



Children's Coronavirus Agenda: Qualitative Study

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ABSTRACT

Aim: Public health emergencies are not easy for anyone to comprehend or accept and many young children can feel frightened and confused in this process. This study was carried out to determine how the coronavirus disease-2019 experiences of children were evaluated by their parents.

Materials and Methods: A qualitative research method was used in this research. The data were collected using a socio-demographic data form and a semi-structured questionnaire. The data of the research were obtained via online methods due to the continuing social isolation measures in Turkey. The study was completed with 28 parents. The data obtained were analysed by thematic coding.

Results: Three main themes have been identified regarding the coronavirus agenda of children: (1) children's questions about coronavirus, (2) children's statements about coronavirus, (3) children's reaction to the process. Two sub-themes were identified in each theme. It was found that the children had expressions and questions about corona virus itself, the ways of protection against it, the effects of the virus, what it was and who it would harm. In addition, it was determined that children had emotional and behavioural reactions in this process.

Conclusion: In our study results, it was found that the expressions, questions and reactions of children about coronavirus differ according to their ages. Creating an open environment where children are free to ask questions can help them cope with stressful events and experiences and reduce the risk of permanent emotional problems.

Keywords: Coronavirus, child behaviour, outbreak, qualitative study

Introduction

Coronavirus disease-2019 (COVID-19), which first appeared in people working in an animal market in China in December 2019, has spread to many countries in a short time and has become a global health threat for the whole world (1-3). Due to the rapid spread of the disease and its potentially fatal consequences, emergency action plans have been created in all countries of the world and efforts have been made to reduce the effects of the virus. In Turkey as well, education in schools was suspended for a while and measures were taken to reduce social contact within the scope of the fight against the virus. Both country-wide and

family-based measures have led to changes in children's routines.

Although COVID-19 does not pose a serious risk in children, applications such as isolation and restrictive measures, which are confusing for children, can be frightening for them (4). Children may have problems perceiving what is going on around them in this process. Almost all television channels talk about the effects of corona virus, the number of cases, the mortality rates, and the "at risk" groups. Children are often exposed to these conversations on television, social media and via adult speech (5). Children may have difficulties or misunderstand

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the meaning of concepts such as death and illness that are constantly talked about due to their inadequate cognitive perception. One study showed that even children under 2 years of age are aware of the changes around them (6). Their parents' anxiety during this process can cause stress and anxiety in children even if they are not old enough to comprehend the pandemic (7).

This type of situation causes anxiety in children to increase due to factors such as changes of routines and social lives of children. Even if children have heard from the television or adults that the disease is not dangerous for them, they can worry about their elderly relatives who are emphasized to be at risk. Children can express this anxiety in various ways. Children show this by asking their parents various questions, expressing concerns about this situation in their speech, or by changing their behaviour. One study reported that children isolated or quarantined during pandemic diseases are more likely to develop acute stress disorder, adjustment disorder and grief (8). In order to reduce the level of psychological exposure of children, it is very important to answer the child's questions in accordance with their perception level, to listen to their concerns and to provide them with extra love and care (6).

Materials and Methods

The purpose of this study was to discover how COVID-19 is perceived by children, and how they express their concerns with their questions, expressions, emotions and behaviour. For the purpose of this study, in-depth interviews were made with parents.

Recruitment and Eligibility

A qualitative research method was used in this research. With this method, the aim was to investigate how children perceive the situation in depth in order to describe and understand their experiences in detail. The data were collected using a semi-structured questionnaire and the results were analysed thematically. The parents' inclusion criteria are as follows: having children between the ages of 3-18 years old, the absence of diseases that affect the child's cognitive development and also volunteering to participate in the study. The final sample included 28 parents. The sample size was determined to be sufficient for data saturation based on initial reviews of the data and data saturation standards. Data saturation occurs when the themes repeat and no new additional themes arise despite additional data.

Study Procedures

Data Collection

The data of the research were collected via online methods due to the continuing social isolation measures in our country. The participants were told about the purpose and content of the study. The questionnaire consists of two parts, a socio-demographic data form and a semi-structured questionnaire. First of all, the parents filled in the descriptive data form that includes their and their child's socio-demographic characteristics such as age and education level. A semi-structured interview form was used for in-depth, one-on-one interviews. Following this, a semi-structured interview prepared by the researchers was used to determine the children's perceptions, behaviours or concerns about the COVID-19. This form consists of 5 questions. Participants were given the necessary time to express their feelings and thoughts in depth. Interviews were made with the permission of the participants. Each interview lasted approximately 30-35 minutes. The first interview was conducted as a pilot interview, and after this interview, the interview questions were reviewed and those questions that the participants had difficulty in understanding were either rewritten or removed from the form.

Semi-structured interview question

1. Could you tell us what your child is asking you about coronavirus?
2. Could you tell us what your child tells you about coronavirus?
3. Could you tell us what kind of statements your child has made about coronavirus?
4. Could you talk about how your child reacts emotionally to this process?
5. Could you tell us what kind of change you have noticed in your child's behaviour during this process?

Before the study was conducted, ethical permission was obtained from the Ethical Commission of Yozgat Bozok University (protocol number: 95799348-050.01.04-E.9944). The parents were also informed about this study and consent was obtained from the parents before participating in the study.

Statistical Analysis

The IBM SPSS Statistics 22.0 (IBM Corp, Armonk, New York) package software was used to evaluate the data. Socio-demographic data are presented as number and percentage. Qualitative data were analysed using the

content analysis method. The data obtained were analysed by thematic coding. After the expressions were converted into written text, they were examined separately by two researchers and codes corresponding to the discourses were created. The codes obtained were grouped under similar titles and themes were established and the codes were matched with these themes.

Results

The study was completed with 28 parents. Nineteen (67.9%) of the parents were mothers and 9 (32.1%) were fathers. The average age of the fathers was 38 years $\pm 4,846$, and the average age of mothers was 35.18 years $\pm 4,675$. 28.6% of the mothers and 17.9% of the fathers had only graduated from primary school. 39.3% of the parents had 2 children. The children of the parents interviewed had an average age of 7.36 years and 60.7 % were male. In addition, 60.7% of the children attended school and all of the children who attended school received education regarding coronavirus (Table I).

Three main themes have been identified regarding the coronavirus agenda of children: (1) the children's questions about coronavirus, (2) the children's statements about coronavirus, (3) the children's reaction to coronavirus. Two sub-categories were identified for each theme (Figure 1).

Theme 1. Children's questions about coronavirus

The participants stated that their children asked various questions about the virus and its effects. These questions were analysed and divided into two categories as follows: the effects of the virus and means of protection against the virus.

Sub-theme 1: Questions about the effects of the virus

It was determined that the questions of the children differed according to their ages. Preschool children asked more about the tangible property of the virus. Some parents' statements were as follows:

Parent (P) 21 (Mother: 29 years old/Child: 4-year-old male) "Is our time here? What time is it my son? Isn't it time to die from the corona virus? Why are you saying this? I heard it on TV".

P7 (Mother: 35 years old/child: 4-year-old female) "What does the virus mean? Does the virus have feet?"

It was determined that school-age children are partially aware of disease and its symptoms, and they have questions about staying away from school or getting sick. Some parents' statements were as follows:

Table I. Parents and children descriptive characteristics		
Features (N=28)	Number	%
Father age	38.00 \pm 4.846	
Between 25-35 years	9	32.1
36 years old and above	19	67.9
Mother age	35.18 \pm 4.675	
Between 25-35 years old	14	50.0
36 years old and above	14	50.0
Mother's educational level		
Primary education	8	28.6
High school	5	17.8
License and above	15	53.6
Father's educational level		
Primary education	5	17.8
High school	6	21.4
License and above	17	60.7
Mother work		
Working	14	50.0
Not working	14	50.0
Father profession		
Officer	15	53.5
Employee	9	32.1
Self-employment	4	14.4
Number of children		
1	10	36.7
2	11	39.3
3 and high	7	25.0
Child's age	7.36 \pm 3.402	
3-6 years old	13	46.4
7-12 years old	12	42.9
13 and high	3	10.7
Gender of the child		
Female	11	39.3
Male	17	60.7
School attendance status		
Yes	17	60.7
No	11	39.3
Coronavirus education status		
Yes	17	60.7
No	11	39.3

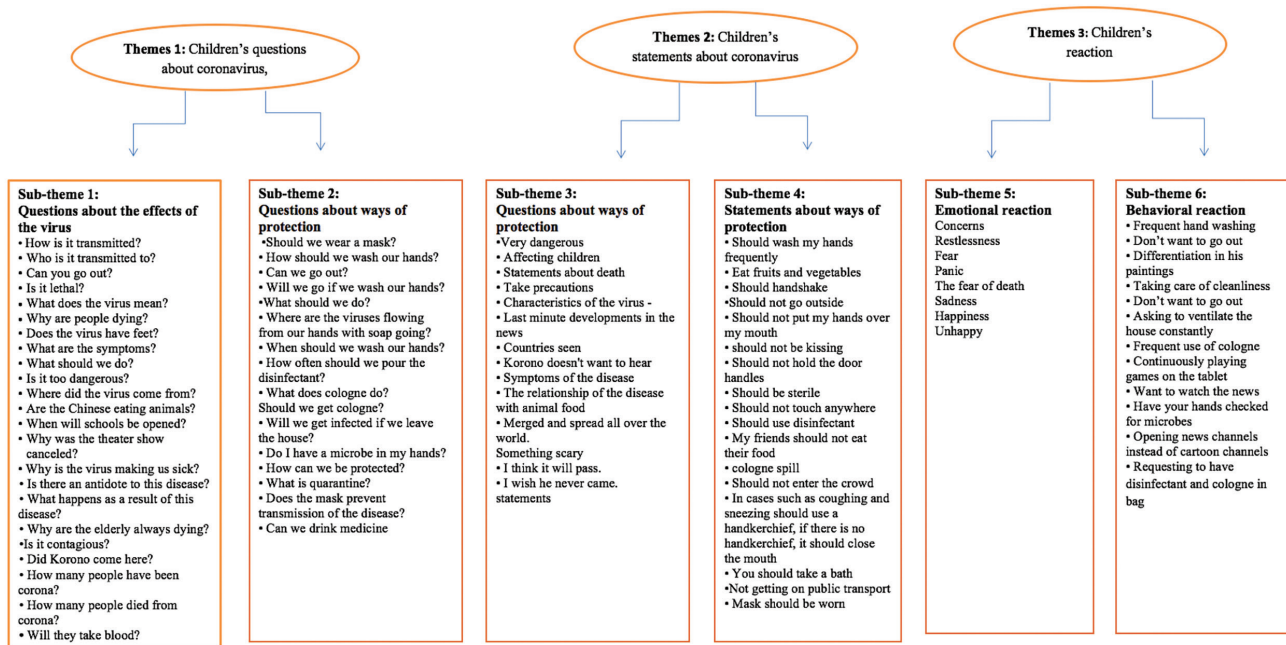


Figure 1. Themes and Sub-theme

P17 (Mother: 32 years old/child: 8-years-old male) "My nose is running. Have I caught coronavirus? Are we not going to school anymore? Does everyone infected die?"

P26 (Mother: 26 years old/child: 8-year-old male) "Did the virus come from China? Did they always eat animals? Is it contagious? Why are old people always dying?"

It was determined that adolescents evaluate the situation mostly with objective data. One parents' statements were as follows:

P10 (Mother: 43 years old/child: 14-year-old male) "How many people have caught corona? How many people have died from corona?"

Sub-theme 2: Questions about ways of protection

Parents stated that their children asked questions about ways to protect themselves against the virus. They asked parents about what kind of measures to take for virus protection. The statements of some parents on this subject were as follows:

P2 (Father: 34 years old/child: 8-year-old male) "Should we wear a mask? How should I wash my hands? Shouldn't I go out?"

P8 (Mother: 38 years/child: 9-year-old female) "When should I wash my hands? How often should I use disinfectant?"

The questions of children in the pre-school period were more concrete expressions.

P7 (Mother: 38 years old/child: 4-year-old female) "Where are the viruses going from our hands with soap? Why do viruses make us sick?"

Theme 2. Children's statements about coronavirus

Children's statements about coronavirus were divided into two categories.

Sub-theme 3: Questions about ways of protection

Some of the statements of the parents were as follows:

P6 (Father: 38 years old/child: 9-year-old female) "It doesn't affect children. It affects the elderly".

P8 (Mother: 38 years old/child: 9-year-old female) "There was a virus and it was transmitted to everyone".

P28 (Mother: 32 years old/child: 7-year-old male) "It appeared because they ate animals in China. It spread all over the world. It is horrible. I think it will pass, but I wish it had never come".

The statements of parents with children of a pre-school age stated that their children think of the virus as a visible, nurtured, human-like creature. Some statements of the participants were as follows:

P7 (Mother: 35 years old/child: 4-year-old female) "I saw it on TV, the feet of the virus were colourful".

P21 (Mother: 29 years old/child: 4-year-old male) "The virus was traveling outside. He was eating. He was sleeping and waking up".

P4 (Father: 37 years old/child: 3-year-old female) "The disease hurts our throat. It leaves you sleepless".

Sub-theme 4: Statements about ways of protection

The participants stated that their children often had expressions about what should be done to protect themselves against the virus.

Some of the parents' statements were as follows:

P1 (Mother: 31 years/child: 4-year-old female) "I have to wash my hands frequently. I should eat plenty of fruit and vegetables. I shouldn't go out too much".

P20 (Mother: 45 years old/child: 7-year-old female) "I should wash my hands frequently, cover my mouth with a handkerchief when sneezing, cover my mouth with the inside of my arm if there is no handkerchief".

P18 (Father: 40 years old/child: 8-year-old male) "We should not enter crowds and touch the places where everyone touches and we should wash our hands".

P25 (Mother: 36 years old/child: 9-year-old male) "Mother, put disinfectant cologne in my bag and put it in front of me at home".

Theme 3. Children's reaction

Parents stated that they observed some emotional and behavioural changes in their children during this process. This theme is divided into two categories based on the statements of the parents.

Sub-theme 5: Emotional reaction

The participants stated that their children were emotionally affected. The emotional responses of the children differed according to their developmental periods.

One parent with a pre-schooler stated that she was happy that her child was at home with her two parents. The parent's statement was as follows:

P12 (Mother: 31 years old/child 4-year-old male) "He is not happy going to nursery because of the holiday and is happy to spend time with both parents at home."

Parents who had a child attending school stated that their children had feelings of anxiety and fear and that they were sad because they were separated from their school and friends.

P8 (Mother: 38 years old/child: 9-year-old female) "I'm so scared. Mother, will we die too?"

P14 (Mother: 39 years old/child: 7-year-old male) "I am very sorry. If the virus gets in you, won't you kiss me?"

P25 (Mother: 36 years old/child: 9-year-old male) "Unhappy for falling behind in social activities".

P17 (Mother: 32 years old/child: 8-year-old male) "He experiences panic due to not going out".

P28 (Mother: 32 years old/child: 7-year-old male) "He feels sad. He is sad that his shows at school were cancelled. He thinks their effort was wasted".

P15 (Mother: 36 years old/child: 9-year-old male) "I know that nothing will happen to me, but I am afraid that my grandparents will be sick".

Sub-theme 6: Behavioural reaction

The parents stated that they observed some behavioural reactions in their children during this process. The statements of the parents regarding this were as follows:

P7 (Mother: 38 years old/child: 4-year-old female) "She wants to go out. She often washes her hands".

P14 (Mother: 39 years old/child: 7-year-old male) "He constantly washes his hands. He wants to ventilate the house constantly".

P17 (Mother: 32 years old/child: 8-year-old male) "He is introverted. He spending his time with the boredom tablet. He communicates very little".

P9 (Father: 39-year-old/child: 4-year-old male) "His paintings have changed. We cannot make sense of them".

Some parents stated that their children watch news programs frequently, although they had never watched them before.

P24 (Father: 41 years old/child: 18-year-old male) "Normally, he doesn't like watching the news. But now, he is constantly watching the news. He tells me in which countries the virus is seen. He describes how it spread, how many people have died".

P2 (Father: 34 years old/child: 8-year-old male) "He does not go out. He wants to wash his hands constantly. He wants to watch the news instead of cartoons".

Discussion

This study examines how the COVID-19 outbreak is perceived by children. The fight against this pandemic has caused children to experience changes in their routines, as is the case in the rest of the society. In our country, curfews have been imposed for people under the age of 20 years old. Factors such as closing schools, being kept away from social environments, or changing play activities can create stress and anxiety in children (9). During this period, most of the media and social conversations are about the epidemic. Children are exposed to the coronavirus speech of the adults around them (6). In our study, it was found that children had expressions about the methods

of protection against coronavirus, the effects of the virus, what it was, who it will harm and how they should be protected. It was also seen that children ask their parents various questions in order to understand the disease and its effects. In addition, it was determined that children respond emotionally and behaviourally. In this study, parents stated that their children had emotional symptoms such as fear, unhappiness, anxiety, and loneliness. In one study conducted in Spain and Italy, their study results appear similar to our results. According to their study, 85.7% of the parents perceived changes in their child's emotional state and behaviour during quarantine, such as increased boredom, irritability, restlessness, nervousness, feelings of loneliness and worries (10).

Cognitive development of children reaches maturity during adolescence (11). In our study, it was found that the questions, speech, behavioural responses and emotional responses of the children differed according to their ages. Especially for pre-school children, what is happening and is spoken about in this process may create confusion and the reason for the measures taken may not be fully understood. In our study, one question from a child was "If nothing happens to children, why are we not leaving home?". Uncertainty increases children's anxiety and stress. Children need honest information about changes in their families and their arrangements. In the absence of this information, children try to understand the situation themselves (12). Children between the ages of 3-6 years look at events in a more concrete manner and have magical and animistic thoughts. The idea that the disease or the condition that he or she is in is a punishment for his or her behaviour may prevail. In our study, pre-school children stated that the virus eats, travels and sleeps, and they have questions about what happens to the virus when they wash their hands. It is important to listen to what children believe and know about COVID-19 so that they do not develop wrong ideas during this period; providing children with an accurate explanation will ensure that they will not be unnecessarily afraid or feel guilty (6). In addition, there should not be much talk about this issue and news should not be watched when children are present.

On the other hand, school children can understand concepts such as microorganisms that may be the cause of the disease, the symptoms of the disease and methods of protection against diseases. Also, in this period, friends, school, teachers and activities are very important for children (11). In our study, it was found that school-age children were upset about cancelled activities at school. It was noted that the children asked their parents questions

such as how the virus is transmitted and where it came from. School-age children may be concerned that they or their elders may get sick. This is highlighted by the following statements from a parent with a school age child: "I have a runny nose. Have I become infected with a coronavirus? Are they not going to accept me to school anymore? Does everyone who is infected die?". When we evaluated these statements, it can be seen that the child seems to be worried about getting sick, that this will prevent him or her from going to school and that the child has a fear of death. Another child's statement, "I know that nothing will happen to me, but I am afraid that my grandparents will get sick" shows that he or she is worried about his or her elders. Autonomy is important for children of this age. When our study results were analysed, it was seen that school-age children ask questions about individual measures and exhibit behaviour such as hand washing and airing the room more frequently. It should be explained that children should rest, explanations should be made with simple sentences so that they can understand, and that they are safe when the rules are followed. In addition, giving practical advice that they can apply in their daily lives is important in making children feel that they have the power to control the situation while reducing their risk of infection. In our study, it was stated that the children in the school period watch the news. Watching constant updates about COVID-19 can increase fear and anxiety. Developmentally inappropriate information or information designed for adults can cause anxiety or confusion, especially in young children (13).

The adolescent period is a period when abstract thinking develops and what is happening around them is evaluated realistically. The concept of death is perceived in a similar way to adults (12). For young people who learn from friends and are less dependent on their parents, the situation may differ from young children. Young people tend to trust their friends and the media rather than their families when following an agenda. In our study, parents stated that their children follow the news in this process, although they had never watched it before. More in-depth discussions can be made with children of this age. It is important to direct young people who are exposed to a lot of content from social media to the right resources. Honest, accurate and factual information about the current state of COVID-19 should be provided. It is suggested that adolescents be included in family plans and decision-making processes regarding help with household chores (14). This can also contribute to reducing the exposure of adolescents to social media and digital screens.

Study Limitations

The data of the research were obtained via online methods due to the continuing social isolation measures in our country and the expressions of the parents were used because the children could not be reached directly.

Conclusion

In our study, it was found that the expressions, questions and reactions of children about coronavirus differ according to their ages. Creating an open environment where children are free to ask questions can help them cope with stressful events and experiences and reduce the risk of permanent emotional problems. Accordingly, consideration should be given to the child's age when explaining coronavirus, the changes in daily life due to the virus, and the measures taken against the virus.

Ethics

Ethics Committee Approval: Before the study was conducted, ethical permission was obtained from the Ethical Commission the Yozgat Bozok University (protocol number: 95799348-050.01.04-E.9944).

Informed Consent: Parents were informed about this study and consent was obtained from the parents before participating in the study.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Concept: D.Y.G., R.Y., Design: D.Y.G., R.Y., Data Collection or Processing: S.Ç., D.Y.G., R.Y., Analysis or Interpretation: S.Ç., Literature Search: S.Ç., Writing: S.Ç., D.Y.G., R.Y.

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