

Araştırma Makalesi/ Research Article

The Care Process of Newborns Diagnosed with COVID-19 and the Experiences of Their Mothers: A Phenomenological Study

COVID-19 Tanısı Alan Yenidoğanların Bakım Süreci ve Annelerinin Deneyimleri: Fenomenolojik Bir Çalışma

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ABSTRACT

Objective: This study was conducted to determine care process of newborns diagnosed with COVID-19 and experiences of their mothers diagnosed with COVID-19.

Methods: This phenomenological study was conducted with qualitative design in the III-level neonatal intensive care unit of a tertiary hospital. A semi-structured interview form was used during the interview. The interview was recorded on a tape recorder. Content analysis was used to analyze the data.

Results: Appropriate nursing interventions were applied according to the symptoms of the newborns. Three main themes were determined as “Emotions and thoughts about her newborn and her loved ones”, “Thoughts about the health sector” and “Thoughts about the future”.

Conclusion: The mothers had negative emotions and thoughts such as trauma, fear of loss, sadness, helplessness, longing, social isolation, stigma and positive emotions and thoughts such as attachment, social support and value. The mothers had positive thoughts about the health sector such as value, satisfaction and trust. The mothers had negative thoughts about the future such as worry and social isolation and positive thoughts such as hope.

Keywords: COVID-19, mother, neonatal intensive care, newborn, nursing

ÖZ

Amaç: Bu çalışma, COVID-19 tanılı yenidoğanların bakım sürecini ve COVID-19 tanılı annelerinin deneyimlerini belirlemek amacıyla yapıldı.

Yöntem: Bu araştırma nitel tasarım olarak fenomenolojik tipte üçüncü basamak bir hastanenin III. düzey yenidoğan yoğun bakım ünitesinde yapıldı. Görüşme sırasında yarı yapılandırılmış görüşme formu kullanıldı. Görüşme ses kayıt cihazına kaydedildi. Verilerin analizinde içerik analizi kullanıldı.

Bulgular: Yenidoğanın semptomlarına göre uygun hemşirelik girişimleri uygulandı. Annelerin “Yenidoğan ve sevdikleriyle ilgili duygu ve düşünceleri”, “Sağlık sektörü ile ilgili düşünceleri” ve “Gelecek ile ilgili düşünceleri” olmak üzere üç ana tema belirlendi.

Sonuç: Annelerin travma, kayıp korkusu, üzüntü, çaresizlik, özlem, sosyal izolasyon ve damgalanma gibi olumsuz duygu ve düşünceleri ile bağlanma, sosyal destek ve değer gibi olumlu duygu ve düşüncelerinin olduğu görüldü. Annelerin sağlık sektörü hakkında değer, memnuniyet ve güven gibi olumlu düşünceleri vardı. Gelecekle ilgili ise annelerin, endişe ve sosyal izolasyon gibi olumsuz, umut gibi olumlu düşünceleri vardı.

Anahtar Kelimeler: Anne, COVID-19, hemşirelik, yenidoğan, yenidoğan yoğun bakım

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Introduction

The new coronavirus disease, named as COVID-19 (SARS-CoV-2), is a highly contagious disease. The World Health Organization (WHO) has declared the continuing outbreak as a global emergency for community health, namely a pandemic (Huang et al., 2020; Zhu et al., 2020). SARS-CoV-2 is a single-stranded RNA virus. It belongs to a subgenre of the beta coronavirus general (Lu et al., 2020). The present data show that the main modes of transmission are droplets, contact, and aerosol. Fecal-oral transmission should not also be neglected because SARS-CoV-2 has been detected in fecal samples of patients in the United States and in China (Zhang et al., 2020). In a study conducted with nine pregnant women diagnosed with COVID-19, the amniotic fluid, umbilical cord blood, throat culture and breast milk samples of six newborns were tested for SARS-CoV-2 and all the samples were negative for the virus (Chen et al., 2020). In a review study, 31 pregnant women diagnosed with COVID-19 and their babies were examined and no evidence of intrauterine transmission was found for the virus (Karimi-Zarchi et al., 2020).

Although COVID-19 may affect all age groups, it usually courses more mildly in children than adults. Non-specific symptoms may accompany especially in newborns (Lu and Shi 2020). The first pediatric cases were reported in Shenzhen between 20 January 2020 and 6 February 2020. Also 230 pediatric cases were reported in China during the same dates (Lu and Shi 2020). In a study conducted in China, it was found that 17.7% of the 2143 children with positive or suspected COVID-19 were under the age of one (Dong et al., 2020). It was determined that the first newborn case diagnosed with COVID-19 infection in China was 17 days old. First the housemaid, then in the mother and finally in the newborn were infected (Lingkong et al., 2020). It has been reported that SARS-CoV-2 has a strong capacity of transmission in children and newborns and COVID-19 shows symptoms and signs that may vary from asymptomatic infections to severe respiratory distress (Lu and Shi 2020). The incubation duration of COVID-19 disease is estimated to range from 1 to 14 days and to be 5.2 days on average. 97.5% of those who develop symptoms have apparent infection within 10.5 days (Lauer et al., 2020). Among the most common clinic symptoms of COVID-19 disease are fever, fatigue and dry cough. Some patients show upper respiratory symptoms like nasal obstruction, nasal

flow and sore throat, while some may have gastrointestinal symptoms like vomiting, stomachache and diarrhea (Lu and Shi 2020).

Early diagnosis and early isolation are essential to control COVID-19. If resuscitation is necessary for newborns that are born from mothers with confirmed and/or suspected COVID-19 infection, the resuscitation team should wear protective equipment (such as N95 masks, gloves, caps, glasses, and protective clothing). If the postpartum women are positive for SARS-CoV-2, the newborn should be isolated and then examined for SARS-CoV-2 (Wang et al., 2020). Newborns diagnosed with COVID-19 should be kept in negative-pressure rooms (Zumla et al., 2015) and should not be visited (Lu and Shi 2020).

Children's treatment is basically performed depending on the clinic experiences of adults due to the limited number of cases. There is no special medication for COVID-19 infection (Lu and Shi 2020; Wang et al., 2020). Symptomatic and supportive precautions including oxygen are the main treatment for these patients. The correction of fluid-electrolyte and acid-base imbalances is also crucial (Lu and Shi 2020). Fluid-electrolyte reinforcement is used for preventing the exacerbation of pulmonary edema and the decrease of oxygenation (Society of Pediatrics CMA 2020). In newborns with severe acute respiratory distress syndrome; high dose pulmonary surfactants, inhale nitric oxide, high frequency-released ventilation and extracorporeal membrane lung might be useful (Lu and Shi 2020). It has been reported that remdesivir medication (Holshue et al., 2020) and interferon-a2b nebulization might be effective in the treatment (Danesh et al., 2011; Khalid et al., 2015). Three potential medication combinations (sirolimus + dactinomycin, mercaptopurine + melatonin, and toremifene + emodin) are reusable medications (Zhou et al., 2020). In addition, it is reported that giving plasma taken from the patients who have recovered from COVID-19 infection to the infected patients is useful (Mair-Jenkins et al., 2015).

As a result of the literature review, it has been determined that there is no study reporting the nursing care of newborns diagnosed with COVID-19 and the experiences of mothers diagnosed with COVID-19 in this process. Thus, this study was conducted to determine the diagnosis, treatment and care process of two newborns hospitalized in our clinic and the emotions and thoughts of their mothers related to this process.

Methods

Design

This phenomenological study was conducted with qualitative design between March–May 2020 in the III-Level Neonatal Intensive Care Unit of a tertiary hospital.

Participants

The sample of this study consisted of two mothers diagnosed with COVID-19 and their babies as the world is going through the COVID-19 pandemic and an extraordinary process. The first mother was a 23-year-old nurse who became a mother for the first time. The second mother was a 27-year-old housewife who became a mother for the second time. The first newborn was a 25-day-old male newborn who was at gestation age of 39 weeks, had a birth weight of 3600 gr and was born via c-section. The second newborn was a five-day-old female twin who was at gestation age of 34 weeks, had a birth weight of 1850 gr and was born via c-section.

Data collection

The diagnosis, treatment and care of the newborns were followed and recorded throughout their stay in the NICU. The mothers were sent to home for quarantine after they were diagnosed with COVID-19. Face-to-face interview was conducted with mothers on the day the newborns would be discharged. The mothers tested negative during the newborns' discharge. A "semi-structured interview form" prepared by the researchers was used in the interview. As well as descriptive questions (age, occupation, mode of transmission of the virus to the mother and the newborn), the mothers were asked: "How do you feel right now?", "How do you feel about your newborn's condition?", "What do you think about the COVID-19 virus?", "How do you feel about your newborn right now?", "What kind of care (breastfeeding, skin-to-skin contact, etc.) would you like to give your newborn right now?" and "What do you think about the future?". The interviews were recorded on a tape recorder. In the interviews, the nurse wore a mask, a face shield, glasses and gloves, while the mother wore a mask and a gown. The interviews were conducted in a quiet room with nearly two-meter distance between the mother and the nurse.

Data analysis

The data of the study were analyzed using the content analysis method. In this context, the "descriptive phenomenological analysis steps" proposed by Colaizzi (1978) and comprising seven stages, was used. In the transcript step of the

analysis, each researcher listened to the sound recordings repetitively and recorded them on the computer without making any alterations. In the extracting significant statements stage of the analysis, each researcher determined the words, word groups and statements that were thought to be important for the phenomenon. In the formulation of meanings stage of the analysis, three researchers coded every important citation one by one. In the organizing formulated meanings into clusters of themes stage of the analysis, the codes revealed by the researchers were combined on the basis of their meanings and were collected under three main themes as "Emotions and thoughts about her newborn and her loved ones", "Thoughts about the health sector", and "Thoughts about the future". In the exhaustive description of the phenomenon stage of the analysis, the researchers discussed the explanation of the data related to the phenomenon in detail in the results and discussion sections. In the describing the basic structure of the phenomenon stage of the analysis, the codes were separated into themes and subthemes. The researchers prepared a concept map explaining the phenomenon and containing themes and subthemes and thus, revealed the structure of the phenomenon. In the returning to the participants stage of the analysis, important citations acquired from the interviews were sent to the mothers and their views on the convenience of these citations were received.

Results

Hospitalization process of the first newborn

The newborn applied to the emergency service of our hospital with fever and cough history. During the physical examination, the newborn weighed 4900 gr and had a body temperature of 38°C, respiratory rate of 70/min and SPO₂ of 94%. Due to these symptoms, nasopharyngeal and oropharyngeal swap samples were received from the newborn for the Real-Time Fluorescence Polymerase Chain Reaction (RT-PCR) test to get a diagnosis. The newborn was taken to the isolation room and started to receive antibiotics treatment. The chest radiography showed that the findings were normal. Lymphocyte, thrombocyte, and liver enzyme values were normal. The CRP test in blood was negative at the value of 0.8 mg /dl. As nasal flow and cough symptoms were also observed in the newborn's mother and the RT-PCR test was applied to her. Both the mother and the newborn tested positive for COVID-19. The mother was sent to home for isolation. As there was no growth in the newborn's

hemoculture, the antibiotics were interrupted within 48 hours. The oseltamivir was started for the newborn and continued for five days. His symptoms regressed on the third day of the treatment. On the second day after the treatment (seventh day of hospitalization), samples for the RT-PCR test were received twice every 24 hours and as the results became positive, the newborn continued to be followed up in the isolation room. The RT-PCR test which was repeated on the 14th day of hospitalization, came out positive again. The newborn was discharged when the RT-PCR tests were negative on the 21st and 22nd days of hospitalization. The mother was trained on breastfeeding before discharge.

Hospitalization process of the second newborn

The newborn applied to the emergency service of our hospital due to poor feeding and jaundice complaints. During the physical examination, the newborn weighed 1800 gr, had a body temperature of 36.5°C, respiratory rate of 60/min and SPO₂ of 98%. The newborn whose total bilirubin value was 20 mg/dl, had normal platelet and lymphocyte counts. The hemoculture result was negative. As the grandmother of the newborn receiving phototherapy tested positive for COVID-19 on the fifth day of hospitalization and they had contact, the RT-PCR test was also required for the newborn and the mother. Their tests came out positive. The mother was sent to home for isolation. As the newborn had no fever and respiratory symptoms, she was followed up in the isolation room before starting an antiviral treatment. As the tests repeated at the end of the first week were positive, the newborn continued to be followed up. Since the tests done in the second week of hospitalization also were positive, she continued to be followed up in the isolation room. As the RT-PCR tests of the newborn came out negative in the third week of hospitalization and the mother's results were also negative, the newborn was discharged. The mother was trained on breastfeeding before discharge.

Nursing interventions applied for the newborns

A nurse provided care to the newborns in an incubator in the double-door isolation room every 8 AM – 5 PM and 5 PM – 8 AM shift. The nurse was wearing necessary protective equipment every time she visited the newborns in the room and complied with the asepsis principles. The newborns' care plan was prepared based on the components of the core measures of the developmental care model (Coughlin et al., 2009). In the beginning of the

follow-up, the researcher introduced the model to all the nurses and informed them on its components.

Protection of Sleep

All non-emergency cares were provided when the newborns were awake and thus their sleep-wakefulness balance was obtained. As the mothers were subjected to social isolation due to the diagnosis of COVID-19, there was no skin-to-skin contact between the mothers and the newborns. However, each mother's voice was recorded for her own newborn to listen to. In order to establish a strong bond, the mothers were regularly sent the photos and videos of their babies and thus, were able to follow their development. The room was kept quiet and the light levels were gradually enhanced during care. Incubator covers were used to support the night's sleep. The newborns were bathed once in 2-3 days and applied with skin massage to relax.

Assessment and Management of Pain/Stress

The N-PASS which is routinely used in the clinic, was used to assess the newborns' pain. The assessments were made regularly and their results were recorded. As a result of the assessments, it was determined that the newborns had no pain, except for painful care activities (such as venipuncture). The methods such as giving pacifier, breast milk smell and minimizing environmental stimuli among non-pharmacological methods used to reduce pain during painful procedures were used to alleviate pain.

Developmentally Supported Activities of Daily Living

The newborns were kept in the nursery during all care activities and thus, their development was supported. Their position was changed every three hours, depending on their sleep cycle. In the literature, there is no conclusive evidence regarding whether the virus can be transmitted to breast milk or not. The mothers were told that they could breastfeed their newborns or give their milk to their babies without pasteurizing (Davanzo et al., 2020). Thus, they were informed on the advantages of breast milk on the phone. As the mothers in the study were isolated at home due to COVID-19, they were not able to come to the clinic to breastfeed their newborns. As the clinic protocol, breast milk consent of the mothers stating that they breastfed their babies with their own free will was obtained. The mothers pumped their milk and sent it to the clinic. The newborns were fed with cup feeding. The first newborn was fed with breast milk orally. No abdominal distention developed. The second newborn was fed with breast milk/formula via an

orogastric tube only one day. Then, she started oral feeding. Vital signs of the newborns were followed regularly. Their body temperature never exceeded 38°C. Phototherapy was applied to the second newborn for two days. Skin integrity of the newborns was assessed at regular intervals using scale, which is routinely used in the clinic. In order to protect their skin integrity, Vaseline, and rash creams were used to moisturize the skin.

Family-Centered Care

The families were regularly informed on the newborns. Developments in the newborns were regularly recorded. Training on milking, social isolation, mask use and hand washing was provided to the families by the phone.

Rehabilitative Environment

Healing environment for the newborns was arranged in terms of sound, light and smell and was sustained. As the newborns were kept in incubators and in the double-door isolation room, this reduced the noise level. Light levels were reduced and dim light was applied outside care hours. The newborns were not visited needlessly in their room. They were watched from the outside. Their room was kept off unpleasant odors (such as cleaning materials and unnecessary use of disinfecting agents). Trainings on how to apply hand hygiene protocols and protective isolation precautions were provided to the healthcare professionals taking part in the care of the newborns. The trainings were recorded. Doctor and nurse collaboration was provided and treatment and care of the newborns were realized.

Experiences of the mothers about the process

As a result of the analysis, three main themes and 16 codes were created. Figure 1 shows the main themes, subthemes and codes.

Emotions and thoughts of the mothers about their newborns and their loved ones

Emotions and thoughts of the mothers about their newborns and their loved ones were separated into two subthemes as negative and positive emotions and thoughts (Figure 1).

The mothers said that they experienced trauma because their newborns were diagnosed with COVID-19 and thus were hospitalized in the neonatal intensive care unit.

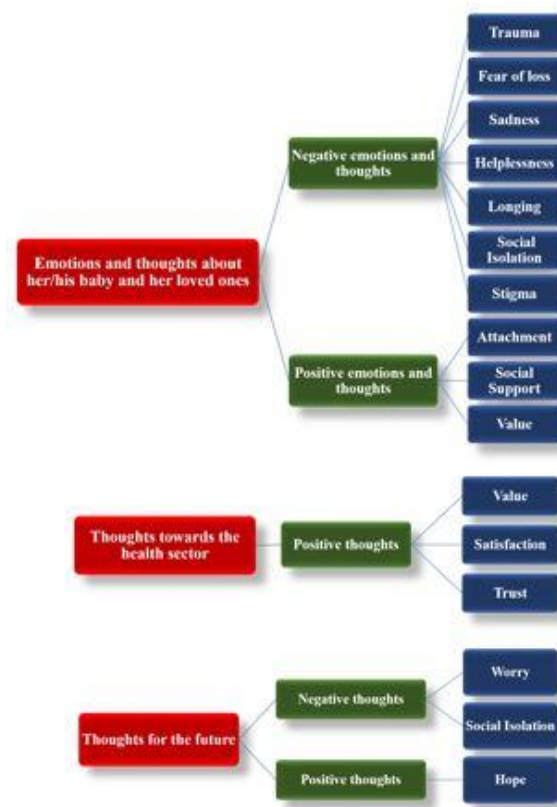


Figure 1. The main themes, subthemes and codes.

“...to be honest it was scary. I can't put it into words right now, but it was horrible back then. I mean I had never experienced such a thing before... I was truly shocked...”

Mother 1

“Those days were really hard. They said that the Ministry of Health was about to provide psychological therapy for me. I was surprised when I heard that. They called me but I didn't accept it because I wasn't in the mood. It was horrible. I was crying all the time.”

Mother 2

The mothers stated that they had the fear of losing their babies and their loved ones due to COVID-19 infection.

“The fear of losing him was so strong. I feared that his condition would worsen and he would be put on ventilator. I always thought the worst. I mean my thoughts were eating me alive. I was constantly asking myself if I would be able to hold him again and telling myself that I had lost him too early. It was such a horrible time for me...”

Mother 1

"...my father is slightly elderly. My family had fear of losing him."

Mother 1

"...every time the phone rang, we thought it was the hospital and they would give us bad news. It was such a hard time. I can't even put it into words. It was so hard..."

Mother 2

The mothers stated that their milk lessened because they were worried about their newborns.

"...my milk lessened thoroughly after he had been hospitalized in the intensive care unit. Of course, I was pumping, but you know..."

Mother 1

"...at one stage my milk was gone for good because of sorrow..."

Mother 2

The second mother expressed her helplessness in the face of their situation as follows: *"...I cried a lot. But I somehow had to console myself because above all, I had had premature birth. I constantly told myself to consider her in my belly. That's what I did all the time."*

The mothers expressed their longing for their babies as follows.

"I dreamt about giving him a bath and then laying him to sleep as he would be too sleepy after bath. I dreamt about combing his hair and breastfeeding him..."

Mother 1

"...but it's a really different feeling, especially when you long for her and then see her."

Mother 2

The mothers stated that they isolated themselves from their loved ones in the process of COVID-19 disease.

"I locked myself in a room... I tried to avoid contacting people..."

Mother 1

"...since I had the virus too, I was at home all the time... My husband and I had decided to sleep in different rooms. I didn't even touch my other baby..."

Mother 2

The first mother expressed how individuals diagnosed with COVID-19 were exposed to stigma by society as follows: *"...the people around you have a certain perspective of you, which is not so good. I get that we have a contagious disease, but it feels like you are alienated from society..."*

The first mother stated that the mother-newborn attachment was established via breastfeeding as follows: *"I think the whole bond between the mother*

and the baby is established via breastfeeding. He smells you and feels you and knows you through breastfeeding. Skin-to-skin contact is thus so important."

The second mother expressed the social support she received from her loved ones during the process of COVID-19 disease as follows: *"In this process, your relatives provide enormous support. Even if they are not with you, they call you all the time. I really had great support, for which I am grateful. So glad I have them. I would not be able to make it without them."*

The first mother said that she was able to appreciate her loved ones better in the COVID-19 pandemic as follows: *"... for example you appreciate your loved ones better in such situations. Like your mother... You need someone to hold on to but you cannot..."*

Thoughts of the mothers about the health sector

Thoughts of the mothers about the health sector were all positive. Positive thoughts formed the subtheme (Figure 1).

The first mother who was a nurse expressed the value of her profession as follows: *"...this profession is unique..."*

The mothers stated that they were satisfied with healthcare professionals giving care to their newborns and trusted them, as follows:

"I am really grateful to you. You helped me a lot in this process. I never worried about my newborn's care because you were there all the time and he was safe with you. He was given such good care. That's why I felt at ease. The photos you sent to me literally made me hold on to life when I had given up on myself. The photos and videos made my day."

Mother 1

"I am grateful to them. I always thanked them. The nurses and doctors sent me her video on tiktok. Then I felt completely relieved. I figured she was in safe hands."

Mother 2

Thoughts of the mothers about the future

Thoughts of the mothers about the future were separated into two subthemes as negative and positive thoughts (Figure 1).

The first mother expressed her concerns about her country as follows: *"I think our country may have a crisis due to this process in the future. Because life has literally stopped. Everything is so expensive now..."*

The first mother stated that the dimension of interpersonal relations might change and there might

be social isolation in the future, as follows: “*Nothing will be the same in the future... I think we will continue to avoid kissing and approaching each other in the future as well. The social distancing will be sustained.*”

The mothers expressed hopeful statements about taking better care of their babies and about healthcare professionals, as follows:

“*...I don't know what to do to protect her, but I will do my best. That's the only thing I can do. I will keep her away from germs as much as possible. I will immediately consult a doctor in case of any trouble.*”

Mother 2

“*...I think what we have gone through in the process of COVID-19 and the struggle of healthcare professionals will hopefully never be forgotten. I believe this value will continue.*”

Mother 1

Discussion

In the present study the newborns whose mothers were diagnosed with COVID-19 had fever, cough, poor feeding and jaundice in their clinic symptoms, however, the severity of their symptoms was mild. Vitals signs of the newborns were stable and no serious complications were encountered. Also in the studies, the clinic symptoms in newborns were reported to be fever (Lingkong et al., 2020; Lu and Shi 2020; Ma et al., 2020), cough (Lingkong et al., 2020; Lu and Shi 2020), poor feeding (Ma et al., 2020), vomiting (Lingkong et al., 2020; Ma et al., 2020), fatigue (Lu and Shi 2020), lethargy (Kamali Aghdam et al., 2020; Ma et al., 2020), cutaneous mottling, respiratory distress (Kamali Aghdam et al., 2020), sneezing (Ma et al., 2020), and asymptomatic (Buonsenso et al., 2020; Wang et al., 2020). In the literature, it is stated that mothers of newborns diagnosed with COVID-19 also test positive (Buonsenso et al., 2020; Lu and Shi 2020; Ma et al., 2020; Wang et al., 2020). In this study, the mothers and the newborns tested positive for COVID-19.

Declared as a pandemic by the WHO; COVID-19 (Huang et al., 2020; Zhu et al., 2020) has a potential of affecting the psychological health negatively due to its psychosocial impacts at individual and community levels (Mukhtar 2020a). During the previous pandemics, the psychological effect on non-infected society led to the emergence of diseases and development of important psychiatric morbidities causing a constant anxiety about getting the disease as well as the development

of negative psychosocial emotions (Van Bortel 2016). In a qualitative study conducted with eight mothers with healthy newborns during the severe acute respiratory syndrome (SARS) pandemic, the mothers stated that they experienced anxiety, constant uncertainty, social isolation, and fear during the pandemic (Dodgson et al., 2010). The studies investigating the effects of psychological trauma during the Middle East respiratory syndrome (MERS) pandemic have reported that the survivors are exposed to stigma and social isolation even after a successful treatment (Shigemura et al., 2020; Sim 2016). In a study conducted via social media during the COVID-19 pandemic, it was reported that 23.84% (n = 376) of 1577 adults had possible anxiety and 19.21% (n = 303) had possible depression (Ni et al., 2020). Lockdown, which causes self-isolation, quarantine and social distancing, is a traumatic event posing a serious threat for individuals (Mukhtar 2020b). In the present study, the mothers diagnosed with COVID-19 expressed negative emotions and thoughts about their and their newborns' COVID-19 diagnosis and treatment process, such as trauma, loss of fear, sadness, despair, yearning, social isolation and stigma. As the COVID-19 pandemic is an individual and a collective traumatic event and affects every individual in the world either directly or indirectly, it is necessary to minimize the negative impacts of this traumatic event on the “survivors” (Mukhtar 2020a).

Based on the present scientific data, the WHO has reported that COVID-19 infection is not transmitted to breast milk in mothers diagnosed with the virus (WHO 2020). Considering the benefits of breast milk, the Centers for Disease Control and Prevention (CDC) recommend the encouragement of infected mothers to breastfeed their babies by taking infection precautions (CDC 2020). In the present study, the mothers were willing to breastfeed their newborns. However, as they were isolated at home as a part of the treatment during the treatment process, they could not to come to the clinic to breastfeed their newborns. But they pumped their milk and sent it to the clinic for their newborns.

Physical distancing is crucial to reduce the spread of COVID-19. With social support, the negative effects of the pandemic and precautions including physical distancing on mental health can be reduced (Bao et al., 2020). In a study, it was determined that social support reduced possible anxiety and depression (Ni et al., 2020). In the present study the mothers stated that they had

positive emotions and thoughts about the COVID-19 process such as attachment, social support and appreciation. It is suggested for individuals to be in contact with their loved ones via digital methods in the COVID-19 process (IAC 2020). In the present study the mothers fearing to lose their babies and loved ones stated that they understood their value better in this process and kept in touch with them via phone in the process.

This pandemic which has shaken every country, is a global health problem having a potential of causing economic, political and social crises that may leave destructive and deep traces for both the present time and the future (UNDP Turkey 2020). Certain protective precautions such as quarantine, social distancing and social isolation have also been taken in Turkey against the COVID-19 pandemic effect of which is gradually increasing worldwide (Demirutku 2020).

It is indicated that the uncertainty and unpredictability of the COVID-19 pandemic cause fear, anxiety and panic in communities (Mukhtar 2020a). In a study conducted in Turkey, half of the participants reported that they had anxiety due to the uncertainty of the pandemic (Uskudar University 2020). In the present study, the mothers stated that they had negative thoughts about the future such as anxiety and social isolation.

The profession of nursing is the backbone of the health system. Especially intensive care nurses are a key element requiring particular attention for this system. The importance of the nursing profession has been revealed once again in the COVID-19 pandemic. Countries lacking adequate number of professional nurses fail in crisis management (Williams 2020). In a systematic review examining 13 qualitative studies aimed at the experiences of nurses during the pandemic, it was concluded that nurses wanted to be actively supported by governments, politicians, and nurse groups during and after the pandemic. It was emphasized that unless nurses were supported, they might face loss of labor force and burnout (Fernandez et al., 2020).

In the present study, the mothers stated that they had positive thoughts about the health sector such as appreciation, satisfaction and trust during the COVID-19 process. In addition, one of the mothers in the present study who was also a nurse, stated that she hoped her profession to continue in the future as well. According to a study which was conducted with participation of 6318 individuals in the age range of 18-97 years in Turkey, 82% of the participants stated that their thoughts about

healthcare professionals developed positively in the COVID-19 process (Uskudar University 2020).

Limitations

The sample of the study was small with two infants and their mothers. Therefore, the findings of the study are limited to the number of samples.

Conclusion

In the present study, the mothers expressed negative emotions and thoughts such as trauma, loss of fear, sadness, despair, yearning, social isolation and stigma, as well as positive emotions and thoughts such as attachment, social support and appreciation during the pandemic process. In addition, they indicated that they had positive thoughts about the health sector such as appreciation, satisfaction and trust. Although they had negative thoughts about the future such as anxiety and social isolation, they had positive thoughts about the health sector. It can be recommended that the study is conducted with a larger sample consisting of mothers having newborns diagnosed with COVID-19 and to investigate their experiences in this process.

Ethics Committee Approval: Biruni University Non-Interventional Ethics Committee (2021/50-09). The COVID-19 pandemic has caused extraordinary situations. Ethics committee units did not work at the time of the research. Due to the uncertainty of the opening period of the ethics committees, the consent of the mothers and the clinic chief was obtained, and interviews were held with the mothers of two COVID-19 babies hospitalized in our NICU, and then ethics committee permission was obtained.

Peer-review: External referee evaluation.

Author Contributions: NUÖ, MÇİ, EÇ, SS; Design: NUÖ, MÇİ, EÇ, SS; Consultancy: MÇİ, SS; Data collection and/or Data Processing NUÖ, EÇ; Analysis and/or Interpretation: NUÖ, MÇİ, EÇ, SS; Source scanning; NUÖ, MÇİ, EÇ, SS; Writing of the article: NUÖ, MÇİ, EÇ, SS; Critical review: MÇİ, SS.

Conflict of interest: The authors report no actual or potential conflicts of interest

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What did the study add to the literature?

- The COVID-19 pandemic is a global health problem having a potential of causing economic, political and social crises that may leave detrimental and deep traces both in the present time and in the future.

- The paper determined the below regarding the mothers of newborns receiving treatment in the hospital due to the diagnosis of COVID-19;
 - Emotions and thoughts about their newborns and their loved ones.
 - Thoughts about the health sector.
 - Thoughts about the future

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