بسم الله الرحمن الرحيم

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Knowledge and Practices of Breastfeeding Mothers regarding Protective Measures for their Neonates against COVID-19

Thesis

Submitted for Partial Fulfillment of the Requirements
of Master Degree in Pediatric Nursing
(Neonatal Nursing)

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Abb.	:	Full term
AAP	:	American Academy of Pediatrics
ABHS	:	Alcohol-Based Hand Sanitizer
ACE2	:	Angiotensin Converting Enzyme 2
ARDS	:	Acute Respiratory Distress Syndrome
CAPR	:	Controlled Air-Purifying Respirators
CDC	:	Centers for Disease Control and Prevention
COVID-19	:	Coronavirus Disease 2019
CPAP	:	Continuous Positive Airway Pressure
EBF	:	Exclusive breastfeeding
FIL	:	Feedback Inhibitor of Lactation
HCW	:	Health Care Workers
HMOs	:	Human Milk Oligosaccharides
MHRA	:	Medicines and Healthcare Products Regulatory Agency
NICU	:	Neonatal Intensive Care Units
NRP	:	Neonatal Resuscitation Program
PAPR	:	Powered Air-Purifying Respirators
PCR	:	Polymerase Chain Reaction
PPE	:	Personal Protective Equipment
RDS	:	Respiratory Distress Syndrome

RNA	**:**	Ribonucleic Acid
RT-PCR	**:**	Real-Time Polymerase Chain Reaction
SARS-CoV-2	**:**	Severe Acute Respiratory Syndrome Coronavirus 2
SIgA		Spike-specific secretory Immunoglobulin
TTN	**:**	Transient Tachypnea of the newborn
UNICEF	**:**	United Nation Children's Fund
WHO	**:**	World Health Organization

Knowledge and Practices of Breastfeeding Mothers regarding Protective Measures for their Neonates against COVID-19

Abstract

Background: Considering the benefits of breastfeeding and the role of breastfeeding in the transmission of COVID-19, mothers can continue breastfeeding, while applying the necessary protective measures. **Aim:** This study aimed to assess knowledge and practices of breastfeeding mothers regarding protective measures for their neonates from COVID-19. **Design:** A descriptive correlational design. **Subject:** A convenient sample of 104 breastfeeding mothers and a purposive sample of their hospitalized neonates. **Setting**: The neonatal intensive care units at Maternity and Gynecological Hospital and Children's Hospitals affiliated to Ain Shams University Hospitals and Benha Specialized Pediatric Hospital. **Tools:** 1) Interviewing Questionnaire contained 3 categories, 2) Neonatal Medical Record included characteristics of the studied neonates 3) Observational Checklists to assess breastfeeding mothers' practices regarding protective measures of COVID-19. **Results:** Less than three quarters of studied mothers had unsatisfactory knowledge regarding protective measures of COVID-19 and more than half of them had unsatisfactory practices regarding protective measures of COVID-19. **Conclusion:** There was a statistical significant relation between studied mothers' total knowledge and their education, age and job, there was a statistical significant relation between their total practice and their educational level and there was a positive correlation between mothers' total knowledge and their total practice toward protective measures for their neonates against COVID-19. **Recommendations:** Conducting the study in different settings such as breastfeeding outpatient.

Keywords: Knowledge, Practices, Breastfeeding, Mothers, Protective measures, Neonates, COVID-19.

Introduction

Novel coronavirus infection is an infectious disease was named Coronavirus Disease 2019 (COVID-19) by the World Health Organization (WHO). In early December 2019, a number of pneumonia cases of unknown origin emerged in Wuhan, China. Then, COVID-19 spreads rapidly throughout China and has become a global pandemic. The disease has a strong human-to- human transmission ***(Ma et al., 2020).***

The disease is primarily transmitted via respiratory droplets or direct contact, and the incubation period ranges from 2 to 14 days (median 5 days). Although intrauterine and transplacental transmission appear to be unlikely, they cannot be completely ruled out based on the current evidence. In neonates, symptoms appear to be milder and associated with better outcomes ***(Trevisanuto et al., 2020).***

Exclusive breastfeeding up to six months has incredible health benefits to the newborn and mother. It reduces the risk of newborn morbidity and mortality by reducing risk of contamination from formula milk and ensures proper early mental and motor development. It has immunological and anti-inflammatory properties that

protect both mother and newborn against various infections and diseases ***(Rahman et al., 2020)***.

Milk expression is safely and effectively achieved by both manual and mechanical methods and can be used to maintain milk supply in the event of separation from the infant. Both latch and an effective suckling pattern are keys. Milk removal, either via direct breastfeeding or expression, is essential for continuation of milk production ***(Feldman-Winter et al., 2020).***

When lactating mother is COVID-19 positive and infant is negative, breastfeeding is encouraged with measures taken to reduce infection as: mask wearing, hand washing, disinfection of surfaces, cleaning and sterilization of feeding equipment before and after use and breast washing with soap and water. When mother is healthy and infant is COVID-19 positive, the mother is encouraged to remain in quarantine with her infant and to continue breastfeeding ***(Vassilopoulou et al., 2021).***

Neonatal nurses must explain the suitable interval between breast expression. The caregiver taking care of the newborn during mother isolation should be taught how to breastfeed the newborn and the principles of personal hygiene, including regular hand washing and Personal

Protective Equipment (PPE). As neonatal symptoms of infection may be nonspecific or gastrointestinal disorders, so these symptoms should be taught to parents and caregivers. Parents should be informed about national screening, vaccination and routine visits programs during the COVID-19 pandemic ***(Sighaldeh & Kalan, 2020).***

Strict precautions in Neonatal Intensive Care Units (NICUs) should be maintained by using PPE with social distancing measures in the neonatal wards to minimize staff exposure. Breaks should be spread out so colleagues do not eat or drink with each other. Asymptomatic contacts of this team member should be tested and self-isolation in these cases depends on unit policy ***(De Rose et al., 2020).***

Protective measures should be followed by breastfeeding mothers during breastfeeding and contact with newborns. Mothers should wash hands for at least 20 seconds before breastfeeding or touching their newborns and wear a face mask (completely covering the nose and mouth). Immediately removing masks from elastic bands should done when coughing, sneezing or at every feeding ***(Calil et al., 2020)***.