THE EFFECTIVENESS OF NEWBORN CARE PROMOTION ON INCREASING KNOWLEDGE, ATTITUDE, AND BREASTFEEDING PRACTICE AMONG MOTHERS IN NORTH JAKARTA

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ABSTRACT

Background: Breastfeeding is one of the most important contributors to the health, growth and development of the newborns. This study aimed to determine the effect of the promotion of newborn care by health cadres on increasing knowledge, attitude, and practice of breastfeeding among mothers.
Subjects and Method: This study was quasi-experimental design with one group pre-posttest in 2020. The population in this study were mothers who had newborns in Koja, Cilincing, and Tanjung Priok sub-districts, North Jakarta. A total of 50 mothers were selected. The dependent variables were knowledge, attitude, and practice. The independent variable was promotion of newborn care. Data was collected by questionnaire. Data were analyzed using paired-t test and Mc Nemar test.
Results: The mean score of breastfeeding knowledge was higher after intervention (Mean= 16.10; SD=1.11) than before intervention (Mean= 13.34; SD= 1.14) and it was statistically significant ($p < 0.001$). The mean score of breastfeeding attitude was higher after intervention (Mean= 15.38; SD= 1.25) than before intervention (Mean= 15.38; SD= 0.83) and it was statistically significant ($p<0.001$). Mothers were more likely to practice breastfeeding after participation in the promotion of the newborn care (OR= 2.00; 95% CI= 1.22 to 3.33; p= 0.008).
Conclusion: Promotion of newborn care by health cadres improves knowledge, attitude, and practice of breastfeeding.

Keywords: health promotion, breastfeeding, health cadres, newborn care.

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BACKGROUND

Neonatal and child problems are challenges that needs to be overcome. Indonesian Demographic and Health Surveys (Penelitian and Pengembangan, 2013) showed that Neonatal Mortality Rate (NMR), Infant Mortality Rate (IMR), and Under-five Mortality Rate (UMR) are still high in Indonesia. The neonatal period was very critical time due to child mortality. The main problem of infant mortality occurred during neonatal period, which contributes to 59% of infant deaths in Indonesia (Kementerian Kesehatan RI, 2016). About 78.5% of the- deaths occurs in infants aged 0-6 days (Kementerian Kesehatan RI, 2018). Majority of NMR was caused by low birth weight (LBW) and prematurity (28%) and severe infections (26%) (Lawn, Cousens and Zupan, 2005; Lawn et al., 2010). Newborns or infants are risk for infectious diseases, growth delays and development, and death during

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childhood (Ballot et al., 2012; Soleimani et al., 2014).

Neonatal deaths cannot be significantly decreased without the support to reduce maternal mortality and improve maternal health. Antenatal care and standard delivery assistance should be accompanied by adequate neonatal care and efforts to reduce infant mortality from low birth weight, post-natal infections (such as tetanus neonatorum, sepsis), hypothermia and asphyxia (Kementerian Kesehatan RI, 2010).

Neonatal care is a treatment used to support the health of newborns including cord care and post-natal care, prevention of hypothermia, early and exclusive infants, spontaneous breathing efforts and infection prevention efforts (Kementerian Kesehatan RI, 2010). Essential neonatal health care or services are part of comprehensive child health services with a health improvement maintenance approach (promotive), disease prevention (preventive), disease healing (curative), and dise-ase recovery (rehabilitative) (Kementerian Kesehatan RI, 2014).

Some important indicators for the achievement of infants' health include providing quality systems for health services and incorporating essential programs into maternal and child care programs, providing access to essential health services, and providing insight into essential neonatal health knowledge (Kementerian Kesehatan RI, 2014). The support and involvement of family and community is needed so that newborn health services can run well. The involvement of community elements such as community health workers is expected to increase public access to maternal and child health services.

Community health workers are officers who live in the communities in which they serve, are elected by that community, are accountable to the communities in which they work, receive certain short training and do not have to be attached to any formal institution (WHO, 2008). Community health workers or commonly called Posyandu cadres are members of the community who are willing, able and have time to organize Posyandu activities voluntarily (Kementerian Dalam Negeri RI, 2011).

The World Health Organization mentions that the role of community health workers in maternal and child health services is to promote pregnancy care, childbirth preparation, childbirth by health workers, nutritious food during pregnancy, reproductive health and family planning, exclusive breastfeeding, post-natal care, immunization, Kangaroo Mother Care (KMC) for LBW, newborn basic care and LBW care (WHO, 2012). In Indonesia, one of the health care coverage provided by community health workers along with health workers is related to the development of nutrition and maternal and child health, including counseling and counseling regarding the care of newborns, signs of danger in infants and toddlers (Kementerian Dalam Negeri RI, 2011).

North Jakarta is the region with the prevalence of child mortality rate at the age of < 1 year (25.96%) the 2nd highest in DKI Jakarta (DKI Jakarta Provincial Population and Civil Registry Office, 2019). (Dinas Kependudukan dan Pencatatan Sipil Provinsi DKI Jakarta, 2019). Based on observations found that mothers who have newborns have not practiced the care of newborns properly, such as the practice of clean and healthy living behaviors that have not been good such as un

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hygienic home conditions and there are still mothers who provide breast milk with mixed other drinks. The neonatal care promotion by community health workers is expected to improve knowledge, attitudes, and practices of breastfeeding in North Jakarta. Objective of this study was to analyze the effect of neonatal care promotion by community health workers towards knowledge, attitude, and practice of breastfeeding in North Jakarta.

SUBJECTS AND METHOD

1. Study Design

This study was quasi-experimental design with one group pre-posttest in 2020.

2. Population and Sample

The population in this study were mothers who had newborns in Koja, Cilincing, and Tanjung Priok sub-districts, North Jakarta. A total of 50 mothers were selected by consecutive sampling.

3. Study Variables

The dependent variables were knowledge of breastfeeding, attitude toward breastfeeding and practice of breastfeeding. The independent variable was promotion of newborn care.

4. Operational Definition of Variables

Knowledge of breastfeeding was measured by interval scale; wrong answer 1 and right answer 2; Attitude of breastfeeding was measured by interval scale; very disagree 1, disagree 2, agree 3, and very agree 4; and practice of breastfeeding was measured by ratio scale; the frequency of mothers who practiced exclusive breastfeeding.

5. Study Instruments

Data was collected by questionnaire.

6. Data analysis

Data were analyzed using paired-t test and Mc Nemar test.

RESULTS

The mean age of respondents was 31 years old, mean parity was 2 children, the majority of them were low education (64%), not working (100%), and distance to health services was less than 1 km (56%).

1. Effect of neonatal care promotion towards knowledge of breastfeeding

Breastfeeding knowledge in this study include questions about the best drinking for the infants, benefit of breastfeeding, how to breastfeed the infants, frequency of breastfeeding, amount of breastfeeding, how to massage breast, and how to pumping breastmilk. On 1st measurement, majority of mothers can answer correctly questions about the best drinking for the infants, benefit of breastfeeding, how to breatfeed the infants, and frequency of breastfeeding. But they didn't know about amount of breastmilk, how to massage breast, and how to pumping breastmilk.

The promotion conducted by community health workers in this study was provided information, motivation, and reminded about neonatal care especially breastfeeding practice. In the home visit, community health workers provided information and education about the frequency and amount of breastmilk, how to massage breast, and how to pumping breastmilk.

After neonatal care promotion by community health workers, there was an increase in mothers' knowledge about the amount of breastmilk, how to massage breast, and how to pumping breastmilk. Overall, there was an improvement of mother's average total score of breastfeeding knowledge on 1st and 2nd second measurements. The average total score of breastfeeding knowledge on 1st measurement was (Mean= 13.34; SD= 1.14) and 2nd

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measurement was (Mean= 16.10; SD= 1.11). It showed in Table 1.

Based on paired t-test, there was a difference in the mother's average total score of breastfeeding knowledge on first and second measurements (p <0.001). This explaines that neonatal promotion by community health workers improved the mother's knowledge of breastfeeding. The statistical results showed in Table 2.

2. Effect of neonatal care promotion towards attitude of breastfeeding

Breastfeeding attitude in this study include mothers' agreement that breastmilk is the best drinking for the infants, breastmilk has many benefit to infants' health, infants don't need additional drink to increase their weight quickly, and mothers has to massage their breast to increase breastmilk. On 1st measurement, majority of mothers agree that breastmilk is the best drinking for the infants and breastmilk has many benefit to infants' health. But they didn't agree that infants don't need additional drink to increase their weight quickly and mothers has to massage their breast to increase breastmilk.

After neonatal care promotion by community health workers, there was an increase in mothers' positive attitude that infants don't need additional drink to increase their weight quickly and mothers has to massage their breast to increase breastmilk. Overall, there was an improvement of mother's average total score of breastfeeding attitude on 1st and 2nd second measurements. The average total score of breastfeeding attitude on 1st measurement was (Mean=13.34; SD= 1.14) and 2nd measurement was (Mean= 16.10; SD= 1.11). It showed in the Table 3.

Based on paired t-test, there was a difference in the mother's average total score of breastfeeding attitude on first and second measurements (p <0.001). This explaines that neonatal promotion by community health workers improved the mother's attitude of breastfeeding. The statistical results showed in Table 4.

3. Effect of neonatal care promotion towards breastfeeding practice

Breastfeeding practice in this study was the feeding of breastmilk only to infants, without any additional drinks or foods. On 1st measurement, majority of mothers giving breastmilk by mixing with other drink such as formula milk to increase the infants' weight. Another reason is because the mother's breastmilk is lacking as well as the experience of formula feeding in previous children.

After neonatal care promotion by community health workers, there was an increase in the number of mothers who give breastmilk only on 2nd measurements. The number of mothers who give breastmilk only on 1st measurement is 35 people (70%) and 2nd measurement is 41 people (82%). It showed in the table 5.

Based on Mc Nemar-test, there was a difference in the number of mothers who practice breastmilk only on first and second measurements (p <0.05). This explaines that neonatal promotion by community health workers improved the mother's breastfeeding practice. The statistical results showed in the Table 6.

Table 1. Breastfeeding Knowledge Score at Each Measurement

Breastfeeding Knowledge	Mean	SD
1st Measurement	13.34	1.14
2nd Measurement	16.10	1.11

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Table 2. Breastfeeding Knowledge Score Difference at Each Measurement

Time Measurement	Mean Difference		OR	95% CI	p
	Mean	SD			
1st and 2nd Measurement	-2.76	0.80	0.75	-2.99 to -2.53	<0.001

Table 3. Breastfeeding Attitude Score at Each Measurement

Breastfeeding Attitude	Mean	SD
1st Measurement	12.48	1.25
2nd Measurement	15.38	0.83

Table 4. Breastfeeding Attitude Score Difference at Each Measurement

Time Measurement	Mean Difference		OR	95% CI	p
	Mean	SD			
1st and 2nd Measurement	-2.90	1.04	0.57	-3.19 to -2.61	<0.001

Table 5. Breastfeeding Practice at Each Measurement

Time Measurement	Breastfeeding Practice		
	Category	N	%
1st Measurement	No	15	30
	Yes	35	70
2nd Measurement	No	9	18
	Yes	41	82

Table 6. Breastfeeding Practice Difference at Each Measurement

Time Measurement	OR	95% CI		p
		Lower limit	Upper limit	
1st and 2nd Measurement	2.00	1.22	3.33	0.008

DISCUSSION

1. Effect of Neonatal Care Promotion towards Knowledge of Breastfeeding

One of the efforts that can be done to improve health knowledge, attitudes, and behaviors is communication, information, and education about health (Notoatmodjo, 2012). Health education is an effort or activity to create community behavior conducive to health (Notoatmodjo, 2007). The promotion conducted by community health workers in this study is a communication of behavior changes to improve maternal knowledge about neonatal care. Behaviour change communication is an intervention that can be done to change behavior at the individual and family level (Notoatmodjo, 2012).

In the home visit, community health workers provided information and education about neonatal care by using information media in the form of back sheets and booklet as a material reading for mothers at home. Mothers in this study had an improvement of neonatal care knowledge after neonatal care promotion by community health workers. It can be explained that information provided by community health workers received well by the mothers and it is effective. Community health workers play a role as an informer and reminder of neonatal care.

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Interventions designed by health workers, policymakers, and health educators about the benefits of breast milk, breastfeed on-demand, and colostrum initiation immediately after birth is important to increase breastfeeding knowledge (Dukuzumuremyi et al., 2020). Study by Suryani et al. (2019) showed that there is effect of nutritional promotion and counseling on knowledge of breastfeeding.

Knowledge relates to the amount of information a person has. The more information a person has, the higher one's knowledge. According to Mubarak (2007), the goal of health education iss to improve health status, prevent disease and increasing health problems, maintain existing health status, and help people to overcome health problems. The more information the mothers had about the care of the newborn, the better knowledge and understanding about the newborn care.

Based on the study in India (Rasaily et al., 2017) most mothers have a good knowledge of neonatal care after being educated about neonatal care. Another study in India (Darmstadt et al., 2006) found that mothers and families learned of the benefits of neonatal care after being educated about neonatal care. Quasem et al., (2003) in his study in Bangladesh explained that mothers know the benefits of neonatal care after being educated about the care of neonatal.

2. Effect of Neonatal Care Promotion towards Attitude of Breastfeeding

Attitude is a reaction or response that is still closed from someone to a stimulus or object (Notoatmodjo, 2007). Attitude is also a readiness or willingness to act and is also the implementation of certain motives. Attitude is a person's closed response to a stimulus or object, both internal and external so that its manifestation cannot be directly seen, but can only be interpreted in advance from closed behavior. Attitudes in reality indicate the conformity of the response to a particular stimulus.

The promotion conducted by community health workers in this study was reminded and provided motivation about neonatal care especially breastfeeding practice. With the information and motivation, it will increase the mother's positive attitude about neonatal care especially breastfeeding practice.

The mothers in this study had an improvement of neonatal care attitude after neonatal care promotion by community health workers. It can be explained that information provided by community health workers received well by the mothers and it is effective. Community health workers play a role as an informer and educator to improve mothers' acceptance of neonatal care.

This research is in accordance with research in India (Rasaily et al., 2017; Darmstadt et al., 2006; Mazumder et al., 2017) that mothers had positive attitude regarding neonatal care after being educated about neonatal care.

One of the breastfeeding strategies is the availability of access to breastfeeding education and information (National Association of County and City Health Officials, 2018). Breastfeeding education usually occurs during the prenatal and intrapartum periods. The goals of breastfeeding education are to increase mothers' knowledge and skills, help them view breastfeeding as normal, and help them develop positive attitudes toward breastfeeding. Similarly, Jolly et al. (2012) said that educating the mother, increasing awareness in the whole community may

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be essential to improve breastfeeding practice.

3. Effect of Neonatal Care Promotion towards Breastfeeding Practice

Breastfeeding practice is one of the neonatal care which is very important. Optimal breastfeeding practices are the cornerstone of child survival, nutrition and early childhood development. World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend initiation of breastfeeding within an hour of birth, exclusive breastfeeding for the first 6 months of life, and continued breastfeeding beyond 6 months and at least up to 2 years of age or more along with the introduction of nutritionally adequate and safe complementary foods (Zimmermann, 2004). Many studies have proven the benefits of breastmilk for the growth and development of babies. Optimal breastfeeding practices also improve mother and infant bonding, help achieve optimum growth and development, protect against non-communicable diseases and benefit maternal health (WHO, 2003, 2017).

Mothers in this study had an improvement of neonatal care attitude after neonatal care promotion by community health workers. It can be explained that information provided by community health workers received well by the mothers and it is effective. Mothers were practiced breastfeeding optimally. Community health workers play a role as an informer, educator and motivator to improve mothers' breastfeeding prasctive.

Study by Sinha et al. (2015) showed that in order to promote breastfeeding, interventions should be delivered in a combination of settings by involving health systems, home and family and the community environment concurrently. When counselling or education were provided concurrently in home and community, health systems and community, health systems and home settings, respecttively, there was a higher improvements in breastfeeding rates such aearly initiation of breastfeeding, exclusive breastfeeding and continued breastfeeding rates.

Enriquez et al. (2007) explained that combined facility and community based interventions resulted in greater improvements in breastfeeding rates. Educating family or society regarding breastfeeding and providing support to the mother may be useful to create a better breastfeeding milieu. The need for the engagement of multiple sectors and actors as part of a well synchronized engine to protect, promote and support optimal breastfeeding practices globally (Pérez-Escamilla et al., 2012). Support should be provided throughout the continuum in multiple settings by increasing community awareness regarding breastfeeding, followed by health system support and home and family support through counselling.

AUTHOR CONTRIBUTION

Intan Silviana Mustikawati: Responsible for the research, data quality and manuscript; Erlina Puspitaloka Mahadewi: Responsible for the research instruments and manuscript; Mieke Wijaya: Responsible for the research intervention; and Zelfino: Responsible for the data collection

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CONFLICT OF INTEREST

No conflict of interest.

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