anxiety and phobia of parents with children aged 6-18 years and the preventive, traditional and complementary medicine practices

of parents to protect their children against the risk of COVID-19.

METHODS

Study Design and Participants

This is a descriptive study. The sample consists of parents of children between the ages of 6 and 18 who live in Turkey and were selected using the snowball sampling method. The research was conducted according to STROBE guidelines. Inclusion criteria included (1) the ability to read and write in Turkish, (2) having children between the ages of 6-18, and (3) voluntary participation in the study. This study, which was conducted between July and September 2021, was completed with 220 parents. A post-hoc power analysis was conducted using G*Power 3.1 software to assess whether the sample size was adequate for the statistical tests performed. For the comparison of C19P-S total scores between mothers (n = 167) and fathers (n = 53), the effect size was calculated as Cohen's d = 0.50, indicating a medium effect. With an alpha level of 0.05 and a total sample size of 220, the achieved statistical power was 0.88. This result suggests that the study had sufficient power to detect meaningful group differences, and the sample size was adequate for the primary analyses conducted.

Data Collection Tools

"Child-Parent Introduction Form", "Parents' Preventive, Traditional and Complementary Medicine Practices Form", "Coronavirus Anxiety Scale (CAS)" and "Coronavirus-19 Phobia Scale (CP19-S)" were used to collect the data.

Child-Parent Introduction Form

The socio-demographic form created by the researchers in line with the literature includes two sections: parents and children. In this form, which includes 20 questions in total, there are questions such as age, gender, parental education level, perception of economic status, number of children, chronic disease status, and the status of receiving a diagnosis of COVID-19 from themselves/children/relatives (Işık & Can, 2021; Kaplan, 2020).

Parents' Preventive, Traditional and Complementary Medicine Practices Form

It was designed by the researchers in line with the literature in order to determine the increasing behaviours of parents about preventive, traditional and complementary medicine practices after the pandemic. In this form, which included a total of nine questions, T&CM practices were examined under the subheadings of "herbal, cognitive/behavioural, manipulative and body-based and traditional approaches to cleaning" (Işık & Can, 2021; Kaplan, 2020).

Coronavirus Anxiety Scale (CAS)

This scale, developed by Lee (2020), was adapted to Turkish society by Biçer et al. (2020) The scale is 5-point Likert-type (0: Never, 1: Rarely, less than one or two days, 2: A few days, 3: More than seven days, 4: Almost every day in the last two weeks) and consists of 5 items and one sub-dimension. Scores obtained from the scale vary between 0-20. As the score obtained from the scale increases, it is revealed that the anxiety levels of individuals against COVID-19 increase. While Cronbach's alpha value was 0.83 in Biçer et al.'s (2020) study, it was found to be 0.88 in this study.

Coronavirus-19 Phobia Scale (C19P-S)

This scale was developed by Arpaci et al. (2020) in line with DSM-5 specific phobia diagnostic criteria. The scale is 5-point Likert-type (1: Strongly disagree, 5: Strongly agree) and consists of 20 items and 4 sub-dimensions (Psychological, Somatic, Social, Economic). While a minimum score of 20 points is obtained from the scale, a maximum score of 100 points is obtained. As the score obtained from the scale increases, it is revealed that the phobia level of individuals against COVID-19 increases. While Cronbach's alpha value was 0.92 in Arpaci et al.'s study, it was found to be 0.94 in this study.

A pilot study involving 15 parents was carried out to assess the clarity and practicality of the questionnaires. Those who took part in the pilot study were excluded from the main sample.

Data Collection

The study data were collected online via "Google Forms" between July and September 2021 from parents who voluntarily agreed to participate. Prior to accessing the survey, participants were presented with an online informed consent form outlining the purpose of the study, confidentiality, and their right to withdraw at any time. Only those who gave consent could proceed to the questionnaire.

To ensure data completeness, all survey questions were set as mandatory. To prevent duplicate submissions, the form was configured to accept only one response per Google account, and participants were informed that the survey should be completed only once. Additionally, the dataset was reviewed for identical demographic information and response patterns; no repetitive entries were identified. Those who left the study were considered as those who closed the form without completing it and

did not submit it; these data were automatically excluded by the system.

Ethical Considerations

All stages of the study were conducted in accordance with the principles of the Declaration of Helsinki. Ethical approval for the study was granted by a university clinical research ethics committee (Date: 23.05.2021, No: 2021/82), and research authorization was granted by the Ministry of Health, General Directorate of Health Services (Date: 21.02.2021). Permission to use the CAS and C19P-S, which served as data collection instruments, was obtained via email from their respective authors. Detailed information about the study was shared with parents via Google Forms prior to completing the questionnaire, and informed consent was obtained.

Data Analysis

Data were analysed using SPSS version 26 (Statistical Package for the Social Sciences). Descriptive statistics, including number, mean, percentage, and standard deviation, were calculated, and the normality of data distribution was assessed using the Kolmogorov-Smirnov test. For data with a normal distribution, the "Independent Sample t-test" was applied, while the "Mann-Whitney U test" and "Kruskal-Wallis test" were used for data that did not follow a normal distribution. Categorical variables were analyzed using the "Chi-Square Test," and Spearman correlation analysis was performed to assess relationships between scales. A 95% confidence interval was used to interpret the results, and a p-value of less than 0.05 was considered statistically significant.

RESULTS

Table 1 shows the sociodemographic characteristics of parents and children. The average age of the parents participating in the study was 39.6±7.64 years, with 75.9% (n=167) being mothers and 24.1% (n=53) fathers. The children included in the study had a mean age of 10.88±4.69 years. Of these children, 57.7% (n=127) were girls, and 42.3% (n=93) were boys. It was found that 5.9% (n=13) of the children had chronic illnesses and were on continuous medication. During COVID-19, 25% (n=55)

Table 1. Sociodemographic characteristics of parents and children

Sociodemographic Characteristics		X±Ss	Min.-Max.
The mean age of the parents (year)		39.6±7.64	24-56
The mean age of the children (year)		10.88±4.69	6-18
		n	%
Gender (Parent)	Female	167	75.9
	Male	53	24.1
Mother's education	Primary school	42	19.1
	Secondary school	15	6.8
	High school	37	16.8
	University and more	126	57.3
Father's education	Primary school	25	11.4
	Secondary school	18	8.2
	High school	52	23.6
	University and more	125	56.8
Mother's working status	Yes	114	51.8
	No	106	48.2
Father's working status	Yes	181	82.3
	No	39	17.7
Place of residence	City centre	124	56.4
	District centre	82	37.3
	Village	14	6.3
Perception of the economic situation	My income is less than my expenses	54	24.5
	My income equals my expenses	120	54.5
	My income exceeds my expenses	46	20.9
Diagnosis of COVID-19 in the family	Yes	62	28.2
	No	158	71.8
Family members diagnosed with COVID-19*	Parent	55	25.0
	Child	21	9.5
Diagnosis of COVID-19 in the relatives and neighbours	Yes	202	91.8
	No	18	8.2
Gender (Child)	Girl	127	57.7
	Boy	93	42.3
Having a chronic disease (Child)	Yes	13	5.9
	No	207	94.1
Using a medication constantly (Child)	Yes	13	5.9
	No	207	94.1
Utilisation status of T&CM	Yes	122	55.5
	No	98	44.5

* More than one response was allowed

of parents and 9.5% (n=21) of children were diagnosed with COVID-19. It was determined that 91.8% (n=202) of the parents had relatives and people around them diagnosed with COVID-19.

Table 2 presents the comparison of sociodemographic characteristics, parents' use of T&CM to protect their children, and the total and sub-dimension scores of the CAS and C19P-S. When the total, C19P-S total, and sub-dimension mean scores of parents were examined based on the "parental gender" variable, it was found that mothers had higher mean scores for the C19P-S total, psychological, and social sub-dimensions. This difference was statistically significant (t=3.574, $p < 0.01$; t=4.104, $p < 0.001$; t=3.603, $p < 0.001$)

When the mean scores of the total, C19P-S total, and its sub-dimensions for parents participating in the study were examined based on the "gender of the child," it was observed that parents with female children had higher mean scores in the total, C19P-S total, psychological, and social sub-dimensions. However, a statistically significant difference was found only in the somatic sub-dimension mean scores (t = 2.988, $p < 0.01$). Additionally, when the mean scores of the total, C19P-S total, and sub-dimensions were analyzed according to the variable of "utilization of traditional and complementary medicine (T&CM) practices," it was noted that parents who utilized T&CM had higher mean scores in the total, C19P-S total, psychological, and social sub-dimensions compared to those who did not. The difference was statistically significant only for the total score of T&CM utilization (t = 2.030, $p < 0.05$).

It was determined that there was no statistically significant difference between the total, C19P-S total and subscale mean scores of the parents participating in the study and the variables of "having a child with chronic disease" and "having a diagnosis of COVID-19 in the family" ($p > 0.05$).

Table 3 shows the most frequently used practices based on nutrition, cognitive/behavioural, manipulative and body, and cleanliness among traditional and complementary medicine practices that parents use to protect their children against the risk of COVID-19. 55.5% of the parents (n=122) stated that they used T&CM practices to protect their children during the

Table 2. Examination of Sociodemographic Characteristics And Parental Use of T&CM Practices According to Coronavirus Anxiety Scale and Coronavirus-19 Phobia Scale Total-Subdimension Scores (N=220)

Variables	n(%)	CAS Total (X±SD)	C19P-S Total (X±SD)	Psychological Total (X±SD)	Somatic Total (X±SD)	Social Total (X±SD)	Economic Total (X±SD)
Gender (Parent)							
Female	167(%75.9)	1.97±3.10	47.47±16.33	16.25±7.06	10.32±3.96	12.86±5.10	8.03±2.91
Male	53(%24.1)	2.33±3.86	39.64±13.04	12.49±5.35	9.43±2.83	10.28±4.36	7.43±2.76
Test[a]/p		-0.0637 / 0.526	3.574 / **p<0.01**	4.104 / **p<0.001**	1.796 / 0.075	3.603 / **p<0.001**	1.328 / 0.186
Gender (Child)							
Girl	127(%57.7)	2.11±3.25	46.37±17.40	15.40±7.51	10.54±3.83	12.25±5.37	8.18±2.98
Boy	93(%42.3)	1.98±3.21	44.52±13.70	15.25±5.92	9.51±3.53	12.23±4.59	7.49±2.69
Test[a]/p		0.273 / 0.785	0.847 / 0.398	0.161 / 0.872	2.030 / **p<0.05**	-0.032 / 0.975	1.754 / 0.081
Having a chronic disease (Child)							
Yes	13(%5.9)	1.92±2.92	43.00±12.30	13.69±6.58	10.61±3.15	11.23±4.02	7.46±1.80
No	207(%94.1)	2.06±3.25	45.75±16.14	15.44±6.89	10.07±3.77	12.30±5.10	7.91±2.93
Test[b]/p		1332.5 / 0.949	1247.5 / 0.660	1123.5 / 0.318	1161.5 / 0.398	1226.0 / 0.590	1339.0 / 0.976
Diagnosis of COVID-19 in the family							
Yes	62(%28.2)	2.32±3.59	46.16±16.38	15.29±7.10	10.51±3.62	12.19±5.15	8.16±2.61
No	158(%28.2)	1.95±3.08	45.36±15.80	15.36±6.80	9.94±3.77	12.26±5.02	7.78±5.02
Test[a]/p		0.756 / 0.450	0.332 / 0.740	-0.074 / 0.941	1.013 / 0.312	-0.095 / 0.924	0.872 / 0.384
Utilisation status of TCM							
Yes	122(%55.5)	2.61±3.57	46.51±16.12	15.65±6.97	10.34±3.70	12.52±4.94	7.99±2.92
No	98(%44.5)	1.36±2.61	44.43±15.69	14.95±6.75	9.81±3.77	11.89±5.17	7.76±2.83
Test[a]/p		2.988 / **p<0.01**	0.961 / 0.338	0.746 / 0.456	1.043 / 0.298	0.914 / 0.362	0.579 / 0.563

Notes: CAS, Coronavirus Anxiety Scale; C19P-S, Coronavirus-19 Phobia Scale; $\overline{X}$, Mean; SD, Standard Deviation; aIndependent Sample Student t test; bMann-Whitney U.

Table 3: Traditional And Complementary Medicine Practices Of Parents To Protect Their Children Against COVID-19 Risk (N=220)

Traditional and Complementary Medicine Practices		n(%)*
Nutrition Based	Abundant fluid intake	179(81.4)
	Vegetable and fruit-based nutrition	175(79.5)
	Plenty of nuts (hazelnuts, walnuts, almonds, etc.) and dried fruit (grapes, figs, etc.)	173(78.6)
Cognitive/Behavioural Based	Prayer	136(61.8)
	Exercise	119(54.1)
	Listening to relaxing music	80(36.4)
Manipulative and Body Based	Massage	61(27.7)
	Aromatherapy	29(13.2)
	Using aromatic oil in massage	28(12.7)
Cleanliness Based	Soaking vegetables and fruits in vinegar water, washing them thoroughly and then cooking them	150(68.2)
	Washing groceries with soapy water	149(67.7)
	Cleaning the house with vinegar water	113(51.4)

Notes: * The number and percentage of respondents who answered in the affirmative out of n=220 are given. More than one response was allowed.

pandemic process. In nutrition-based approaches, the most common practices, respectively; ensuring that the child drink plenty of fluids (n=179, 81.4%), feeding the child mainly vegetables and fruits (n=175, 79.5%), and ensuring that the child consume plenty of nuts and dried fruits (n=173, 78.6%). In cognitive/behavioural-based approaches, the most common practices were praying (n=136, 61.8%), having the child do exercises (n=119, 54.1%) and having the child listen to relaxing music (n=80, 36.4%). In manipulative and body-based approaches, the most common practices were massaging the child (n=61, 27.7%), aromatherapy (n=29, 13.2%) and using aromatic oil in massage (n=28, 12.7%). In cleanliness-based approaches, the most common practices, respectively, were soaking vegetables and fruits in vinegar water and cooking them after washing them thoroughly (n=150, 68.2%), washing grocery items with soapy water (n=149, 67.7%), and cleaning the house with vinegar water (n=113, 51.4%). Parents stated that they mostly obtained information from the internet in all areas while applying T&CM practices.

Table 3 shows the most frequently used practices based on nutrition, cognitive/behavioural, manipulative and body, and cleanliness among traditional and complementary medicine practices that parents use to protect their children against the risk of COVID-19. 55.5% of the parents (n=122) stated that they used T&CM practices to protect their children during the pandemic process. In nutrition-based approaches, the most common practices, respectively; ensuring that the child drink plenty of fluids (n=179, 81.4%), feeding the child mainly vegetables and fruits (n=175, 79.5%), and ensuring that the child consume plenty of nuts and dried fruits (n=173, 78.6%). In cognitive/behavioural-based approaches, the most common practices were praying (n=136, 61.8%), having the child do exercises (n=119, 54.1%) and having the child listen to relaxing music (n=80, 36.4%). In manipulative and body-based approaches, the most common practices were massaging the child (n=61, 27.7%), aromatherapy (n=29, 13.2%) and using aromatic oil in massage (n=28, 12.7%). In cleanliness-based approaches, the most common practices, respectively, were soaking vegetables and fruits in vinegar water and cooking them after washing them thoroughly (n=150, 68.2%), washing grocery items with soapy water (n=149, 67.7%), and cleaning the house with vinegar water (n=113, 51.4%). Parents stated that they mostly obtained information from the internet in all areas while applying T&CM practices.

Table 4 shows the mean total and C19P-S total and sub-dimension scores and minimum-maximum values of the parents. In the study, the mean total score of the parents was 2.05±3.23 and the mean total score of C19P-S was 45.59±15.93. When the sub-dimension scores of C19P-S were examined; psychological 15.34±6.87, somatic 10.10±3.73, social 12.24±5.05 and economic 7.89±2.88. It was determined that there was a positive and medium level relationship between the mean total score of CAS and C19P-S total (rs: 0.359, $p < 0.001$), somatic (rs: 0.432, $p < 0.001$) and economic (rs: 0.388, $p < 0.001$) sub-dimension scores, and a positive and low level significant relationship between the mean psychological (rs: 0.241, $p < 0.001$) and social (rs: 0.264; $p < 0.001$) sub-scores.

DISCUSSION

This study highlights parents' coronavirus anxiety and phobia during the coronavirus pandemic, and the preventive, traditional and complementary medicine practices to protect their children against the risk of COVID-19.

The physical and mental well-being of countless people around the world has been profoundly affected by the COVID-19 pandemic (Russell et al., 2020). For parents

Table 4. The Relationship Between the Mean and Subscale Scores of the Coronavirus Anxiety Scale Total and Coronavirus-19 Phobia Scale Total and Subscale Scores of Parents (N=220)

	Min-Max.	($\bar{X}$±SD)	Coronavirus Anxiety Scale	
			r_s	p
Coronavirus Anxiety Scale	0-17	2.05±3.23	-	-
Coronavirus-19 Phobia Scale	20-96	45.59±15.93	0.359	**p < 0.001**
Psychological	6-30	15.34±6.87	0.241	**p < 0.001**
Somatic	5-23	10.10±3.73	0.432	**p < 0.001**
Social	5-25	12.24±5.05	0.264	**p < 0.001**
Economic	4-20	7.89±2.88	0.388	**p < 0.001**

Notes: * The number and percentage of respondents who answered in the affirmative out of n=220 are given. More than one response was allowed.

in particular, the pandemic has posed unique challenges and stressors. Concern for their children's health and safety, the need to adapt to new circumstances such as working from home and remote education of children, limiting social ties with the community and coping with uncertainty have been the main challenges faced by parents (Calvano et al., 2021; Chung et al., 2020; Russell et al., 2020). Intense psychological distress and care burden can complicate the balancing of simultaneous care responsibilities and can lead parents to feel obliged to meet their child's care needs at the sacrifice of their own well-being. This is commonly observed among mothers, who often take on the role of primary caregiver (Russell et al., 2020). This study findings show that anxiety and phobia levels of mothers are significantly higher than fathers. While emotional challenges like anxiety and phobia are significant concerns for both parents, our findings highlight the influence of gender differences on their psychological well-being. Similar results are found in the literature. Literature, found that coronavirus anxiety and coronavirus phobia were significantly higher among female parents compared to male parents (Çiçekci et al., 2023) It was reported that women were three times more likely to suffer from anxiety disorders than men during the COVID-19 pandemic (Wang et al., 2021). However, Calvano et al. (2021) found that mothers experienced higher levels of general stress, anxiety and depression. In line with these results, it is thought that women carry more emotional burden while fulfilling their parenting role and therefore their anxiety and phobia levels may increase (Blanchard et al., 2006). This study found that anxiety and phobia levels were higher among parents of girls than parents of boys, but this difference may be coincidental or influenced by other factors, such as cultural perceptions of vulnerability or parental protective attitudes towards girls. In many societies, girls are often perceived as more vulnerable, which can lead to increased parental worry during times of crisis, such as a pandemic. Additionally, the emotional burden on mothers, as primary caregivers, appears to be compounded by gendered caregiving expectations and concerns related to their children's gender. These findings highlight the importance of adopting gender-sensitive approaches in mental health interventions for parents, especially in situations involving prolonged stress and uncertainty. Future studies could further explore the interplay between child gender, parental roles, and psychological outcomes to inform more targeted support strategies.

The coronavirus pandemic has led to a major health crisis across the globe, and the uncertainty and anxiety it has caused has severely affected people's psychological and emotional health. In this context, parents have turned to different traditional medicine practices both for their own coronavirus anxiety and in their quest to ensure that their children are protected against the risk of COVID-19 (Babich et al., 2020). This study findings show that the anxiety and phobia levels of the parents who benefited from T&CM were higher than the parents who did not benefit from T&CM, but only the anxiety level was statistically significantly higher. The literature suggests that mothers who use alternative medicine to protect their children from the COVID-19 virus have an increased fear of coronaviruses (Çelik et al., 2022) and that individuals use complementary alternative medicine methods to reduce COVID-19 anxiety. This study findings are similar to the literatures (Babich et al., 2020; Çelik et al., 2022; Dehghan et al., 2022).

Due to an uncertain treatment protocol during the COVID-19 pandemic, many people have sought ways to strengthen their immune systems, aiming to reduce the side effects of drug therapies and better adhere to treatment (Babich et al., 2020; Dehghan et al., 2022; Kretchy et al., 2021). In this context, there has been a great interest in traditional practices, especially herbal treatments based on phytotherapy (Akaydın & Kahriman, 2021). This study findings show that more than half of the parents utilized T&CM practices to protect their children during the pandemic. Studies show that in order to protect their children from the COVID-19 virus, mothers used alternative medicine

(Çelik et al., 2022; Dehghan et al., 2022; Kretchy et al., 2021; Uçar et al., 2020). T&CM methods are thought to be widely used due to their natural and low side effects, easy accessibility and subjective healing experiences that make individuals feel better.

This study findings show that the most common practices used by parents during the COVID-19 pandemic were ensuring that the child drinks plenty of fluids in nutrition-based approaches, praying in cognitive/behavioral-based approaches, massaging the child in manipulative and body-based approaches, and cooking vegetables and fruits after soaking them in vinegar water and washing them thoroughly in cleaning-based approaches. In the literature, it is stated that the complementary alternative medicine methods frequently used during the COVID-19 period are 'herbal products, nutritional supplements, herbal medicines, prayer, cleaning behaviour above normal'(Altay et al., 2023; Çelik et al., 2022; Dehghan et al., 2022).

In the event of a new pandemic, such as the current one caused by the SARS-CoV-2 virus, access to reliable and up-to-date information is considered to be of great importance. This emphasises the importance of adhering to scientific recommendations and communicating information ethically, rather than allowing misinformation to spread through social media. Access to accurate information empowers individuals to make informed and consistent decisions about their health and safety (Kakemam et al., 2020; Saleem and Jan, 2024). This study findings show that parents mostly get information from the internet when applying for T&CM practices. Similarly, Dehghan et al. (2022) reported that among various sources, social networks and the internet were the most frequently used platforms for obtaining information about complementary alternative medicine and COVID-19. In addition, it is emphasised that obtaining information from the internet may increase the anxiety level of individuals (Gao et al., 2020). This points to increased anxiety levels in individuals when news and information programs, social media use and internet searches about the pandemic are uncontrolled. In particular, being constantly exposed to news about the pandemic and constantly talking about it may lead to increased feelings of anxiety and fear in individuals. Health organizations and the media should adopt a balanced approach to provide the public with accurate and reliable information about the pandemic.

Clinical data shows that infectious diseases, such as COVID-19, have a negative impact on human psychology, leading to an increase in anxiety disorders worldwide (Chakraborty & Maity, 2020). Our study findings show that the coronavirus anxiety levels of the included parents were very low. When the literature is examined, different results stand out. Studies show that parents (Brown et al., 2020; Lee et al., 2021) have moderate to severe levels of anxiety, especially parents with young children (Uzşen et al., 2023) and parents who are health workers (Calvano et al., 2021). A systematic review found that pandemics cause severe anxiety and depression in parents (Araújo et al., 2021). When parents are under significant stress, they may find it difficult to understand and meet their children's emotional needs.

This study findings show that the coronavirus phobia levels of the included parents are close to the average level. When the sub-dimensions of the Coronavirus-19 Phobia Scale were examined, it was found that the psychological sub-dimension was at an average level, the somatic and social sub-dimension was close to average, and the economic sub-dimension was below average. When the literature was examined, it was seen that the coronavirus phobia levels of the parents in the studies conducted were at an average level and the results of the scale sub-dimensions were similar to our findings (Altay et al., 2023; Araújo et al., 2021). These findings help us understand the mental health challenges brought on by the COVID-19 pandemic on individuals. Coronavirus phobia can be a serious concern for parents' mental health and the overall well-being of the family. Dealing with such concerns is crucial in terms of providing accurate information and developing effective coping strategies through counseling services. In addition, our study findings show that as the coronavirus anxiety levels of parent's increase, coronavirus phobia levels also increase. An analysis of the literature revealed a positive relationship between parents' levels of anxiety and phobia (Araújo et al., 2021; Uzşen et al., 2023). Conducting studies based on a larger participant population may increase the generalizability of the findings. Furthermore, long-term follow-up and repeated measurements are needed to understand how coronavirus anxiety and phobia change over time. We believe that such studies will help us better understand people's adaptation processes to the pandemic and changes in anxiety and anxiety levels.

Limitations/Strengths

The strength of this study lies in its focus on an extraordinary period of the pandemic and its examining of parents' traditional and complementary medicine (T&CM) approaches towards their children during this time. By examining the relationship between these practices and levels of parental anxiety and fear, the study contributes valuable data to the literature. However, a major limitation is its reliance on online data collection. The data were obtained only from parents who were accessible during the specific data collection

period, which restricts the representativeness of the sample. In addition, the study could only reach families who were literate, had access to smartphones or similar devices, and were able to use these tools effectively. Consequently, the study's results are not applicable to the broader population of Türkiye. Furthermore, the study is based solely on self-reported data and does not include a control group, which limits the ability to make comparative evaluations.

CONCLUSION

This study examined the traditional and complementary medicine (T&CM) practices used by parents to protect their children during the COVID-19 pandemic and the relationship between these practices and anxiety. The findings show that a significant proportion of parents resorted to T&CM practices to protect their children during the pandemic. The most frequently used practices include giving the child plenty of fluids, praying, massaging, and washing and cooking vegetables and fruits thoroughly. It is thought that such practices may support children's physical health and psychological well-being. However, more scientific research is needed on the effectiveness and safety of these approaches.

The study revealed that mothers, in particular, and parents with daughters had higher levels of anxiety and phobia related to the virus, while parents who used T&CM practices had higher scores for phobia of the virus. These results reveal that parents' efforts to protect their children increase during crisis periods, intensifying their emotional burden in the process. Therefore, it is important for parents to consider their own emotional state when resorting to traditional practices.

In this respect, it is of great importance to establish guidance programmes that facilitate parents' access to reliable, scientifically based information in extraordinary situations. Additionally, developing intervention programmes to support the psychosocial needs of parents, particularly mothers as the primary caregivers, is an effective way to protect the mental health of parents and children. This study highlights the importance of considering parental behaviours and psychological states when shaping public health policies.

REFERENCES

Akaydın, A. E., & Kahriman, İ. (2021). COVID-19 and traditional practices in children. In N. Ulutaşdemir & İ. Kahriman (Eds.), Child health in COVID-19 pandemic (pp. 151–182). İksad Publishing House.

Altay, M., Çalmaz, A., & Karaca Bıçakçı, N. (2023). Being a mother during the COVID-19 pandemic. Caucasian Journal of Science, 10(2), 99–114. https://doi.org/10.48138/cjo.1260711

Araújo, L. A. D., Veloso, C. F., Souza, M. D. C., Azevedo, J. M. C. D., & Tarro, G. (2021). The potential impact of the COVID-19 pandemic on child growth and development: A systematic review. Jornal de Pediatria, 97, 369–377. https://doi.org/10.1016/j.jped.2020.08.008

Arpaci, I., Karataş, K., & Baloğlu, M. (2020). The development and initial tests for the psychometric properties of the COVID-19 Phobia Scale (C19P-S). Personality and Individual Differences, 164, 110108. https://doi.org/10.1016/j.paid.2020.110108

Asmundson, G. J., & Taylor, S. (2020). Coronaphobia: Fear and the 2019-nCoV outbreak. Journal of Anxiety Disorders, 70, 102196. https://doi.org/10.1016/j.janxdis.2020.102196

Babich, O., Sukhikh, S., Prosekov, A., Asyakina, L., & Ivanova, S. (2020). Medicinal plants to strengthen immunity during a pandemic. Pharmaceuticals, 13(10), 313.

Biçer, İ., Çakmak, C., Demir, H., & Kurt, M. E. (2020). Coronavirus anxiety scale short form: Turkish validity and reliability study. Anatolian Clinic the Journal of Medical Sciences, 25(Special Issue on COVID-19), 216–225.

Blanchard, L. T., Gurka, M. J., & Blackman, J. A. (2006). Emotional, developmental, and behavioral health of American children and their families: A report from the 2003 national survey of children's health. Pediatrics, 117(6), e1202–e1212. https://doi.org/10.1542/peds.2005-2606

Brown, S. M., Doom, J. R., Lechuga-Peña, S., Watamura, S. E., & Koppels, T. (2020). Stress and parenting during the global COVID-19 pandemic. Child Abuse & Neglect, 110, 104699. https://doi.org/10.1016/j.chiabu.2020.104699

Calvano, C., Engelke, L., Di Bella, J., Kindermann, J., Renneberg, B., & Winter, S. M. (2021). Families in the COVID-19 pandemic: Parental stress, parent mental health and the occurrence of adverse childhood experiences—Results of a representative survey in Germany. European Child & Adolescent Psychiatry, 31(7), 1–13. https://doi.org/10.1007/s00787-021-01739-0

Çelik, M., Sungur, M., & Geçici, F. (2022). Alternative medicine methods applied to their children by mothers with fear of COVID-19. Health Academy Kastamonu, 7(COVID-19 Additional Issue), 28–37. https://doi.org/10.25279/sak.1090870

Chakraborty, I., & Maity, P. (2020). COVID-19 outbreak: Migration, effects on society, global environment and prevention. Science of The Total Environment, 728, 138882. https://doi.org/10.1016/j.scitotenv.2020.138882

Chung, G., Lanier, P., & Wong, P. Y. J. (2020). Mediating effects of parental stress on harsh parenting and parent-child relationship during coronavirus (COVID-19) pandemic in Singapore. Journal of Family Violence, 37, 801–812. https://doi.org/10.1007/s10896-020-00200-1

Çiçekci, F., Uluer, M. S., Sargın, M., Aslanlar, E., Şener, P., Sevgili, A., & Kara, İ. (2023). Evaluation of COVID-19 anxiety and phobia levels of the parents of pediatric patients undergoing surgery. Cyprus Journal of Medical Sciences, 8(2). https://doi.org/10.4274/cjms.2021.2021-208

Dehghan, M., Ghanbari, A., Heidari, F. G., Shahrbabaki, P. M., & Zakeri, M. A. (2022). Use of complementary and alternative medicine in general population during COVID-19 outbreak: A survey in Iran. Journal of Integrative Medicine, 20(1), 45–51. https://doi.org/10.1016/j.joim.2021.11.004

Gao, J., Zheng, P., Jia, Y., Chen, H., Mao, Y., Chen, S., ... & Dai, J. (2020). Mental health problems and social media exposure during COVID-19 outbreak. PLOS ONE, 15(4), e0231924. https://doi.org/10.1371/journal.pone.0231924

Güner, U. Ç., & Ayar, D. (2022). Parental anxiety's relationship to children's fear and behaviors during the pandemic. Journal of Child, 22(2), 80–88. https://doi.org/10.26650/jchild.2022.1000600

Işık, M. T., & Can, R. (2021). Preventive, traditional and complementary medicine practices for a group of nursing students for COVID-19 risk. Mersin University Faculty of Medicine Lokman Hekim Journal of History of Medicine and Folkloric, 11(1), 94–103. https://doi.org/10.31020/mutftd.790805

Kakemam, E., Ghoddoosi-Nejad, D., Chegini, Z., Momeni, K., Salehiniya, H., Hassanipour, S., ... & Arab-Zozani, M. (2020). Knowledge, attitudes, and practices among the general population during COVID-19 outbreak in Iran: A national cross-sectional online survey. Frontiers in Public Health, 8, 585302. https://doi.org/10.3389/fpubh.2020.585302

Kaplan, M. (2020). COVID-19: Traditional and complementary healing practices in the pandemic process. Milli Folklor, 32(16), 35–45.

Karacan, E., Sapçı, E., & Güngörmüş, Z. (2023). Does the fear of corona affect the use of alternative methods for disease prevention and treatment? Eurasian Journal of Health Sciences, 6(1), 30–42. https://doi.org/10.53493/avrasyasbd.1107794

Kretchy, I. A., Boadu, J. A., Kretchy, J. P., Agyabeng, K., Passah, A. A., Koduah, A., & Opuni, K. F. M. (2021). Utilization of complementary and alternative medicine for the prevention of COVID-19 infection in Ghana: A national cross-sectional online survey. Preventive Medicine Reports, 24, 101633. https://doi.org/10.1016/j.pmedr.2021.101633

Lee, P. I., Hu, Y. L., Chen, P. Y., Huang, Y. C., & Hsueh, P. R. (2020). Are children less susceptible to COVID-19? Journal of Microbiology, Immunology, and Infection, 53(3), 371. https://doi.org/10.1016/j.jmii.2020.02.011

Lee, S. A. (2020). Coronavirus Anxiety Scale: A brief mental health screener for COVID-19 related anxiety. Death Studies, 44(7), 393–401. https://doi.org/10.1080/07481187.2020.1748481

Lee, S. J., Ward, K. P., Chang, O. D., & Downing, K. M. (2021). Parenting activities and the transition to home-based education during the COVID-19 pandemic. Children and Youth Services Review, 122, 105585. https://doi.org/10.1016/j.childyouth.2020.105585

Liu, Y. C., Kuo, R. L., & Shih, S. R. (2020). COVID-19: The first documented coronavirus pandemic in history. Biomedical Journal, 43(4), 328–333. https://doi.org/10.1016/j.bj.2020.04.007

Özdemir, Ö., & Pala, A. (2020). Diagnosis, treatment and prevention methods of pediatric COVID-19 infection. Journal of Biotechnology and Strategic Health Research, 4, 14–21. https://doi.org/10.34084/bshr.711208

Russell, B. S., Hutchison, M., Tambling, R., Tomkunas, A. J., & Horton, A. L. (2020). Initial challenges of caregiving during COVID-19: Caregiver burden, mental health, and the parent–child relationship. Child Psychiatry & Human Development, 51, 671–682. https://doi.org/10.1007/s10578-020-01037-x

Saleem, S. M. & Jan, S. S. (2024). Navigating the infodemic: Strategies and policies for promoting health literacy and effective communication. Frontiers in Public Health, 11, 1324330. https://doi.org/10.3389/fpubh.2023.1324330

Seifert, G., Jeitler, M., Stange, R., Michalsen, A., Cramer, H., ... & Kessler, C. S. (2020). The relevance of complementary and integrative medicine in the COVID-19 pandemic: A qualitative review of the literature. Frontiers in Medicine, 7, 587749. https://doi.org/10.3389/fmed.2020.587749

Sharma, A., Ahmad Farouk, I., & Lal, S. K. (2021). COVID-19: A review on the novel coronavirus disease evolution, transmission, detection, control and prevention. Viruses, 13(2), 202. https://doi.org/10.3390/v13020202

Soyanıt, Ş., Cabar, H. D., Avcı, G., & Avcı, İ. A. (2022). Determining the anxiety levels of parents with school children during the COVID-19 pandemic process. Turkish Journal of Family Medicine and Primary Care, 16(4), 660–669. https://doi.org/10.21763/tjfmpc.1063851

Spinelli, M., Lionetti, F., Pastore, M., & Fasolo, M. (2020). Parents' stress and children's psychological problems in families facing the COVID-19 outbreak in Italy. Frontiers in Psychology, 11, 1713. https://doi.org/10.3389/fpsyg.2020.01713

Uçar, D., Tayfun, K., Müslümanoğlu, A. Y., & Kalaycı, M. Z. (2020). Coronavirus and phytotherapy. Journal of Integrative and Anatolian Medicine, 1(2), 49–57.

Uzşen, H., Zengin, D., Sevgili, S. A., Yılmaz, H. B., & Başbakkal, Z. (2023). The effects of coronavirus phobia and anxiety states on parents' attitudes towards their preschool children. Journal of Ege University Nursing Faculty, 39(1), 35–41. https://doi.org/10.53490/egehemsire.1119726

Wang, Y., Di, Y., Ye, J., & Wei, W. (2021). Study on the public psychological states and its related factors during the outbreak of coronavirus disease 2019 (COVID-19) in some regions of China. Psychology, Health & Medicine, 26(1), 13–22. https://doi.org/10.1080/13548506.2020.1746817