

Original article

Coronavirus (COVID-19) From The Perspective of the Children 60-72 Months ¹

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Abstract

The aim of the study is determined as to reveal the cognitive structures of 60-72 months old children regarding the coronavirus. The case study method was used to conduct this study, which involved 16 pre-school students aged 60 to 72 months in early childhood. The content analysis method was used to examine the data obtained from the drawings created by children and their perspectives on the impact of coronavirus on our lives. The findings, in the form of codes for color, figure, drawing tempo, and picture placement on paper, were grouped under the theme of children's sentiments and thoughts regarding the coronavirus. As a result of the study, it was seen that the children had feelings of anxiety, danger, and death related to the coronavirus, as well as the need for security and love. In addition, all of the children's depictions of the virus with figures with circles and limbs are not based on scientific knowledge/description of preschool children; it suggests that children are affected by environmental awareness such as social media, family and school. It is recommended to conduct different studies in which the causes of negative thoughts in the cognitive architecture of children revealed in this research are investigated in the context of the social environment.

Keywords: COVID-19, Coronavirus, Pandemic, 60-72 months old children.

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INTRODUCTION

The COVID-19 pandemic, which affects all areas of life, causes all individuals to have different experiences. While curfews were imposed to prevent the epidemic, decisions were made to suspend formal education, to close schools and to minimize social interaction (Sop & Demirgiran, 2021). Governments around the world have continued to work to find solutions that will enable students to return to full-time schooling as safely and as quickly as possible (Edmunds, 2020). Countries have taken many precautions, particularly distance education, in order not to stop educational activities (Aktan Acar, Erbaş & Eryaman, 2021). Understanding and adapting to these sudden changes is undoubtedly more difficult for young children who are trying to get to know and make sense of life. In this process of being isolated from social life, the reactions of family members to the situation, the stress and anxiety caused by the current disease news frequently featured in the media make this process more difficult for children than adults (Sine Nazlı & Alafat Çat, 2021; Yüksek Usta & Gökcan, 2020). In traumatic events such as pandemics, children are more affected because they do not have the ability to meet their spiritual needs on their own (Schonfeld & Demaria, 2015). However, the fact that the vital effects of the virus threaten the elderly population causes it to be ignored how children are affected by this process (Akoğlu & Karaaslan, 2020). However, studies have shown that children whose cognitive development has not yet been completed will be affected negatively by processes such as pandemics in the short and long term; that they will carry these effects throughout their lives and that they cannot throw them away (Le Brocque et al., 2017; Yoshikawa et al., 2020).

The reactions of individuals to the events and situations they encounter during the pandemic process, the ways of making sense of the process and coping with the process differ according to age groups (Özyürek & Çetinkaya, 2021). Especially when children's ages and cognitive skills are taken into account, how they structure the new information they encounter during the pandemic process in their minds becomes further important (Tarkoçin, Alagöz & Boğa, 2020). In this process, while children's access to information is negatively affected, their learning styles and sources of information also change (Onyema et al., 2020). Children are exposed to information obtained from the mass media that families apply for information about the global epidemic (Sine Nazlı & Alafat Çat, 2021). It is seen as an expected situation for children to be confused with this constantly changing information, and to worry about both themselves and their families (Jiao et al., 2020). From this point of view, it is seen as a necessity to reveal how children perceive the changing life dynamics (Tarkoçin et al., 2020). Knowing how children perceive this pandemic process is thought to be an important factor for educators to determine the emotional and social support they will provide, and to prevent negative experiences that will leave permanent traces on them by taking the necessary precautions (Yukse Usta & Gokcan, 2020).

In summary, the pandemic process should be considered as a new process that is difficult for children to adapt to. Considering that the early childhood period is different from other periods, it is also

seen important to reveal the effects of the pandemic in these critical years. In this process, revealing how children perceive the coronavirus and how they make sense of virus-related situations is considered as an important need for their future lives. Only in this way will it be possible to understand the changes in the lives of children during the pandemic process, and to support them in resisting this and similar processes.

Aim of the Study

The aim of the study is determined as to reveal the cognitive structures of 60-72 months old children regarding the coronavirus. For this purpose, answers to the following questions were sought;

- What is the cognitive structure of the coronavirus in the pictures drawn by 60-72 month old children?
- What are the views of 60-72 month old children on the effects of the coronavirus on our lives?

MATERIALS and METHODS

Research Design

In the study, the case study method was used as it was aimed to reveal the cognitive structures of 60-72 month-old children regarding the coronavirus. In case studies, it is aimed to examine a situation in detail with small groups from many aspects (Creswell & Clark, 2007). In addition, since it was aimed to reveal the cognitive structures pointed out in the research with a holistic perspective, the holistic single case method was used (Yıldırım & Şimşek, 2013).

Study group

The research was carried out in a day care center located in the city center of Kars in the 2020-2021 academic year. A total of 16 pre-school students, 8 girls and 8 boys, aged 60-72 months participated in the study. In the study, the coronavirus was analyzed in terms of the pictures drawn by children. This age group was preferred since 60-72 months old children are in the pre-schema stage of artistic development. For this reason, purposeful sampling was preferred in this study in order to derive an in-depth meaning from children's drawings (Patton, 2014).

Data Collection Tool

In the research, the drawing technique was used to reveal the cognitive structures of children regarding the coronavirus. It is known that the pictures drawn by children can reflect their feelings and thoughts, and these feelings and thoughts can be measured by analyzing the pictures (Halmatov, 2016). In addition, while the painting was being drawn, short interviews were held on the "effect of the coronavirus on our lives".

Data Collection and Analysis

In the study, data on children were collected as a result of the researcher working one-on-one with children. The researcher collected the data by working with each child separately. It was paid attention to ensure that the environment in which the children drew pictures was silent and insulated from distracting stimuli.

The pictures drawn were examined by document analysis method based on the categories created as a result of the literature review. Cognitive structures of the children participating in the study about the coronavirus were examined in 4 codes under the theme of children's feelings and thoughts about the coronavirus. These codes are; color codes of children's feelings and thoughts about COVID-19, figure codes of children's feelings and thoughts about COVID-19, drawing tempo codes of children's feelings and thoughts about COVID-19, location codes of the picture on the paper of the children's feelings and thoughts about COVID-19.

On the other hand, the effects of the coronavirus on children's lives were tried to be revealed by including the statements obtained from the interviews. In such studies, including direct quotations from children is important for the validity of the research (Yıldırım & Şimşek, 2013). Both the examination of the pictures drawn by the children and the interviews with the children are used to diversify the data by using different data collection methods. Children's being in the pre-schema stage, thus expressing themselves through drawings and their originality provided convenience in the analysis of the pictures. Care was taken to present the collected data systematically and a clear and understandable language was used.

RESULTS

In this section, the findings obtained from the children's drawings are included within the scope of the themes determined for the analysis. Color codes of children's feelings and thoughts about COVID-19 are given in Table 1.

Table 1. Color codes of children's feelings and thoughts about COVID-19

Frequency	Anxiety-Worry	Need for Safety- Love	Danger-Death
f	7	5	4

As seen in Table 1, the color codes of children's feelings and thoughts about COVID-19 are divided into 3 categories as anxiety-worry, need for safety- love and danger-death. Considering the colors used by the children in their paintings, it was seen that they frequently used purple and brown colors. In addition, it is seen that children frequently use the colors green, blue and yellow, which mean

the need for safety and love. On the other hand, it is seen that there are children who used red and black colors. The picture depicted by one of the students participating in the research is given in Picture 1.



Picture 1. Drawing of students depicting coronavirus

According to Picture 1, while the child showed the virus with green color, which expresses the feeling of safety, they drew themselves and their family with purple color, which expresses the need for love/attention. Table 2 includes the figure codes of the children's feelings and thoughts about COVID-19.

Table 2. Figure codes of the children's feelings and thoughts about COVID-19

Frequency	Living form	Lifeless form
f	7	9

In Table 2, it is seen that the figure codes of children's feelings and thoughts about COVID-19 are divided into 2 categories as living and lifeless forms. Looking at the figures used by the children in their drawings, it was seen that they drew the concept of 'coronavirus' in human form and described it as 'germ/bacteria/bad thing'. In addition, children who depicted the virus in human form generally stated it as mother, father or child.

One of the children depicting the virus in human form explained their drawing as “*The coronavirus is coming down the stairs. The one in red is the father virus, the other elder is the mother and he calls their children. He transmits diseases with its extensions on the top.*”

One of the children depicting the virus in lifeless form expressed it as “*I drew in black, it is a very bad thing. The virus is also black.*”

The drawing tempo codes of children's feelings and thoughts about COVID-19 are shown in Table 3.

Table 3. The drawing tempo codes of children's feelings and thoughts about COVID-19

Frequency	Wavy, soft lines	Sharp, hard lines	Doodles
f	5	6	5

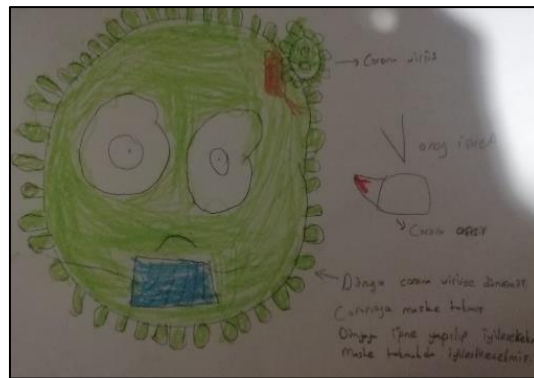
In Table 3, it is seen that the drawing tempo codes of children's feelings and thoughts about COVID-19 are divided into 3 categories as wavy, soft lines; sharp, hard lines and doodles. When the pictures were examined, it was seen that whereas the children drew the figures with hard lines, mostly by suppressing them, the doodles and faint lines were at the same frequency.

Location codes of the picture on the paper of the children's feelings and thoughts about COVID-19 are given in Table 4.

Table 4. Location codes of the picture on the paper of the children's feelings and thoughts about COVID-19

Frequency	Left Part	Center Part	Whole Paper
f	1	5	10

In Table 4, the location codes of the picture on the paper of the children's feelings and thoughts about COVID-19 are divided into 3 groups as the left area, the center area and the whole paper. When the drawings of the children are examined, it is seen that they often paint the coronavirus in such a way that it covers the entire paper, and it is also stated that they positioned it only in the central area. Additionally, only one child placed the coronavirus on the left side of the paper. In Picture 2, a sample drawing that covers the whole paper is given.



Picture 2. A sample drawing that covers the whole paper

According to Picture 2, the child reflects that their agenda is shaped around the virus by drawing it to cover the whole paper. Furthermore, while drawing eyes and mouth to the virus expresses the animism feature of the pre-schema, the fact that they paint the virus with green and it wears a mask shows the hope that they will remain safe if hygiene/mask rules are followed. In the interviews with the child, the statement "We will recover if the mask is worn" supports this statement.

Discussion, Conclusion and Suggestions

As a result of this study, which aimed to reveal the cognitive structures of 60-72 month-old children regarding the coronavirus, it was seen that the children had feelings of anxiety, danger, and death related to COVID-19, as well as the need for safety and love. Aras Kemer (2022) revealed in her research that children have high fear and anxiety about coronavirus, and they also experience different negative emotions such as anger, sadness, and restriction. That children gave different reactions to a given concept reflects on their drawings. It should be noted that these reactions will also be affected by children's unique cognitive structures and temperaments. Anger, aggression or introversion are seen in children who use colors and figures that evoke negative emotions. Temperament is stated as an active factor in the reflection of emotions and the development of skills in pre-schema children (Akin Sarı, 2018). For example; it is stated that purple and brown colors mean anxiety and worry in the literature on children's drawings (Halmatov, 2016). It is known that black color expresses pessimistic emotions such as danger and death (Çankırılı, 2015).

On the other hand, since 60-72 months old children are in the pre-schema period, animistic thought was reflected in the pictures and it was seen that the coronavirus was depicted as a human figure. With the effect of the animistic period, the child identifies the virus with the human and draws its mouth, nose and eyes (Dilci, 2017). It was also observed that the figures drawn in lifeless form also made them feel negative and that they would make them sick. In addition to that, in the study, it was viewed that pre-schema children included mouth, eyes, teeth and large hands to the virus. Dönmez and Gürbüz (2020), in their research with undergraduate students, tried to determine the cognitive structures about COVID-19 and obtained similar results with this research. Nevertheless, according to the data obtained; when it is evaluated in terms of figure, drawing tempo and location of the picture on paper, it was found noteworthy that the 'virus' was portrayed in an aggressive living form in the minds of the children regarding the coronavirus.

The child transfers the thoughts and feelings in their head to the paper by drawing. How they use the paper, where they draw the figures, how much they use which area of the paper is also an indicator of transferring the images in their mind to the paper (Halmatov, 2016). The meanings of the different areas of paper used vary. For example, the back and left of the paper describe the past, stability, insignificance and the subconscious, while the right side of the paper describes the future, hope and mobility. The middle of the paper can represent the child's current emotional state and today, the top side of the paper can represent light, belief and optimism, and the bottom side can represent the foundation, rooting and memory (Ketenci, 2015). It was found out that children learned that COVID-19 was at the center of their lives and they had to shape their lives according to this, since they often used the whole paper in their drawings. Duban and Şen (2020) mentioned in their research that children have social and psychological concerns due to not being able to go to school.

Furthermore, it is among the results that children are aware of mask-distance-isolation rules and know how these rules will affect themselves and their families. In a similar study, parallel results were obtained in the pictures in which the children of health workers who took part in the COVID-19 epidemic reflected their perceptions of the pandemic process. In these pictures, it is seen that as well as the children got adapted to the isolation process, they depicted wearing masks, washing hands and using disinfectants. Moreover, it has been revealed that some of the children have high levels of anxiety (Tiryaki, Zengin & Çınar, 2021). In a similar study, Yüksek Usta and Gökcan (2020) determined that children have some negative feelings about the virus, that they are negatively affected by the social isolation process, that their sources of information are mostly media elements and that they are familiar with the terms related to the epidemic.

Additionally, it has been clearly seen that preschool children are affected by scientific knowledge/definition and environmental awareness such as social media, family and school, based on the description of the virus by all children with a circle and figure with limbs. It is thought that children acquire this information as a result of latent learning from the media or in their relationship with the environment. This implicit learning of children, which can have such important and severe psychological consequences, can be harmful (WHO, 2020). It has been determined that children drew the coronavirus in the form of the circle and its extensions on the surface, showing similarities with the statements of Artut (2004) "Children draw what they perceive". The reflections of the virus images shown in different media in children's minds are thought to be the reason why children drew the virus in this form.

Akoğlu and Karaaslan (2020) mentioned in their work that some unexpected and unpredictable processes, such as epidemics, have negative effects on children in the short and long term and the necessity for related experts to develop and implement some strategies. Aksu (2021) in his research conducted with 25 children mentioned about the uneasiness caused by the fact that the children had negative feelings and thoughts regarding the pandemic process, that they had difficulties during the isolation process and that they had to postpone their wish to go out. However, in another study conducted with 43 children aged 3-6; it was revealed that the children can comprehend the rules thanks to individual guidance service and they make an effort to adapt to the current situation in order to protect themselves and their families even if they feel uneasy (Gökçe, Erdoğan, Yatmaz, Avaroğlu & Çok, 2021).

According to the data obtained as a result of this research, children are consciously or unconsciously affected by the environment and social media positively or negatively. From this point of view, more attention should be paid to television, tablet and similar digital materials opened next to the child and the elements such as death, fear and danger in relations with the environment. On the other hand, outdoor activities can be planned for children who move away from reality and turn to virtual environments. Similarly, peer learning can be supported for the development of positive emotions by

including family trainings on the subject. In addition, in different studies, the demographic status of the family, the pictures of children whose parents or relatives died from COVID-19 and the pictures of children who have not experienced a loss can be compared. In this study, it was also determined that some negativities occurred in the cognitive structures of children due to the COVID-19 epidemic, which affected the whole world in general. It is thought that these negativities may be related to the social environment that the children have, as well as the family where they spend most of their time. For this reason, it is suggested that the effect of the pandemic process on children should be handled in the context of the social environment and different studies should be conducted.

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