




ORIGINAL PAPER

## Challenges of the COVID-19 pandemic for children and their families during home quarantine in Turkey

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### ABSTRACT

**Introduction and aim.** The COVID-19 pandemic has caused significant changes in human life. As a result of these changes, it is important to determine the effects on the child and family life. This study was conducted to determine the challenges experienced by children and their families while home quarantine in the pandemic.

**Material and methods.** The study was conducted with parents who had children aged 6-18, use social media, and willing to participate in the study. A total of 450 parents participated in the study. Online survey was used.

**Results.** It was determined that some of parental daily activities decreased (doing sports, communicating with friends, engaging in hobbies) and some of them increased (personal hygiene, internet, and playing games with their children). The decreased daily activities of children (doing sports and communicating with friends) and increased activities (eating, personal hygiene, internet, and social media use, playing with toys and technological devices) were detected. There was an increase in some of the family activities (watching movies, playing games, and studying).

**Conclusion.** It was determined that the home quarantine in the pandemic led to some negative changes in the daily living habits, lifestyles, and feelings of the family.

**Keywords.** child, COVID-19, family health, nursing, pandemics, quarantine

### Introduction

Considerable changes have occurred in human life with the COVID-19 pandemic, which has had a worldwide effect. The physical, social, economic, and psychological consequences of the measures taken by governments to reduce the spread of the pandemic have affected all segments of society. The measures taken during the quarantine period have brought about some difficulties and had negative effects on the family life, which is the smallest unit of society, especially the children.<sup>1</sup>

As in the rest of the world, measures have also been taken to prevent the spread of the pandemic in Turkey. Some of these measures were lockdowns for individu-

als under the age of 20 and over the age of 65, the closure of schools and other educational institutions, the suspension of flights and public transportation, the restriction of intercity travels, the closure of workplaces serving in sectoral areas, such as cafes and restaurants, and carrying out of some services by working from home (education, public services, etc.).<sup>2</sup> Although these measures were taken to protect society, they had a significant negative impact on all its segments. Economic losses and unemployment, difficulties in transition to distance education, problems experienced by parents in the care of children at home, and failure to follow up, treat, and provide care for individuals with

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chronic health problems led to physical and psychosocial health problems due to staying at home.<sup>3,4</sup>

With the onset of home quarantine, children's group activities at schools, team sports, or access to playgrounds disappeared. Many parents had difficulties keeping their children busy and safe at home. In particular, working parents with inadequate social support resources had problems caring for their young children.<sup>5</sup> The loss of jobs or income among parents who had been working in the private sector or were self-employed negatively affected family processes. The economic crisis in the family and the crowded household made this situation even worse.<sup>6</sup> In this process, the increase in domestic violence, divorce, and abuse made children vulnerable to the exploitation and abuse by online risk groups.<sup>4,6</sup> It is stated that 65.7% of child neglect and abuse cases in the USA were determined by employees in institutions serving children, 19.4% by teachers, and 9.6% by health workers.<sup>7</sup> As children did not go to school during the pandemic, it became difficult to detect such cases.<sup>8</sup>

The rapid spread of the virus at a speed that threatens human health around the world and the restrictive measures taken caused individuals to feel intense stress, isolation, loneliness, and fear. Studies indicated that there was an increase in the level of children's stress, fear, and internet addiction and that they experienced posttraumatic stress disorder, fear of infection, lack of attention, anger, and stigma problems as a result of long-term isolation.<sup>5,9</sup> This process caused children and parents who struggled with the difficulties of life and had inadequate coping to experience psychological problems.<sup>10,11</sup>

The closure of schools caused children to have limited contact with their classmates, physical activities to decrease, and eating habits to change.<sup>9,11</sup> During the COVID-19 pandemic, inactivity, changes in eating habits, increased food intake, and unhealthy food choices were detected in children due to the quarantine process. This increased the risk of obesity in children.<sup>12</sup>

Although experts report that COVID-19 has a mild course in children and the mortality rate is low, it is important to accept that children are a risk group affected by this process.<sup>13</sup> Nurses, who are one of the occupational groups that work closely with children and their families, have responsibilities for the solution of biopsychosocial problems. For this reason, they must identify the difficulties experienced by children and families they work with. The lack of enough studies in the literature for determining the difficulties experienced by children and their families during the COVID-19 pandemic guided the planning of this research.

## **Aim**

This study was designed to determine the difficulties of the COVID-19 pandemic for children and their families during home quarantine.

## **Research questions**

1. What were the changes in the daily living habits of children and parents who were in home quarantine during the pandemic?

2. Was there any change in the activities that the family did together during the home quarantine in the pandemic?

3. Was there any change in the lifestyle of children and families who were in home quarantine during the pandemic?

4. Was there any change in the emotional state of children and parents who were in home quarantine during the pandemic process?

## **Material and methods**

### ***Study design, setting and participants***

The study was planned in a retrospective, descriptive and cross-sectional design. The study sample consisted of parents who lived in Turkey and had children between the ages of 6-18. G\*Power 3.1.9.7 was used to calculate the required sample size. Based on the study findings of sleep anxiety mean scores found by Liu et al., it was calculated that 439 people were required to conduct the research, according to the 0.01 significance level, 99% power and low effect size (0.24). Considering the 10% loss, it was determined that 483 people should be taken. As a result, we reached 450 parents. An online questionnaire (a Google Docs.) developed by the researchers in line with the literature, was shared with the participants via various social media platforms (Facebook, Instagram, blogs, and forums). The inclusion criteria applied for participation in the study were as follows: The children of the parents must be between the ages of 6 and 18, lived in Turkey during lockdown period, be able to read and write in Turkish, use social media, and voluntarily agree to participate in the study.

As a result of the post-hoc analysis calculated on the basis of child and parent eating behaviors as the main variable in the study, the power of the study was calculated as 99% when a significance level of 0.01 and an effect size of 0.3 were taken. As a result, it was determined that the number of samples was sufficient.

### ***Data collection instruments***

#### ***Descriptive information form***

This form consisted of 13 questions about the descriptive characteristics of the children and their families (age, gender, number of children, education level, parents' job, income level, place of residence, working status, whether family members lived together, etc.).

### Data form for determining challenges of the COVID-19 pandemic for children and their families during home quarantine

This form, which was developed by the researchers in line with the literature, was used to determine the difficulties faced by the children aged 6-18 and their families in home quarantine during the COVID-19 Pandemic.<sup>6,8-11,14</sup> The form consisted of a total of 60 items about the daily living habits of children and parents who were in home quarantine during the pandemic (total 27 items; 12 for parents and 15 for children), family activities (8 items), lifestyles (5 items), and emotion changes (20 items). The form items are evaluated as “decrease”, “no change” and “increase” by the participants’ self-evaluation of themselves and their children.

Content validity of the questionnaire was evaluated by taking the evaluations of the expert pediatric nursing academicians and the questionnaire was finalized. The form had internal consistency of .87 (sub-items for parents .77, for children .76 and for family activities .76).

### Data collection and analysis

A total of 450 parents were involved in the study. Completed data collection forms were controlled by two researchers independently, and incomplete forms were excluded from the study. Data were analyzed on the IBM SPSS 24.0 software package (Armonk, NY, USA). Counts, mean scores, and percentage values were used in the analysis of the descriptive data.

### Ethics approval

Written permissions were obtained from the Non-Interventional Research Ethics Committee of a University (No: 61351342/2020-510, date: 29.10.2020). At the outset, the participants were informed about the purpose, method, and plan of the study by the researchers, and their informed consent was obtained.

### Results

The mean age of the 450 parents participating in the study was  $37.23 \pm 5.62$ , the majority of them were between the ages of 35-44 (58.2%), and 94.2% were mothers. Most of the parents (50.2%) had two children, and 94.9% were married. Some of the parents had high school (33.3%) and university (31.8%) education, and more than half of them had equal income and expenses (57.8%). During the pandemic period, the majority of the mothers (64.7%) were not working, 66.7% of the fathers continued to go to work, 10.9% worked from home, and 6.2% were on unpaid leave. It was determined that 93.8% of the family members lived together during the pandemic process.

The changes in the daily living habits of the children and parents during the pandemic are given in

Table 1. There was a decrease in children’s engagement in sports (66%) and communication with friends (90%), while there was an increase in eating (46.9%), personal hygiene (81.8%), time spent on the Internet (69.8%), social media use (48.7%), playing with toys (52.7%), and playing games with technological devices (68.9%). On the other hand, there was a decrease in parents’ engagement in sports (65.6%), communicating with friends (91.1%), and hobbies (48.2%), whereas there was an increase in the duration of their personal hygiene (85.8%), housework (79.6%), Internet activities (71.3%), and playing games with their children (48%).

**Table 1.** Changes in the daily living habits of the children and parents during the pandemic process (n=450)

Children	Decrease		No change		Increase	
	n	%	n	%	n	%
Eating	36	8	203	45.1	211	46.9
Sleep time	104	23.1	198	44	148	32.9
Sports	297	66	117	26	36	8
Personal hygiene	2	0.4	80	17.8	368	81.8
Doing housework	9	2	226	50.2	215	47.8
Communication with friends	405	90	28	6.2	17	3.8
Time spent on the Internet	26	5.8	110	24.4	314	69.8
Social media use	41	9.1	190	42.2	219	48.7
Receiving online courses	62	13.8	217	48.2	171	38
Reading books	104	23.1	208	46.2	138	30.7
Playing with toys	69	15.3	144	32	237	52.7
Playing games with technological devices	30	6.7	110	24.4	310	68.9
Time allocated for hobbies	131	29.1	197	43.7	122	27.1
Parents	Decrease		No change		Increase	
	n	%	n	%	n	%
Eating	34	7.6	214	47.6	202	44.9
Sleep time	131	29.1	205	45.6	114	25.3
Sports	295	65.6	77	17.1	40	8.9
Personal hygiene	4	0.9	60	13.3	368	85.8
Doing housework	1	0.2	89	19.8	358	79.6
Communication with friends	410	91.1	26	5.8	14	3.1
Time spent on the Internet	21	4.7	108	24	321	71.3
Workload	135	30	231	51.3	84	18.7
Time allocated for hobbies	217	48.2	125	27.7	108	24
Reading books	99	22	203	45.1	148	32.9
Listening to music	79	17.6	223	49.6	148	32.9
Playing with the child	45	10	189	42	216	48

The change in activities performed with children during the pandemic is given in Table 2. The parents stated that there was an increase in watching movies (59.8%), playing games (49.8%), and studying (57.8%) with their children during the pandemic process.

The change in the lifestyles of the children and parents during the pandemic is given in Table 3. The parents stated that there was an increase in their children’s body weight (48.2%), their sleep patterns were impaired (49.8%), and that their anger behaviors in-

creased (49.1%). When the changes in the family lifestyles were questioned, there was an increase in marital problems (19.3%), communication problems among family members (22.4%), and cigarette/alcohol/substance use (16%).

**Table 2.** Changes in activities performed with the children during the pandemic (n=450)

Activities	Decrease		No change		Increase	
	n	%	n	%	n	%
Having meals together	31	6.9	228	50.7	191	42.4
Cooking	27	6	237	52.7	186	41.3
Doing housework	24	5.3	221	49.1	205	45.6
Watching movies	29	6.4	152	33.8	269	59.8
Playing games	42	9.3	184	40.9	224	49.8
Listening to music	45	10	252	56	153	34
Taking videos	46	10.2	263	58.4	141	31.3
Studying	36	8	154	34.2	260	57.8

**Table 3.** Changes in the lifestyle of the children and families during the pandemic (n=450)

Children	Decrease		No change		Increase	
	n	%	n	%	n	%
Body weight	23	5.1	210	46.7	217	48.2
Disruption in sleep patterns	39	8.7	187	41.6	224	49.8
Tidying up their room	62	13.8	254	56.4	134	29.8
Taking home responsibilities	49	10.9	227	50.4	174	38.7
Anger behaviors	23	5.1	206	45.8	221	49.1
Smoking/alcohol use	23	5.1	415*	92.2	12	2.7
Arguing with family members	23	5.1	264	58.7	163	36.2
Arguing with friends	109	24.2	316	70.2	25	5.6
Arguing with girlfriend/boyfriend	88	19.6	333	74	29	6.4
Course success	129	28.7	251	55.8	70	15.6
Family	Decrease		No change		Increase	
Marital problems	27	6	336	74.7	87	19.3
Communication problems of family members	43	9.6	306	68	101	22.4
Smoking/alcohol/substance use	27	6	351	78	72	16
Domestic violence	29	6.4	378	84	43	9.6
Divorce	23	5.1	405	90	22	4.9

\* parents who gave this answer stated that their children did not smoke/use alcohol

The effect of the pandemic on the feelings of the children and parents is given in Table 4. The parents stated that their children had increased feelings of fear (55.1%), anxiety (63.6%), sadness (57.3%), and restlessness (58%). It was also determined that there was an increase in parents' feelings of fear (66%), anxiety (78.2%), sadness (67.3%), restlessness (68.9%), and doubt (63.1%).

## Discussion

This research was carried out to determine the difficulties of the pandemic for children and their families during home quarantine. Due to the rapid global spread of COVID-19 infection, it was declared a pandemic on March 11, 2020.<sup>14</sup> The pandemic has affected people of almost all nations, continents, races, and socioeconomic groups. Daily life has suddenly changed due to quarantine in many countries.<sup>15</sup> Education was suspended and outdoor leisure activities were disrupted, which caused individuals to spend more time at home and their daily living habits to change.<sup>16</sup>

**Table 4.** The effect of the pandemic on the feelings of the children and parents (n=450)

Children	Decrease		No change		Increase	
	n	%	n	%	n	%
Fear	11	2.4	191	42.4	248	55.1
Anxiety	13	2.9	151	33.6	286	63.6
Sadness	14	3.1	178	39.6	258	57.3
Restlessness	13	2.9	176	39.1	261	58
Depression	14	3.1	277	61.6	159	35.3
Doubt	13	2.9	222	49.3	215	47.8
Joy	153	34	232	51.6	65	14.4
Happiness	135	30	245	54.4	70	15.6
Obsession	22	4.9	298	66.2	130	28.9
Introversion	26	5.8	303	67.3	121	26.9
Parents	Decrease		No change		Increase	
Fear	8	1.8	145	32.2	297	66
Anxiety	6	1.3	92	20.4	352	78.2
Sadness	7	1.6	140	31.1	303	67.3
Restlessness	9	2	131	29.1	310	68.9
Depression	11	2.4	231	51.3	208	46.2
Doubt	9	2	157	34.9	284	63.1
Joy	166	36.9	234	52	50	11.1
Happiness	156	34.7	246	54.7	48	10.7
Obsession	17	3.8	251	55.8	182	40.4
Introversion	23	5.1	315	70	112	24.9

COVID-19 infection spreads through breathing and physical contact. The World Health Organization recommends the use of masks, disinfection, social isolation, and quarantine practices for the prevention of the disease.<sup>14</sup> In the study, it was determined that there were changes in the daily living habits and lifestyles of children and parents who were quarantined at home during the pandemic period. These changes, it was determined that there was an increase in the eating and personal hygiene habits of children during home quarantine. In addition, about half of the children evaluated within the scope of this study had gained weight according to the parents' reports. Similarly, some studies have reported an increase in body weight in children, adolescents, and young adults.<sup>17,18</sup> This situation is thought to be related to changes in dietary habits, increased food intake, and

increased consumption of unhealthy foods during the COVID-19 pandemic. Decreased physical activity due to home quarantine is also considered an important risk factor for weight gain.<sup>12,17</sup>

The COVID-19 virus can be neutralized with hand hygiene and disinfection practices. It is extremely important to follow the hygiene rules to protect from the virus during the pandemic process and prevent its spread. It can be said that school children and adolescents are more cognitively competent in understanding the importance of hygiene rules such as hand washing and wearing a mask and adhering to them.<sup>19</sup> In our study, it was determined that there was an increase in the hygiene habits of the children and parents. Similar results were found in a study.<sup>20</sup>

The school has an important place in children's daily physical activities. They spend a very active time doing sports in physical education classes, playing games, and dancing with their friends during breaks at school. In addition, children play active games in playgrounds and parks. School closure causes limited interaction among classmates and decreased physical activity in children.<sup>9</sup> In a study, it was determined that 60% of children spent less time doing physical activities.<sup>21</sup> In this study, too, the sports and exercise status of children and their parents were questioned, and it was determined that there was a decrease in the physical activity levels of both parents and their children.

One of the negative effects of the COVID-19 pandemic on children has been predicted as sleep disorders. In this study, it was determined that the sleep duration of more than half of the parents and their children had changed. Some studies in the literature reported an increase in sedentary life and sleep time of children as a result of home quarantine.<sup>22,23</sup>

Play is one of the most important means of meeting the spiritual, mental, social, and physical needs of children. It is an important method for facilitating the child's coping with stress.<sup>24</sup> In the study, it was found that there was an increase in the duration that children played with their toys and technological devices, as well as the duration that parents played with their children. In the study, it was determined that there was a change in family activities being made together in home quarantine. The participants spent more time watching movies and studying with their children during the pandemic. Some studies in the literature indicated that during the COVID-19 pandemic, parents spent more time with each other and with their children, played games at home, searched the Internet for games that could be played at home, and tried to spend quality time as much as they could.<sup>25,26</sup> It is thought that staying at home constantly during the COVID-19 process can strengthen the bonds between family members as it has increased physical presence and contact.<sup>27</sup> In this process, the increase in the time that children spend

on games and the time parents spend with their children can be interpreted as a positive result.

In the study, it was determined that children and parents spent more time on the Internet but that the time they spent with their friends decreased. Similarly, some studies found that internet use increased during the COVID-19 process.<sup>28,29</sup> However, it was also found that individuals' feelings of loneliness increased along with the COVID-19 quarantine practices.<sup>30,31</sup> In a study conducted by Ellis et al. with 1054 high school students in Canada, it was determined that individuals spent more time using social media during the pandemic process and that especially those with depressive symptoms had more online connections with their friends.<sup>23</sup> In the study, it was determined that there was a change in the emotional states of children and parents who were quarantined at home during the pandemic. It was found that depressive feelings increased in parents (about half) and children (about one third). In a study conducted on 2330 primary school students in Wuhan, China, it was determined that the students in the study had higher depressive symptoms than students from other regions. In the same study, it was stated that the decrease in outdoor activities and social interaction might be related to the increase in children's depressive symptoms.<sup>32</sup> Supporting children's online conversations with their friends during the quarantine period may be important in terms of protecting their mental health.

The spread of the virus at a speed that threatens human health around the world and the restrictive measures taken have led to intense stress, isolation, loneliness, and fear in individuals.<sup>1,10,11</sup> In the COVID-19 pandemic, monotony in the lifestyle of children and parents, lack of social interaction, and other emerging familial problems have affected their lives adversely, and this may cause mental health problems.<sup>11</sup> In a study by Patrick et al., it was determined that the mental health of 27% of parents deteriorated and behavioral disorders developed in the children of the 14%.<sup>33</sup> Some studies indicated that there was an increase in stress, fear, and internet addiction in children and that they experienced posttraumatic stress disorder, fear of infection, attention deficit, anger, and stigma problems due to the long-term isolation.<sup>5,9</sup> Similarly, it was determined in this study that there was an increase in the feelings of fear, anxiety, sadness, and restlessness in both parents and children during the pandemic process.

## Conclusion

In this study, it was determined that the children and their families who were in home quarantine during the COVID-19 pandemic were affected physically, psychologically, and socially. There were some negative changes in the daily living habits, lifestyles, and feelings of the children and their families. It was determined that parents

spent less time doing sports and communicating with friends and that there was an increase in the duration of personal hygiene, internet use, and playing games with their children. It was also found that children spent less time doing sports and communicating with their friends and that the duration of eating, personal hygiene, internet use, social media use, and playing games with toys and technological devices increased. The family members were found to spend more time watching movies, playing games, and studying together. The parents stated that there was an increase in their children's weight gain and deterioration in their sleep patterns. It was determined that there was an increase in children's and parents' feelings of fear, anxiety, sadness, and restlessness.

During the COVID-19 pandemic, nurses and other health professionals should increase the physical activity levels of parents and children, support their healthy eating habits, direct them to social activities, improve their sleep patterns, and guide family members to spend quality time. Thus, children and parents can cope with emotions, such as anxiety, sadness, and fear.

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### Declarations

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#### Author contributions

Conceptualization, B.A., N.Ç.Ç. and S.A.; Methodology, B.A. and N.Ç.Ç.; Software, B.A. and N.Ç.Ç.; Validation, B.A.; Formal Analysis, B.A. and N.Ç.Ç.; Investigation, B.A. and N.Ç.Ç.; Resources, B.A., N.Ç.Ç. and S.A.; Data Curation, B.A. and N.Ç.Ç.; Writing – Original Draft Preparation, B.A., N.Ç.Ç. and S.A.; Writing – Review & Editing, B.A., N.Ç.Ç. and S.A.; Visualization, B.A. and N.Ç.Ç.; Supervision, B.A. and N.Ç.Ç.; Project Administration, B.A. and N.Ç.Ç.

#### Conflicts of interest

No potential conflict of interest was reported by the author(s).

#### Data availability

The data sets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

#### Ethics approval

Written permissions were obtained from the Non-Interventional Research Ethics Committee of a University (No: 61351342/2020-510, date: 29.10.2020). At the out-

set, the participants were informed about the purpose, method, and plan of the study by the researchers, and their informed consent was obtained.

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