



ISSN: 2230-9926

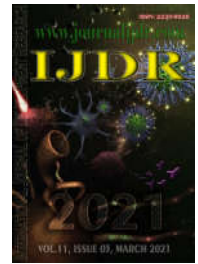
Available online at <http://www.journalijdr.com>

IJDR

International Journal of Development Research

Vol. 11, Issue, 03, pp. 45268-45273, March, 2021

<https://doi.org/10.37118/ijdr.21299.03.2021>



RESEARCH ARTICLE

OPEN ACCESS

PLANNING OF THE NURSING PROCESS TO THE NEWBORN IN THE FACING OF COVID-19

Nathalia Siqueira Duarte¹, Elielza Guerreiro Menezes^{*2}, Sonia Rejane de Senna Frantz², Thiago Queiroz de Souza³, Maria Luiza Carvalho de Oliveira², Adriany da Rocha Pimentão⁴, Francisca Félix da Rocha⁵, Daniely Bianca Magalhães de Figueiredo Carvalho⁶, Milena Batista de Oliveira⁷ and Andreza Cardoso Ramires⁸

¹Enfermeira. Residente em Neonatologia, Universidade do Estado do Amazonas, Departamento de Enfermagem, Manaus- Amazonas-Brasil; ^{2*}Doutora em Enfermagem, Universidade do Estado do Amazonas, Departamento de Enfermagem, Manaus-Amazonas-Brasil; ²Doutora em Enfermagem, Universidade do Estado do Amazonas, Departamento de Enfermagem, Manaus-Amazonas-Brasil; ³Graduando do Curso de Enfermagem, Universidade do Estado do Amazonas, Departamento de Enfermagem, Manaus-Amazonas-Brasil; ²Doutora em Enfermagem, Universidade do Estado do Amazonas, Departamento de Enfermagem, Manaus-Amazonas-Brasil; ⁴Mestranda em Enfermagem, Universidade Federal de Santa Maria, Departamento de Enfermagem, Santa Maria - RS-Brasil; ⁵Mestranda em Enfermagem, Universidade do Estado do Amazonas, Departamento de Enfermagem, Manaus-Amazonas-Brasil; ^{6,7,8}Graduanda do Curso de Enfermagem, Universidade do Estado do Amazonas, Departamento de Enfermagem, Manaus-Amazonas-Brasil

ARTICLE INFO

Article History:

Received 28th December, 2020

Received in revised form

17th January, 2021

Accepted 29th February, 2021

Published online 17th March, 2021

Key Words:

Newborn, Coronavirus infections, Nursing Care, Nursing Diagnosis, Continuity of Patient Care.

*Corresponding author:

Elielza Guerreiro Menezes

ABSTRACT

Objective: to identify scientific evidence in neonatal patients exposed to COVID-19. **Method:** Integrative literature review carried out from April to August 2020, with a time frame of the period of the largest pandemic in the world, through the MEDLINE Medical Literature analysis and Retrieval System Online database, using the uncontrolled descriptors of the Medical Subject Headings (MeSH) vocabulary: "Newborn", "Coronavirus infections" and "Signs and symptoms". **Conducted from two cycles:** integrative literature review and elaboration of the nursing process. **Results:** based on the clinical evidence found, it was possible to list generating themes for the construction of the nursing process for the newborn in coping with the COVID-19 of the synoptic frame type with the nursing diagnoses of the NANDA-I Taxonomy. The use of clinical evidence in newborns showed respiratory distress, dyspnea, tachypnea, intercostal retractions, cyanosis and groans appeared in 11 (91.7%) articles. Unstable temperature, fever and hyperthermia were reported in 10 (83.3%). Poor diet, food intolerance and vomiting presented in 7 (58.3%). Hypoactivity, drowsiness and lethargy observed in 5 (41.7%). **Conclusion:** although the production of studies on the subject is incipient, it is hoped that this research can contribute to the clinical practice of the professional in the front line against COVID-19.

Copyright © 2021, Nathalia Siqueira Duarte et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Nathalia Siqueira Duarte, Elielza Guerreiro Menezes, Sonia Rejane de Senna Frantz, Thiago Queiroz de Souza et al. "Planning of the nursing process to the newborn in the facing of covid-19", *International Journal of Development Research*, 11, (03), 45268-45273.

INTRODUCTION

Today the world is facing an atypical situation, the pandemic caused by SARS-CoV 2, popularly known as COVID-19 or Coronavirus. The outbreak that began in the city of Wuhan, China, in December 2019, today reaches 12 million people worldwide, according to the World Health Organization (who). According to the special epidemiological bulletin, until June 20, 2020, Brazil, was second globally in the number of new cases and deaths affected by The New

Coronavirus, in which the total of new cases were 1,067,579 and 49,976 deaths, behind only the United States (WHO, 2020; Duran et al. 2020; Brazil, 2020). Given the situation of extreme emergency, new scientific evidence is sought in order to safeguard care, especially for potentially vulnerable populations such as the elderly, individuals with compromised health conditions, pregnant women and newborns. Data on the impact of COVID-19 on pregnant women and newborns is limited. Clinical evidence supporting vertical transmission of the virus is unsustainable to date, and confirmed cases of neonates by SAR-CoV-2 have been positive 36 hours after birth to

17 days after delivery (Duran et al., 2020). There have been confirmed positive cases of neonates by SAR-COV-2 ranging from 36 hours after birth to 17 days post deliver. In the United States, in the early 1970s, they realized that nurses, empirically and autonomously, diagnosed care in relation to patients and their families that differed from medical diagnosis. From this discovery, a taxonomy of nursing diagnoses emerged and the creation of the professional organization currently known as NANDA International (Nanda-North American Nursing Diagnosis Association), demonstrated that nursing should have in its pedagogical and care scope the exercise of documenting its clinical practice holistically and comprehensively (Herdman and Kamitsuru, 2018). Nursing Diagnosis is a categorical tool for planning interventions to achieve the recognized need during the nursing process. Although clinical practice requires this systematization, nursing diagnoses focused on neonatology are in little evidence, especially in the context of NICU's, since the needs in this population are still unclear (Di Sarra et al. 2016; COFEN 2009).

For the follow-up of nursing care, it is necessary to list the main neonatal care in the face of COVID-19, being a challenge currently, since there is a shortage of evidence regarding the development of the virus and its pathophysiology in the newborn, thus hindering the elaboration of guidelines and care protocols (Shalish et al., 2020; De Luca et al., 2020). Therefore, the objective of this study is to raise clinical evidence in neonatal patients exposed to COVID-19 and to carry out the planning of the nursing process for this population. Because it is a literature review, the evaluation of the Research Ethics Committee is suspended, according to resolutions n° 466/2012 and 510/2016.

Respiratory Distress Syndrome (SARS-CoV-2 in Newborn): With the emergence of COVID-19 at the end of the Year 2019 in the city of Wuhan, China, many questions have been raised regarding the disease and its manifestations in newborns, in addition to the precautions that can be taken to minimize contagion. The response to the pandemic will be through contingency plans in order to reduce the spread of infection, with protocols and guidelines aimed at prevention, however, due to the scarcity of information there is no preparation for the spread of the virus (Shalish et al., 2020). SARS-CoV-2 is a virus that spreads effectively and unexpectedly quickly, Health Services face a new and unprecedented challenge facing the spread of Coronavirus, in this aspect there is concern for individuals from vulnerable groups, in particular, the elderly, people with underlying clinical conditions including in this group pregnant women and newborns (Duran et al., 2020). The emergence in pediatric cases began in February 2020 in the city of Wuhan China, 8.2% of those infected with the New Coronavirus, only 0.2% of pediatric patients manifested a state of severity of the disease, about 41% presented mild symptoms and 12.9% were asymptomatic (Ma et al. 2020). Neonatal cases are in a limited state, where the main concern of the researchers is vertical transmission; the often insidious onset leads to the difficulty of distinguishing the diagnosis of respiratory distress syndrome and Sar-CoV-2, all of which are suspected due to the pandemic situation (Shalish et al., 2020). One study analyzed 217 neonates who were born to mothers with COVID-19 positive, of these, only 4 babies needed some ventilatory support, the vast majority of babies presented asymptomatic postnatal and a small group presented common neonatal diseases, it was reported only one case of stillbirth due to maternal complications related to shock and respiratory distress (Shalish et al., 2020).

Nursing Process in Times of Pandemic: Neonatal care differs from other populations due to physical and psychological immaturity. Nurses in neonatal care promote a more dynamic and relaxed scenario while maintaining the rigor of responsibilities in order to promote the link between the binomial, being the facilitator in the creation of maternal-neonatal bond and attachment. Given the complexity of the care so specific that it is intended for the newborn, the literature shows the fragility of the scientific evidence intended for this population, requiring more nursing diagnoses in the context of NICU's (Di Sarra et al., 2016).

The nursing process is a care tool intended for nursing practice that aims to systematize nursing actions through clinical reasoning guiding their care, it is a practice provided for in resolution, where in Brazil it is standardized by Resolution 358/2009 (COFEN, 2009). In the 1970s, in the United States, it was noticed that nurses diagnosed detach "Something" in relation to patients that was totally different from the medical diagnosis, from this discovery emerged the taxonomy of nursing diagnoses worldwide known as Nanda International (NANDA-I). Nursing diagnoses serve to guide and document the practice and clinical view of the nurse during their care (Herdman and Kamitsuru, 2009). The Coronavirus is a group of pathogens capable of causing respiratory infections that range from asymptomatic clinics to complex irreversible clinics that have death as an outcome. Given the complexity of the global pandemic, it is necessary to develop specialized and targeted care mechanisms and during this process, the figure of the nurse stands out, a front-line professional who leads the care management in health services (Pires et al., 2020). The studies presented the possible diagnoses related to COVID-19 infection that permeated among diagnoses focused on the problem, as well as those of risk and health promotion. It is a new virus and not much is known about the pathophysiological process, some diagnoses emphasize the care that health professionals must take during the provision of health services, such as the risk of contamination (Herdman and Kamitsuru, 2009; Pires et al., 2020). Given these considerations, the following research question arose: what clinical evidence can help in the nursing process of newborns exposed to COVID-19? And from there, develop a planning of the nursing process for patients based on the Nanda-I taxonomy. Thus, the study aims to integrate the knowledge produced on the main clinical evidence in neonatal patients exposed to COVID-19 to mediate the nursing process in neonatology.

METHODS

This is an integrative review of the literature of scientific studies published in the period from March to August 2020. The stages in this review were based on a protocol that has been established in order to maintain the rigor of the scientific and methodological tools, such as: 1) the formulation of the research question; (2) the definition of the inclusion criteria of the study and the selection of the sample size (or search for sampling in the literature; (3) the representation of the selected studies in the form of a table (collection of data); and (4) a critical analysis of the included studies, by identifying the differences and disputes; and (5) a discussion of the results; and (6) the presentation of the integrative review is clear, and the lens of the evidence to be found. The study arose from the experience in the practice fields in a maternity hospital located in the city of Manaus, AM. Carried out from two cycles: integrative literature review and elaboration of the nursing process called synoptic table with the distribution of titles of nursing diagnoses according to the domains found in the taxonomy NANDA-I. To answer the guiding question of the review, the bibliographic search of the publications indexed in the Medical Literature analysis and Retrieval System Online - MEDLINE database was performed, using the uncontrolled descriptors of the Medical Subject Headings (MeSH) were: "Newborn," "Coronavirus infections" and "Signs and Symptoms". Included in the search were the keywords: newborn; Coronavirus infections; Nursing Care; Nursing Diagnosis; continuity of Patient Care. Boolean expressions AND and OR were adopted. The inclusion criteria of the studies were: original articles, case report, pre-print and Clinical Management, published between March and August 2020, in English and Portuguese; available in full and expressly presenting clinical manifestations of COVID-19 in neonates, specifically in nursing and medicine. The exclusion criteria considered were Review articles, repeated articles, which addressed only asymptomatic or unavailable cases. The filtration process resulted in only one database: MEDLINE (*Medical Literature Analysis and Retrieval System Online*), due to the short time of the emergence of cases in newborns. The result of the research was first through the reading of the title and abstract, verifying the adequacy of the article with the theme of the study. The selection of the articles was conducted in flowchart format with

details according to the *Preferred reporting Items for Systematic Review and Meta-Analyses* (PRISMA)(12) methodology, through this scheme it is possible to better visualize how the data collection of the articles was carried out on the virtual health library platform. In this step, 182 articles were found for analysis, of which, after reading the abstracts, 12 articles were selected for full reading. Figure 1 presents the synthesis of the results obtained in each step.

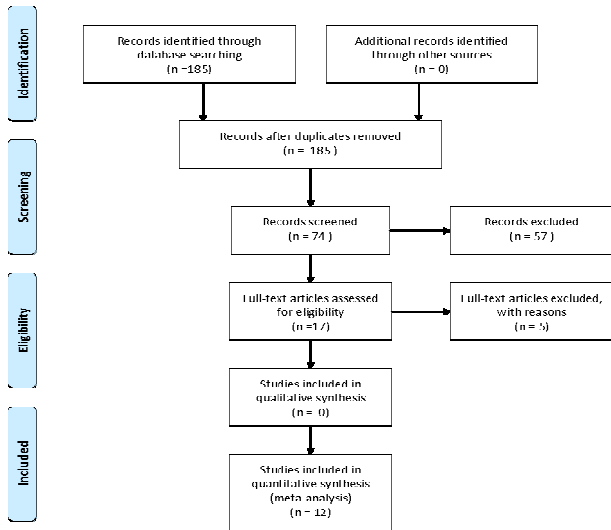


Figure 1. Flowchart of the selection of articles for the study of Integrative literature review by Prism. Manaus, AM 2021

After data collection, a synoptic table was prepared, containing the following information: authors, days of life of onset of symptoms, gestational age, test used to confirm COVID-19, mother with COVID-19, signs and symptoms found (Table 1). From this information was developed a nursing care planning for the professional who is on the front line of the pandemic, in order to base their care based on scientific evidence in order to promote the systematization of nursing care according to the taxonomy of NANDA-I, from the evidence found in the study.

RESULTS

In the MEDLINE / PubMed database 182 articles were selected and published in the time interval from March to August 2020. 170 articles were excluded according to the above criteria, resulting in 12 articles. It is noteworthy that 11 (91.7%) contained the information of respiratory discomfort, dyspnea, tachypnea, shortness of breath, intercostal retractions, cyanosis and moans, the articles that addressed the clinical signs of unstable temperature, fever and hyperthermia were reported in 10 (83.3%) poor diet, food intolerance and vomiting presented in 7 (58.3%) and hypoactivity, drowsiness and lethargy seen in 5 (41.7%) articles. When comparing gestational age (GA), it was observed that there is no pattern or specific GI that makes the baby more susceptible to COVID-19, the variation was from 31 weeks and 1 day to 40 weeks and 2 days. The analyzed Productions emphasized the contact with the mother, because of this, it was placed with how many days of life the NB began to present the symptoms and whether the mother, still in gestation, had tested for COVID-19 or not. The time to present the onset of symptoms ranged from 16 hours to 26 days, in these cases that took to manifest the symptoms were RNs who were discharged home and had contact with third parties (between parents and family members) communicating who presented the coronavirus clinic. Based on the results found in the literature review, the clinical evidence that was most common in the research was traced a basic human needs planning (NHB) of Wanda Horta's Theory, The Nursing Diagnosis according to the International Classification NANDA-I, and the interventions and expected results according to NIC and NOC described in Table 3. The clinical signs were grouped into four groups, where they were interconnected because they are from similar cases, in the first group, in accordance with the priority of the basic human need has been connected.

In accordance with the Oxygen that had symptoms such as dyspnoea, respiratory distress, retractions, and others. In the second group, the Nutrition, and comprises, a poor diet, food intolerance, and vomiting. The third is Sleep and Rest, with an under active, sleepiness, and lethargy, and the last group of thermoregulations, with the variance of the fever, heat stroke and temperature instability. Other signs that are found in detail in the synoptic picture can strengthen the diagnoses addressed, even if they are not within the selected group. As tachycardia found in Article 8 or even diarrhea addressed in Article 5, or even other signs and symptoms that present nonspecific, but that clinically can strengthen the Nursing Diagnosis.

DISCUSSION

From the beginning of the research to the present moment the number of confirmed cases has increased to 30 million in the world, a difference of 18 million more confirmed cases since the beginning of the research, but the proportion of neonates with confirmation of the disease is still low, the evidence of vertical contagion is still inconsistent and the cases acquired postnatal are more reliable with the reality. Respiratory care is also the most requiring attention, and appropriate and safe techniques for professionals and patients should be incorporated into clinical practice, since the long-term consequences or sequels of the virus remain unknown (Shalish et al., 2020; WHO, 2020; Buonsenso 2020). A study in Germany conducted in March 2020 on the management of the symptomatic and asymptomatic newborn for SARS-CoV-2, documented some positive cases in Germany and correlated with some cases in China, infants had insidious onset evolved in a nonspecific manner and others in a severe form leading to death, but with onset of symptoms primarily of pulmonary cause, but without consistency to associate with the new Coronavirus, being consistently associated with complications of prematurity and even with other viruses such as SARS-1, MERS (Simon et al., 2020). A review conducted in the United States, which addressed some risk factors for mothers and babies listed some signs and symptoms that appeared characterizing the NB positive for COVID-19 or presumably acquired by domestic contact and in them were: fever with 48%, followed with respiratory symptoms in 30%, vomiting or diarrhea in 37%, still observed the appearance of neurological changes, lethargy and other nonspecific symptoms, in addition to asymptomatic cases. In China, a study observed the symptomatology of positive RN's and that remained similar to that found in other studies such as fever, lethargy, weak suction and diarrhea (Ma et al., 2020; Rozycki 2020). When comparing different studies, in the United States, respiratory symptoms prevailed in 41.9% of the articles, followed by fever (or equivalent) in 23.3%, poor diet along with vomiting and diarrhea in 20.9% and hypoactivity in 14%. From this, the picture as a whole will gradually be defined as the researches are more consistent, where the change of scenario is more constant.

Respiratory clinic: The clinical picture presents scattered signs and symptoms, differentiated depending on other clinics and basic pathologies, the respiratory evolution behaves as equated with the syndrome of respiratory discomfort of the newborn or hyaline membrane disease. Presenting common signs of respiratory discomfort, dyspnea, tachypnea, intercostal retractions, groans leading to cyanosis. The pathophysio genesis of respiratory distress syndrome is precisely the surfactant deficiency that leads to the collapse of the alveoli and consequently the need for oxygen due to respiratory stress (Yang et al; Hong et al; Chacón-Aguilar et al; Carvalho et al. 2020). Six articles documented gestational age during discussion of the text, of these three were newborns with premature gestational age, ranging from 31 weeks, considered moderate premature, to late premature 37 weeks, justifies the lung physiology of growth and maturation, being aggravated by the SARS-CoV-2 virus (Yang et al.,2020; Amatya et al., 2020; Xiao et al. 2020).

Thermoregulatory Clinic: The combination fever, unstable temperature and hyperthermia were signs and symptoms were evidenced with relevant frequency in the articles found in the review.

Table 1. Description of publications on scientific evidence in neonatal patients exposed to COVID-19. Manaus, AM 2021

N	Authors	Days of life of symptom onset	Gestational Age	Test used on the mother	Mother with COVID	Signs and Symptoms
1	Pu Yang; Xia Wang; Pin Liu et al. (2020).	2 days	36-37 weeks	RT-PCR (qRT-PCR)	+	Mild respiratory discomfort; groan.
2	Hao Hong; Yuan Wang; Hung-Tao Chung et al (2020).	1-3 days	Uninformed	Uninformed	+	Unstable temperature; hypoactivity; bad eating habits; dyspnoea.
3	Rocio Chacón-Aguilar; Juana Maria Osorio-Cámara et al. (2020).	26 days	Uninformed	Uninformed	Uninformed	Ocular retraction; generalized hypertonia; facial cyanosis; vomiting; nasal mucus; fever.
4	Werther Brunow de Carvalho; Maria Augusta Bento Cicaroni; Vera Lucia Krebs et al.(2020).	Uninformed	Uninformed	Uninformed	Uninformed	Fever; poor diet or vomiting and swelling; lethargy, drowsiness; breathing difficulty; groans; worsening of the intensity of the jaundice; reduced diuresis; heat; cyanosis.
5	Zeng Lingkong; Tao Xuwei; Yuan Wenhao et al. (2020).	17 days	39 weeks	Nucleic acid test 2019-nCoV	+	Sneezing; vomiting, unstable temperature; diarrhea
6	Werther Brunow de Carvalho; Maria Augusta Cicaroni; Vera Lucia Krebs et al. (2020).	11 days	Uninformed	Uninformed	+	Hyperthermia; mild respiratory distress.
7	Shaili Amatya; Tammy E. Corr; Chintan K. Gandhi et al. (2020).	16 hours	33 weeks	Uninformed	+	Dyspnea; fever; pneumonia; respiratory distress syndrome; food intolerance.
8	Mojtaba Kamali Aghdam; Nahid Jafari; Kambiz Eftekhari (2020).	17 days	Uninformed	Uninformed	+	Fever; lethargy; tachycardia; tachypnea; intercostal retractions.
9	Zhi-Jiang Zhang; Xue-Jie Yu; Tao Fu et al. (2020).	30 hours to 17 days	39 weeks e 6 days – 40 weeks and 1 day.	Nucleic acid test and CT	+	Fever; shortness of breath; cough.
10	Clara Díaz; María López Maestro; María Teresa Moral et al. (2020).	8 days	38 weeks and 4 days	PCR-RT	+	Polypnea with mild; intercostal retraction; desaturation; deep sleep.
11	Jianhui Wang; Hongbo Qi; Lei Bao et al. (2020).	Uninformed	Uninformed	Uninformed	Uninformed	Fever; hypoactivity; tachypnea; bad eating habits;
12	Tian-Tian Xiao; Kai Yan; Lai-Shuan Wang et al. (2020).	2 days	31 weeks and 2 days	Uninformed	+	Fever; tachypnea; vomiting.

Table 2. distribution of nursing diagnostic titles according to the domains found in the Nanda-I taxonomy. Manaus, AM 2021

Domains	Classes	Labels and Codes of Taxonomy NANDA-I	Related Factor	Defining Characteristics
2. Nutrition	Class 5	Risk for electrolyte imbalance (00195)		Food intolerance; vomiting, diarrhea
3. Elimination and exchange	Class 4	Impaired gas exchange (00030)	Infectious process, pulmonary immaturity	Cyanosis, respiratory distress, moan
	Class 2	Dysfunctional gastrointestinal motility (00196)	Infectious process for COVID-19, intolerance to breast milk or formula.	Diarrhea, vomiting, food intolerance, poor diet
4. Activity/rest	Class 1	Sleep deprivation (00096)	disorganization of the newborn, constant manipulation, infectious processes.	Drowsiness, lethargy and hypoactivity
	Class 4	Ineffective breathing pattern (00032)	Use of accessory muscles, fatigue.	Intercostal retractions, dyspnoea, tachypnea, moan
	Class 4	Impaired spontaneous ventilation (00033)	Incomplete muscle development	Intercostal retractions, dyspnoea, oxygen desaturation, tachycardia
11. Safety/protection	Class 6	Hyperthermia (00007)	Increased incubator temperature, infectious processes	Tachycardia, lethargy, increased body temperature, warm skin to the touch, flushing
	Class 6	Ineffective thermoregulation (00008)	Ambient temperature fluctuation	Tachypnea, peripheral cyanosis, tachycardia, unstable temperature

Infectious cause fever accompanied by other symptoms such as tachycardia, change or oscillations of saturation and changes in laboratory tests. The articles do not discuss the reason for the Fever, only cite it as signs and symptoms and exclusively one article puts the temperature of the RN, a fever of 38.8 °C in the first 24 hours (Hong et al., 2020; Xiao et al. 2020).

Gastrointestinal clinic: The course of evidence of poor diet, food intolerance, vomiting and diarrhea, were associated with intolerance to the formula that in some cases were suspended for one day, gastric emptying was performed and the picture returned to normal the next day. Due to the delicate scenario of the pandemic, breastfeeding was suspended in some cases due to the lack of understanding of the passage of the virus through breastfeeding when the mother was

Table 3. Assistance planning based on The Theory of basic human needs of Wanda Horta and classification systems NANDA, NIC and NOC. Manaus, AM 2021

Main clinical signs	Basic Human Needs	Possible Nursing Diagnosis	Nursing interventions	Expected results
Respiratory discomfort/ dyspnoea/ tachypnea/ shortness of breath/ intercostal retractions/ moan/ cyanosis	Oxygenation	Impaired gas exchange / ineffective respiratory pattern/impaird spontaneous ventilation	Monitor respiratory rate and rhythm; Monitor pulse oximetry; Monitor the occurrence of Central and peripheral cyanosis; Identify possible causes of changes in vital signs; Raise the mattress headboard of the incubator or crib to improve respiratory function.	Cardiopulmonary status: Indicator: Change in respiratory rate, respiratory rhythm, depth of breathing, expulsion of air; oxygen saturation, cyanosis, chest retractions and dyspnea at rest.
Poor feeding/ food intolerance/ vomiting/	Nutrition	Risk of electrolyte imbalance/ dysfunctional gastrointestinal motility	Position the newborn in left lateral decubitus after feeding; Maintain an accurate record of intake and disposal.	Nausea and vomiting: indicators: Prevents onset of nausea; Preventive measures avoid causal factors when possible; Observance in the failure of antiemetic treatment.
Hypoactivity/ drowsiness/lethargy	Sleep and rest	Sleep deprivation	Group Care activities to minimize waking moments; enable sleep cycles of, at least, 90 minutes; Regulate environmental stimuli to maintain normal day-night cycles.	Sleep: Indicator: Establishment of sleep hours; Improvement in sleep quality, sleep routine, sleep pattern; Comfortable temperature setting in the environment.
Unstable temperature/ fever/ hyperthermia	Regulation: thermal	Hypothermia / Ineffective Thermoregulation	Monitor the body temperature of the newborn; Monitor the heart rate of the newborn.	Term regulation: newborn Indicator: Improvement in temperature instability, hyperthermia; Physiological regulation assumes heat dissipation posture when in hyperthermia.

positive for COVID-19. When the hypothesis was discarded, the mother milked the milk following all the standards and milk was offered by drawing to the hospitalized newborn (Hong et al; Chacón-Aguilar et al; Carvalho et al; Lingkong et al. 2020). The correlations with the virus in these articles were also not only cited to approach the picture presented by the baby due to SARS-CoV-2 positivity. Transmission by breastfeeding causing gastrointestinal imbalance has low evidence, although there are studies that have shown the presence of the virus in breast milk, however, more concise studies are needed. Breastfeeding should be encouraged by guiding the mother as to the necessary measures for milking (Rozycki and Kotecha, 2020; Grob et al., 2020; Wu et al., 2020).

Sleep and rest clinic: Infants who tested positive for SARS-CoV-2 due to systemic infection showed signs of hypoactivity, drowsiness and lethargy. The sleep-wake cycle can easily cause these changes in behavior both for physiological causes, especially if the baby is premature, and for pathological causes such as, for example, constant manipulation, temperature variations, infections, sedatives, can leave this baby more loose and unresponsive to handling, making it apathetic in a protective way. The articles of this study showed in their reports this sign and associated with the infectious condition, it became a warning sign, especially when the baby went to the maternal breast (Alonso et al. 2020; Wang et al. 2020).

Nursing care planning: The planning of nursing care was carried out based on the searches for the signs and symptoms most evidenced in the literature. They were divided into groups, based on those described repeatedly in the articles. Because it is a new disease, where its pathogenic process is not very well known, the authors emphasize that the onset is insidious and nonspecific and the differentiation will occur through tests performed on babies.

Two articles that addressed Nursing care systematization in adults brought the following signs and symptoms, among them are: fever, cough, dyspnea, abdominal pain, vomiting, diarrhea and among others. The diagnoses were: ineffective protection; risk of electrolyte imbalance; excessive fluid Volume; Diarrhea; Impaired gas exchange; decreased cardiac output; fatigue; ineffective respiratory pattern; impaired spontaneous ventilation, among others. Both articles concluded that there is a need to establish Nursing Care systematization in order to improve patient care (Pires et al., 2020; Queiroz et al, 2020).

CONCLUSION

The main signs and symptoms before the research were respiratory discomfort, hypoactivity and fever, in addition to gastrointestinal symptoms such as vomiting, poor diet and intolerance. The study gave rise to 12 articles, which resulted in seven diagnoses focusing on the problem and one of risk, mainly highlighting the respiratory diagnoses because they present more evidence of pulmonary origin, an important finding in the care of the newborn who is hospitalized in the NICU, where the professional should pay more attention. The nursing care systematization is the main care tool of the nursing nurse, which seeks to improve the picture of the sick patient through planning, also known as the nursing process. The results of this study will certainly contribute to the clinical practice of this professional front line in coping with COVID-19, bringing positive impacts on patient management. The limitations of this study are related to the impact of the articles found are mostly Case Reports or pre-prints, also, the search was originating only from a database for the evidence found, however, given the needs of scientific production in face of a new and even unknown virus. Based on the research performed, there is a need for additional studies involving mothers in the health-disease process of the newborn while hospitalized. Additionally, it is recommended that the care is more holistic during the face of COVID-19, with the main goal always focused on the patient and the family.

REFERENCES

- Alonso Díaz C., López Maestro M., Moral Pumarega M.T., Flores Antón B., Pallás Alonso C.R. 2020. First case of neonatal infection due to SARS-CoV-2 in Spain. *An Pediatr.* 4, pp. 237–8.
- Amatya S., Corr T.E., Gandhi C.K., Glass K.M., Kresch M.J., Mujsee D.J., et al. 2020. Management of newborns exposed to mothers with confirmed or suspected COVID-19. *J Perinatol.* 40, pp. 987–96.
- Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. 2012. Departamento de Ações Programáticas Estratégicas. Atenção à saúde do recém-nascido: Guia para os profissionais de saúde. Cuidados Gerais. Vol. 1 [Internet]. 2º pp.195.
- Brasil. Ministério da Saúde 2020. . Secretaria de Vigilância em Saúde. Boletim epidemiológico especial - Doença pelo Coronavírus COVID-19. *Bol Epidemiológico.* pp. 1–42.

- Bulechek G.M., Butcher H.K., Dochterman J.M. 2011. Classificação de Intervenções de Enfermagem NIC. 5ª edição. 2011. 944 p.
- Moorhead S., Johnson M., Maas L.M., Swanson E. 2004. Classificação dos Resultados de Enfermagem NOC. . 4ª edição. p. 640.
- Buonsenso D., Costa S., Sanguinetti M., Cattani P., Posteraro B., Marchetti S., et al. 2020. Neonatal Late Onset Infection with Severe Acute Respiratory Syndrome Coronavirus 2. *Am J Perinatol.* pp. 869–72.
- Carvalho W.B de, Gibelli M. A. B. C., Krebs V. L. J., Calil V. M. L. T., Johnston C. 2020. Expert recommendations for the care of newborns of mothers with COVID-19. *Clinics Sao Paulo.* . p. 1932.
- Carvalho W.B. de, Gibelli M. A. C., Krebs V. L. J., Calil V. M. L. T., Nicolau C. M., Johnston C. 2020. Neonatal SARS-CoV-2 infection. *Clinics.* 75 pp. 1996–e1996.
- Chacón-Aguilar R., Osorio-cámara J. M., Sanjurjo-Jimenez I., González-González C., Carnero-López J., Pérez-Moneo B. 2020. COVID-19: Fever syndrome and neurological symptoms in a neonate. *An Pediatr.* 92, pp. 373–4.
- Conselho Federal de Enfermagem 2009. - COFEN. RESOLUÇÃO COFEN-358/2009 Portal Cofen. pp. 1–4.
- De Luca D., van Kaam A. H., Tingay D. G., Courtney S. E., Danhaive O., Carnielli V. P., et al. 2017. The Montreux definition of neonatal ARDS: biological and clinical background behind the description of a new entity. *Lancet Respir Med.* 5, pp. 657–66.
- Di Sarra L., D'Agostino F., Cocchieri A., Vellone E., Zega M., Alvaro R. . Nursing diagnoses and theoretical frameworks in neonatal units: a literature review. *Prof Inferm.* 2016;691. :44–55.
- Duran P., Berman S., Niermeyer S., Jaenisch T., Forster T., Gomez Ponce de Leon R., et al. 2020. COVID-19 and newborn health: systematic review. *Rev Panam Salud Pública.* 44, pp.1.
- Fiorenzano D.M., Leal G.N., Sawamura K. S. S., Lianza A. C., Carvalho W. B. de, Krebs V. L. J. 2019. Síndrome do desconforto respiratório: influência do manejo sobre o estado hemodinâmico de recém-nascidos pré-termo ≤ 32 semanas nas primeiras 24 horas de vida. *Rev Bras Ter intensiva.* 31, pp. 312–7.
- Governo do Estado de São Paulo. 2019. Secretaria de Saúde. Linha de Cuidado da Criança. Manual de Neonatologia 2º. São Paulo; p. 339.
- Groß R., Conzelmann C., Müller J.A., Stenger S., Steinhart K., Kirchhoff F., et al. 2017. Detection of SARS-CoV-2 in human breastmilk. *Ann Oncol.* 395, pp. 1756–9.
- Herdman t. H., Kamitsuru S. 2018. Diagnósticos de Enfermagem da NANDA-I Definições e Classificação 2018-202011º ed. Schawanke A, organizador. NANDA International. Porto Alegre, RS: Artmed Editora LTDA; pp. 1–1187.
- Hong H., Wang Y., Chung H-T., Chen C-J. 2020. Clinical characteristics of novel coronavirus disease 2019 COVID-19. in newborns, infants and children. *Pediatr Neonatol.* 61, pp. 131–2.
- Horta W. de A. 1972. Processo De Enfermagem. Vol. 14, Revista da Escola de Enfermagem da USP. São Paulo. pp. 211–212.
- Kamali Aghdam M., Jafari N., Eftekhari K. 2020. Novel coronavirus in a 15-day-old neonate with clinical signs of sepsis, a case report. *Infect Dis.* 52, pp. 427–9.
- Lingkong Z., Xuwei T., Wenhao Y., Jin W., Xin L., Zhisheng L. 2020. First case of neonate with COVID-19 in China. *Chinese J Pediatr.* 58, pp. 1–7.
- Ma X., Zhu J., Du L. 2020. Neonatal Management During the Coronavirus Disease COVID-19. *Outbreak: The Chinese Experience.* Neoreviews.2, pp. 293–7.
- Mendes K. D. S., Pereira Silveira R. C. de C., Galvão C. M. 2019. Use of the bibliographic reference manager in the selection of primary studies in integrative reviews. *Texto e Context Enferm.* 28, pp. 1–13.
- Moher D., Liberati A., Tetzlaff J., Altman D. G., Altman D., Antes G., et al. 2009. Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Med.* 6.
- Pires Dantas T., Silva de Aguiar C. A., Teixeira Rodrigues V.R., Gomes da Silva R. R., Caetano da Silva M. I., Leite Sampaio L. R., et al. 2020. Diagnósticos de enfermagem para pacientes com COVID-19. *J Heal NPEPS.* 5, pp. 396–416.
- Queiroz A. G. S., De Souza R. Z., Sottocornola S. F., Barbosa S. J., Pinheiro F. A., Souza L. P. de. 2020. Diagnósticos de enfermagem segundo a taxonomia da NANDA internacional para sistematização da assistência de enfermagem a COVID-19. *J Heal Biol Sci.* 8, pp. 1.
- Rozycki H. J., Kotecha S. 2020. Covid-19 in pregnant women and babies: What pediatricians need to know. *Paediatr Respir Rev.* 35, pp. 31–7.
- Segur P. de C., Morero J. A. P., Oliveira C. T. 2019. Assistência de Enfermagem ao recém-nascido com Síndrome do Desconforto Respiratório. *Rev UNINGÁ.* 56, pp.141–59.
- Shalish W., Lakshminrusimha S., Manzoni P., Keszler M., Sant'Anna G. M. 2020. COVID-19 and Neonatal Respiratory Care: Current Evidence and Practical Approach. *Am J Perinatol.* 37, pp. 780–91.
- Simon A., Hübner J., Knuf M., Hufnagel M., Berner R. 2020. . Management of Care for Neonates Born to SARS-CoV-2 Positive Women with or without Clinical Symptoms COVID-19. : Statement of the German Society for Pediatric Infectious Diseases DGPI. in accordance with the German Society for Gynecology and Obstetrics. *D. Klin Pädiatrie.* 232, pp. 173–7.
- Wang J., Qi H., Bao L., Li F., Shi Y. 2020. A contingency plan for the management of the 2019 novel coronavirus outbreak in neonatal intensive care units. *Lancet Child Adolesc Heal.* 4, pp. 258–9.
- World Health Organization. 2020. Coronavirus disease COVID-19. pandemic. Numbers at a glance.
- Wu Y., Liu C., Dong L., Zhang C., Chen Y., Liu J., et al. 2020. Coronavirus disease 2019 among pregnant Chinese women: case series data on the safety of vaginal birth and breastfeeding. *BJOG An Int J Obstet Gynaecol.* 127, pp.1109–15.
- Xiao T-T., Yan K., Wang L-S., Zhou W-H. 2020. What can we learn from neonates with COVID-19? *World J Pediatr.* 16, pp. 280–3.
- Yang P., Wang X., Liu P., Wei C., He B., Zheng J., et al. 2020. Clinical characteristics and risk assessment of newborns born to mothers with COVID-19. *J Clin Virol.*, 127, pp. 1043-56.
- Zhang Z-J., Yu X-J., Fu T., Liu Y., Jiang Y., Yang B. X., et al. 2020. Novel coronavirus infection in newborn babies aged <28 days in China. *Eur respir j.* 55.
