

Media Counseling Of Breastfeeding Practice Improved Newborn Growth Outcomes In Ngombol Public Health Center, Purworejo-Indonesia

Penggunaan media dalam konseling praktik menyusui dapat meningkatkan berat badan bayi di Puskesmas Ngombol, Purworejo-Indonesia

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Abstract: *Exclusive breastfeeding practice in Ngombol public health center is below the regency target which was only 54.4% from 80% in Purworejo in 2019. Program to improve exclusive breastfeeding such as counseling is one of the best ways to increase community participation as this a crucial phase to fulfill newborn nutrition needs. The aim of this study was to determine the effect of media counseling on increasing breastfeeding practice and improving newborn weight in the first month old. We created a quasi-experimental design with one group pre-test and a post-test with a control group design. Of 40 post-partum mothers and newborns were recruited in this study. Data collection was gathered such as socio-demography, breastfeeding observation form, and newborn's weight in both before and after one-month intervention. The intervention group had counseled with media such as leaflet, breastfeeding flipcharts, breast props and newborn dolls. In other hand, the control group had no received counseling with media. A statistical paired t-test test was created to find the association between those variables using SPSS 20.0 for windows. Mean average of newborn weight after intervention was 1,005.55 g and 964,50 g for intervention and control group, respectively. There were differences before and after a month of giving exclusive breastfeeding between the control and intervention groups ($p < 0.001$). Mothers in the intervention group had 80% achieved minimum recommended weight gain (≥ 800 g/month). Exclusive breastfeeding counseling with media has an impact on improving newborn weight at the first month old in Ngombol Public health Center, Purworejo-Indonesia. Using media during breastfeeding counseling regularly may help the awareness and knowledge of exclusive breastfeeding for mothers, yet improve breastfeeding practice*

Key Words: Exclusive breastfeeding; media counseling; weight; newborn

1. INTRODUCTION

Almost 50% of all under-five children mortality happened in 2,5 million of the neonatal death, globally in 2017 (UNICEF/World Health Organization/World Bank Group, 2018). Under-five children mortality mostly occurred in low- and middle-income countries (LMICs), included in Indonesia, and this case mainly from preventable causes (Liu et al., 2021). Early initiation of breastfeeding makes a critical role in the child survival and has successfully promoted exclusive breastfeeding program. Breastfeeding has benefited to protect newborns against diarrhea and respiratory tract infections, improve immune system, and good source to fulfill their daily nutrition needs (Mortazavi et al., 2015).

Based on the Indonesia basic health research survey, less than six month-aged newborn had exclusively breastfeeding in the first six month only 37.70% and this number were below national recommendation (50%) (Kemenkes RI, 2018). Breastfeeding rates in the first six months need to be improved through promotion, protection, and support interventions as its one of the key strategies to achieve nutrition targets under the Sustainable Development Goals (Victora et al., 2016).

Counseling is the provision of objective information carried out in a systematic manner which functions, among others, to increase knowledge and abilities (Handayani, 2016). According to The World Health Organization (WHO), breastfeeding counselling as the support of mothers and newborn which was provided by professional health officers in the decision making, overcoming difficulties, and optimal implementation of feeding practices. The interaction between counselor and mothers is a key element to support mothers decision making and using media as type of interventions such as education, media utilization, and mass-marketing to be taking account for improving breastfeeding rates (McFadden et al., 2019).

The success of breastfeeding can be seen by the mother's ability to provide exclusive breastfeeding with correct attachment and positions. A research from (Suksesty et al., 2016) showed that the ability to breastfeed in the group that was counseled with the application of media was higher compared to without media counselling. This finding supported by Sari et al., (2013) that an effect of counseling on breastfeeding attachment had a significant association between breastfeeding techniques and the weight of newborns aged 1-6 months. Breastfeeding counselling is often part of complex interventions but evidence is lacking on the specific effect of counselling interventions on breastfeeding practices. The aim of this study was to determine the effect of media counseling on increasing breastfeeding practice and improving newborn weight int first month after delivery

2. METHODS

Study Design

This study design was a Quasi-Experimental design with a one group pretest and posttest design with a control group. This trial was conducted in Ngombol Public Health Center, Purworejo, Indonesia from October 2020 to January 2021. Ngombol was subdistrict in the Purworejo Regency. The control and intervention groups were collected and applied using media counselling and not-using media counselling for a month intervention to analyse the infant weight gain in the first month-aged.

Study Participants

Subjects were mothers in post-partum period and newborn pair who recruited after successfully giving birth delivery and the newborn had not more than seven days-old. Mothers in the intervention group were treated with using media counselling such as flipchart, breastfeeding leaflet and props used to describe the techniques, methods and benefits of exclusive breastfeeding. We used purposive sampling method with the inclusion criteria: Exclusive breastfeeding mothers and newborn who had born 6 hours to 7 days after delivery, willing to be the subject and able to communicate. Then the exclusion criteria included sick mothers or newborn after delivery or subject whose medical condition that prevent the counseling process cannot be carried out such as had a history of infectious diseases, and newborn with low-birth-weight status or less than 2500 g of. In total, we

collected 105 post-partum mothers and based on the inclusion and exclusion criteria obtained 51 subjects. During the monitoring process which was carried out four times in a month, 11 subjects dropped out. Therefore, the remaining number were 40 subjects. Of 20 subjects assigned randomly into intervention group and 20 subjects into control group.

Data Collection

The study instruments of this study were digital newborn scales, leaflet media, breastfeeding flipcharts, breast props and newborn dolls, questionnaires and breastfeeding observation sheets. Technique of breastfeeding was observed during the study to determine whether correct or not mothers implied the breastfeeding practice. The description of breastfeeding method in this study was obtained from the result of observing the accuracy of the subject in positioning the newborn's and attaching the newborn's mouth to the mother's breast during breastfeeding, observations made before and a month after counseling. Breastfeeding technique was related to exclusive breastfeeding initiation according to the mode of birth. This relationship implies the importance of early effective interventions among first-time mothers with jaundice newborns in improving breastfeeding techniques and promoting exclusive breastfeeding initiation. We observed eight indicator items, if in the observation checked all items, subjects did a correct position. Otherwise, mothers who had not fulfill eight items indicator did a not-correct position (Lau et al., 2015).

Data collection was carried out from secondary data including data on birth weight, mid-upper arm circumference, which was obtained from the subject's KIA book. The newborn's weight in this study was obtained by weighing the newborn using a newborn digital scale before being given counseling and after a month being given counseling. The primary data consisting of subject characteristics data obtained from interviews using a questionnaire, breastfeeding observation data obtained from observations using breastfeeding observation sheets and body weight. Newborns weight data were obtained from measuring the newborn's weight using a digital newborn scale.

Statistical Analysis

Descriptive statistics were summarized as frequency and percentage for the categorical variables, and mean and standard deviation for the continuous variables. We used paired sample t-test to identify the difference between pre and post-intervention in both groups. Statistical significance was declared at p-value < 0.05 using SPSS 20.0 for windows.

Ethical Approval

The ethical clearance of this study was approved by the institutional review board of Ethical Committee of University of Alma Ata (KE/AA/XI/10322/EC/2020). All subjects of this study had signed the informed consent before taking data collection. The study was conducted according the guidelines of the Declaration of Helsinki.

3. RESULTS AND DISCUSSION

Subject's Characteristics

The characteristics of the majority subjects from the two groups were 82.5% aged between 20-35 years (97.5%), gestational age 37-40 weeks which was in the reproductive age and took pregnancy not at risk and 65% of newborn born were girls. and 60% parity multiparous status (second or more births) with 75% history of exclusive breastfeeding from previous newborn and this parity status described experience in breastfeeding, 70% nutritional status during pregnancy was normal according to MUAC more than or equal 23.5 cm (Ververs et al., 2013), 65% had high school education levels and 95% of subject worked as housewives (Table 1).

Table 1 Characteristics Subject

Variables	Groups	
	Intervention (n=20) (%)	Control (n=20) (%)
Age group (year)		
< 20	5	0
20 – 35	75	90
>35	20	10
Gestational age (week)		
37 – 40	100	95
> 40	0	5
Parity status		
1	50	30
2	35	55
≥3	15	15
Exclusive breastfeeding history		
Yes	70	78.5
No	30	21.5
MUAC status		
<23.5 cm	30	30
≥23.5 cm	70	70
Education levels		
Elementary	5	10
Junior High School	10	30
Senior High School	80	50
University	5	10
Occupational status		
Housewives	95	95
Employee	0	5
Entrepreneur	5	0
Newborn gender		
Boy	40	30
Girl	60	70

Technique of Breastfeeding Status

Table 2 showed the right position of breastfeeding practice status in comparison between pre-test and post-test in both groups. After a month of counseling, we had 17

(85%) and 15 (75%) correctly practice breastfeeding in the intervention and control groups, respectively. This illustrated the increasing ability and skill of the mothers in positioning the newborn's body and attaching the newborn's mouth to the mother's breast. This increased skill and ability were obtained after counseling. This results found similar finding and proving that there was an effect of counseling on breastfeeding attachment to improve breastfeeding success (I. Sari et al., 2013).

Table 2 The Right Position of Breastfeeding Practice Status

Status	Groups							
	Intervention				Control			
	Pre-test		Post-test		Pre-test		Post-test	
	n	%	n	%	n	%	n	%
Correct	0	0	17	85	0	0	15	75
Not correct	20	100	3	15	15	75	5	25

Newborn's Weight Gain Status

Table 3 Minimum Newborn Weight Gain Status in the First Month-aged

Groups	Newborn Weight Gain			
	<800 gr		≥800 gr	
	n	%	n	%
Intervention	4	20	16	80
Control	6	30	14	70

First moth-aged newborn had minimal weight gain needed to meet for minimum 800 g. The successful breastfeeding makes important role to regulate nutrition adequacy and achieve the minimum weight gain in the first month-aged (Kemenkes RI, 2015). This showed that mostly up to 70% newborns in both groups meet the recommendation. An indicator of the adequacy of breastfeeding or the balance of nutritional intake derived from breast milk explained that there was a significant relationship between exclusive breastfeeding and an increase in the weight of newborns aged in the first month (Laliasa et al., 2017).

The Association between Media Counselling and Newborn's Weight

Table 4 Pre- and Post-intervention in Newborn's Weight in the First Month-aged

Groups	Counselling Status	Newborn's Weight (g)			P value
		Mean	SD	Min-Max	
Intervention	Pre	3,188.20	379.453	2,520-4,000	<0.001
	Post	4,193.75	468.814	3,310-4,825	
	Newborn's weight gain	1,005.55	271.550	515-1,465	
Control	Pre	3,101.50	382.423	2,510-3,730	
	Post	4,066.00	507.288	3,345-5,080	
	Newborn's weight gain	964.50	333.675	445-1,755	

The newborn weight of the subjects before and after counseling showed in Table 3. Mean of newborn's weight in intervention group before and after counselling intervention using media were 3,188.20±379,453 g and 4,193.75±468,814 g, respectively. This result found higher than control group with before and after counselling without media were

3,101.50±382,423 g and 4,066.00±507,288 g, respectively. The average of increase weight in the intervention group was 1,005.55 ± 271,550 g, which was higher than the control group of 964.50 ± 333.67 g.

There was an effect of exclusive breastfeeding counseling using counseling media on increasing newborn weight at the Ngombol Public Health Center, Purworejo Regency, the results of this study were in line with research conducted in previous studies and explaining that there was an effect of exclusive breastfeeding counseling on increasing newborn weight and there was a significant difference in the average weight of the newborn before and after being given counseling (Astriyani, 2018; Yuliastanti & Utami, 2021).

According to the results of research by Sari et al., (2017), it showed that there was a significant relationship between breastfeeding techniques and the weight of newborn aged 1-6 months, with the right breastfeeding technique the newborn will get adequate nutritional intake and optimal growth. In the two groups before counseling was carried out in this study, Table 2 showed that all subjects technique of breastfeeding is still not right and a history of previous breastfeeding problems with sore nipples, feeling that the milk is not enough, this can trigger the failure of exclusive breastfeeding. According to Karinda et al., (2013), the factors that affect newborn not getting exclusive breastfeeding include sore nipples and the milk is not smooth or not enough. The causes of sore nipples include inappropriate breastfeeding methods or techniques (Irsal et al., 2017).

The existence of a significant difference in newborn weight after counseling in the 2 groups of subjects of this study indicates the success of counseling means that problem solving and information conveyed by the counselor is accepted by the counselee or subject. In this study, the counseling function as a function of prevention, adaptation and development is aimed at increasing the knowledge and abilities of the counselee or subject (Mundakir, 2016). There is an effect of counseling on exclusive breastfeeding on knowledge and attitudes of breastfeeding mothers (Masthalina & Agustina, 2018).

The influence of counseling in the two groups on the increase in newborn weight and the difference in the increase of newborn weight of 41.05 g was not much different, this means that the message or information conveyed by the counselor to the subject in both groups is effective, it means that the message is received and remembered according to Edgar Dale's theory. The effectiveness of the message is that the subject will remember 30% of what they hear, 50% of what they see, hear, and say while working on their own and the subject will remember 90% of what they said and did, although not using counseling aids media or only heard in the control group, but there are direct media, namely newborn and breasts as objects in learning breastfeeding techniques and directly done (practice) (Lee & Reeves, 2017).

In addition to the counseling media, other factors that influence the effectiveness and success of counseling in this study are the parity status factor, the majority of the subjects were multipara parity in the control group of 14 subjects (70%) and intervention 10 subjects (50%). Factors that influence the counseling process include the quality of the counselee, the characteristics of the counselee, the counselee's personality and readiness to face the process of breastfeeding counseling (McFadden et al., 2019). The results of this study, described in the multiparous control group of 14 subjects who were counseled 10

subjects (71%) the way of breastfeeding was correct and in the multiparous intervention of 10 subjects counseled 10 subjects (100%) the way of breastfeeding was correct, this is in line with Pasiak et al., (2019), showed that there was a significant relationship between parity status and breastfeeding techniques in post-partum mothers where the breastfeeding technique for multiparous mothers was better than primiparas.

Aspects of the counselee's personality consisting of attitudes, emotions, motivations, hopes, and anxiety will be revealed when the counselee undergoes the counseling process (Kakhnovets, 2011). This study found challenges which were emotional or psychological and physical problems of postpartum subjects, the subject looks tense, fatigue was likely affect the message and problem solving conveyed by the counselor to control when it comes to every time counseling is carried out. Mothers need to be accompanied by the subject's family such as her husband or mother (not mandatory) will be creating better feeling from them to receive the counselling process (Aldana et al., 2020; Benedict et al., 2018). Counselling using media assistance in this study was better than not using counseling media assistance, this is in line with the research of Suksesty et al., (2016) that the ability to breastfeed in the group that was given counseling with the application of media was higher than the group that was counseled with standard care. The benefits of counseling with media include information that is easier to receive, more interesting and as a substitute for object (Alhadi et al., 2016). The use of media as an instrument for exclusive breastfeeding counseling is still needed.

4. CONCLUSION

The increase of newborn weight average after a month of being given exclusive breastfeeding counseling in the intervention group was 1,005.55 g and in the control group was 964.50 g. There is an effect of counseling on exclusive breastfeeding using counseling media on increasing newborn weight at the Ngombol Public Health Center, Purworejo Regency. It is recommended that health workers at the Puskesmas can maximize the existing media when providing education and practice of exclusive breastfeeding

CONFLICT OF INTEREST

The authors declare that there were no conflicts of interest in this study.

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