

FACTORS ASSOCIATED WITH BREASTFEEDING PRACTICE AMONG MOTHERS IN MEDAN, INDONESIA

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ABSTRACT:

Background: Breastfeeding has been recognized worldwide for its multiple benefits for both infants and mothers. Inadequate mother's knowledge, negative attitude toward breastfeeding, and lack of husband's support may influence breastfeeding practice and constitute barriers to optimize the increasing of breastfeeding practices.

Methods: This study aimed to identify factors associated with breastfeeding practice among mothers with infants aged 1-6 months in Medan, Indonesia with the Precede-Proceed Model as a guideline. A cross-sectional design was applied. Participants were selected from five Health Integrated Posts (Posyandu) of Primary Health Center in Medan, Indonesia, using a multi-stage sampling method. A total of 374 participants were selected and asked to complete five self-administered questionnaires. Descriptive statistics and Pearson Product Moment Correlation were used for data analysis.

Results: The study revealed that breastfeeding practice of mothers were at a moderate level ($M = 2.84$, $SD = 1.70$). Only 9.1% of mothers performed exclusive breastfeeding practice. Furthermore, majority of participants were at moderate level of breastfeeding knowledge ($M = 23.32$, $SD = 3.47$), attitude toward breastfeeding ($M = 4691.47$, $SD = 1106.86$), and husband's support ($M = 3.03$, $SD = 0.93$). The inferential analysis found breastfeeding knowledge and attitude toward breastfeeding were not associated with breastfeeding practice ($p\text{-value} > .05$). Meanwhile, husband support was positively significant association with breastfeeding practice ($p\text{-value} < .01$).

Conclusion: Husband support was the important factor that correlated with breast feeding practice. The rate of exclusive breastfeeding practice of mother in this study was lower than previous studies and the recommendation by World Health Organization (WHO). Based on these findings, health care providers should involve husbands to support mothers during breastfeeding and to improve breastfeeding practice of mothers in Medan, Indonesia.

Keywords: Breastfeeding practice, Husband support, Indonesia

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INTRODUCTION

Breastfeeding has been recognized worldwide for its multiple benefits for both of infants and mothers. Among the major benefits of breastfeeding are to improve infants nutritional status, reduce morbidity and mortality rates among infants, especially during the first year of life, and reduce health care cost of family and society. Breastfeeding is also important to improve health of the mother and development of infants and

children. World Health Organization (WHO) has recommended mothers to provide breastfeeding immediately after birth and provide exclusive breastfeeding to infants until age of six months. Breastfeeding should be continue until infant age of 2 years or beyond with additional supplementary food [1].

Even though WHO has been promoting breastfeeding worldwide, particularly in developing countries. Only 35% of infants younger than 6 months were exclusively breastfed worldwide [1, 2]. The primary hindrance to improving prevalence of breastfeeding is the mothers lack of knowledge

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related to breastfeeding, negative attitude, lack of support, and influence by cultural practice [3-5].

Inappropriate breastfeeding practices, has impacted morbidity and mortality of infants including 45% of neonatal infectious deaths and 30% of diarrhea. Every year, approximately half of the 10 million deaths of children younger than 5 years old are caused by a direct or indirect consequences of malnutrition including suboptimal breastfeeding [6]. Therefore, it is very important to understand how mothers perform breastfeeding practice and what factors influence breastfeeding practice.

Previous studies revealed various factors that influenced of breastfeeding practice, including mothers' knowledge, attitude, and husband's support [7-10]. Some studies were found significant association between knowledge and breastfeeding practice [11, 12] and some studies reported contrary findings that mother's knowledge was not significantly associated with breastfeeding practice [7, 13, 14]. Related to attitude, some studies found that there was significant association between attitude and breastfeeding practice [7, 15], these findings were contrary with some other studies [13, 14] that attitude toward breastfeeding was not significantly associated with breastfeeding practice due to culture and traditional practice. Furthermore, husband's support was found to be associated with breastfeeding practice [8], contrary with a study in Nigeria that showed breastfeeding practice was not significantly related to husband support, the researchers explained that the mothers received more support of breastfeeding from their older female friends or relatives [16]. Therefore, due to all of those presented variables, they were reported inconsistent findings in previous studies regarding the different characteristics and culture of the samples. For instance, research reflecting aspects of breastfeeding practice among mothers with infants aged 1-6 months in a theoretical framework is still limited for Medan, Indonesia. Identifying the factors associated with breastfeeding practice within a theoretical framework is a requirement to devise guidelines in developing interventions to improve breastfeeding practice among mothers with infants aged 1-6 months.

Therefore, the objective of the study was to identify factors associated with breastfeeding practice among mothers in Medan, Indonesia. Medan is an urban city in North Sumatera, Indonesia, where breastfeeding practice is less than recommendation, particularly the rate of exclusive breastfeeding practice was very low (18.4 % in 2013) [17]. This rate is much lower than the

recommendation of Ministry of Health of Indonesia, which the national target was 80% of exclusive breastfeeding practice. Medan city also has a unique characteristics as a patriarchal culture, which put men in a higher position than women in cultural, social and economics areas [18]. A husband has power over his wife and family members in many aspects, including intra-household decisions [19]. The results could be used as a baseline data for Indonesian government and health center to improve breastfeeding practice especially among mothers with infants aged 1-6 months.

MATERIAL AND METHOD

Design

This research study was undertaken by deploying a cross-sectional design. The hypothesis of this study was that there were significant relationships between breastfeeding knowledge, attitude toward breastfeeding, husband support and breastfeeding practice among mothers with infants age 1-6 months.

Sample

The sample of this study were 374 mothers with infants aged 1-6 months. Participants were recruited from Health Integrated Post (Posyandu) of five Primary Health Centres in Medan, using multi-stage sampling method. The inclusion criteria were; mothers of infants aged 1-6 months, mothers aged 18 years old and over, living with their husband in Medan, Indonesia, able to read and write in Indonesian language, and willing to participate in this study.

Research instruments

Data collection was performed by deploying instruments consisting of five questionnaires; 1) Demographic Data Questionnaire was used to assess personal data that includes, mother's age, educational level, maternal employment, family income, mother's parity, and infants age, 2) Breastfeeding Practice Quality Questionnaire was used for measuring breastfeeding practice, originally developed by Biswas [20]. This questionnaire consists of 6 items, which answering yes or no and justification open-end questions. The score was categorized into three levels using mean score, low level (score 0 to 2.00), moderate level (score 2.01 to 4.00), and high level (score 4.01 to 6.00) of breastfeeding practice. The reliability obtained Cronbach's alpha .88. 3) Breastfeeding Knowledge Questionnaire was measured by The Malay-version of Breastfeeding Knowledge Questionnaire, developed by Ismail and Sulaiman [21]. The questionnaire consists of 30 items. The score was categorized into

Table 1 Distributions of variables (n=374)

Variables	Number	%
Mothers age (years)		
19 – 27	137	36.6
28 – 36	203	54.3
37 – 45	34	9.1
Mean= 29, SD = 5.20, Range = 19-45 years		
Parity		
Primiparity	127	34.0
Multiparity	247	66.0
Education level		
Elementary school	15	4.0
Junior high school	43	11.5
Senior high school	187	50.0
College	129	34.5
Maternal employment		
Employed	184	49.2
Unemployed	190	50.8
Family monthly income		
IDR. < 1, 500,000	28	7.4
IDR. 1,500,000- IDR. 3,000,000	268	71.7
IDR. > 3,000,000	78	20.9
Infants age (Month(s))		
1	52	13.9
2	73	19.5
3	71	19.0
4	89	23.8
5	50	13.4
6	39	10.4
Mean = 4, SD = 1.53, Range = 1 to 6 months		
Breastfeeding knowledge		
Low	19	5.1
Moderate	209	55.9
High	146	39.0
Mean :23.32, SD: 3.47		
Attitude toward breastfeeding		
Low	15	4.0
Moderate	210	56.2
High	149	39.8
Mean = 4691.47, SD = 1106.86.		

three levels including low level (score 0 to 17), moderate level (score 18 to 24) and high level (score 25 to 30) of breastfeeding knowledge. The reliability with Cronbach's alpha was .94. 4) Attitude toward Breastfeeding Questionnaire (BAQ) that developed by Khatun [22]. The BAQ divided into two parts including breastfeeding believe and outcome evaluation. The BAQ consists of 34 items which using Likert scale of 1 to 5; 1= strongly disagree, 2= disagree, 3 = uncertain, 4 = agree, and 5 = strongly agree. A total of BAQ score is obtained by multiply scores of breastfeeding believe and outcome evaluation for all 34 items. The score was categorized into three levels including low level (score 289 to 4334), moderate level (score 4335 to 5780), and high level (score 5781 to 7225) of attitude toward breastfeeding. The reliability with

Cronbach's alpha was .92. And 5) Husband Support Questionnaire that originally developed by Biswas [20]. The questionnaire consists of 20 items with 4 domains including emotional support, instrumental support, informational support and appraisal support. Scoring by assigned a Likert scale of 1 to 5; 1= never, 2= sometimes, 3 = often, 4 = very often, and 5 = always and categorized into three levels using mean score. The low level of (1.00 to 2.33), moderate level (2.34 to 3.66) and high level (3.67 to 5.00) of husband support. The higher the scores indicate the higher of husband support of breastfeeding practice. The reliability obtained Cronbach's alpha.92.

Ethical consideration

This study was received the approval of

Table 2 Level of husband support (n= 374).

Variables	Mean	SD
Overall husband's support	3.03	.93
Emotional support	3.57	1.05
Instrumental support	3.24	1.06
Informational support	2.23	1.19
Appraisal support	3.08	1.02

Table 3. Breastfeeding practice (n = 374).

Statement	Yes		No	
	N	%	N	%
I start breast milk immediately after birth	78	20.9	296	79.1
I stop breastfeeding to my child	44	11.8	330	88.2
I provide prelacteal food to my baby	197	52.7	177	47.3
I provided breast milk only to my baby until now	34	9.1	340	90.9
I provide formula milk or mixed food for my baby	340	90.9	34	9.1
I provide water for my baby	174	46.5	200	53.5
Mean = 2.84, SD= 1.70, Range= 0-6				

research protocol from the committee of the Ethical Review Board for Research Involving Human Research Subjects, Boromarajonani Collage of Nursing NopparatVajira (BCNNV) committee (ERB no. 45/2014).

Data collection

After the researcher obtained the ERB approval and the permission letter granted by head of health department of Medan, the researcher and research assistant met the participants who came to follow up the immunization schedule of their children and provided explanation of the study to potential participants using an information sheet. The mothers who agreed to participate in this study were asked to performed self-administered questionnaires which required approximately 60 minutes to be completed. Data were collected from August to September 2014.

Data analysis

Descriptive statistics were used to analyze for frequency, mean, standard deviation, and percentage. Pearson Product Moment Correlation was used to examine the relationships between breastfeeding knowledge, attitude toward breastfeeding, husband support and breastfeeding practice. Data were analyzed using the Statistical Package for the Social Science (SPSS) version 16 license from Kasetsart University.

RESULTS

Table 1, majority of participants were aged between 28-36 years old (54.3%), with age-range of 19-45 years old and the average age was 29.4 years old. Half of the participants had completed senior high school, unemployed (50.8%), multi-parity

(66.0%), family's monthly income was in the range of IDR. 1,500,000 – 3,000,000 (71.7%), and the ever age for infants' age was 4 months (23.8%). Majority of participants had breastfeeding knowledge at a moderate level (Mean = 23.32, SD= 3.47). Moreover, Most of them rated attitude toward breastfeeding at a moderate level (Mean = 4691.47, SD= 1106.86).

Results showed that overall husband support was at a moderate level (Mean = 3.03, SD = .93). In regards to each dimension of husband support, participants reported that they received husband support at a moderate level for all three dimensions which were emotional support (Mean = 3.57, SD = 1.05), instrument support (Mean = 3.24, SD = 1.06), and appraisal support (Mean = 3.08, SD = 1.02). However, informational support was at a low level (Mean = 2.23, SD = 1.19) (Table 2).

Regarding to breastfeeding practice, the result found that majority of the participants (79.1%) did not start feeding their infants with their breast-milk immediately after birth. More than half of participants provided prelacteal food (52.7%), most of mothers (88.2%) were giving breastfeeding to their infants during data collection period. The ratio between participants who were providing only breast-milk to those participants providing breast-milk with either baby-formula milk or mixed food was roughly 1:10 (9.10% and 90.9% respectively), and those who provided water to their infants (46.5%). Moreover, breastfeeding practices among the participants were generally at a moderate level (Mean = 2.84, SD = 1.70) (Table 3).

Table 4, the results showed that breastfeeding knowledge and attitude towards breastfeeding were not significantly associated with breastfeeding practice ($r = .01$, $r = .08$, and $p > .05$ respectively).

Table 4 Relationship between breastfeeding knowledge, attitude toward breastfeeding, husband support and breastfeeding practice (n=374).

Variables	Breastfeeding practice	
	<i>r</i>	<i>P</i> -value
Mothers age ^(a)	.002	.966
Infants age ^(a)	-.18	.001
Maternal employment ^(b)	.02	.693
Educational level ^(c)	.02	.645
Family income ^(c)	.01	.731
Parity ^(c)	.06	.199
Breastfeeding knowledge	.01	.768
Attitude toward breastfeeding	.08	.125
Overall husband support	.16	.001
Emotional support	.14	.005
Instrumental support	.16	.002
Informational support	.15	.003
Appraisal support	.20	.001

^(a) Pearson product moment; ^(b) Point biserial correlation coefficient; ^(c) Spearman rank correlation coefficient

Meanwhile, overall husband support of breastfeeding had a slightly positive significant relationship with breastfeeding practice ($r = 0.16$, $p < .01$). Among all the aspects of husband support, appraisal support exhibited more strongly and had a more positive association with breastfeeding practice than other aspects ($r = 0.20$, $p < .01$).

DISCUSSION

The level of breastfeeding practice among lactating mothers in Medan was at a moderate level ($M = 2.84$, $SD = 1.70$). However, this study pointed that only 9.1% of participants reported practicing exclusive breastfeeding to infants which was lower than previously reported in Indonesia which was that 12 % of mothers practiced exclusive breastfeeding [23]. From this study, there are several reasons behind overall breastfeeding practice among lactating mothers in Medan, Indonesia, including the mothers individual characteristics, family income, limited facilities of breastfeeding in public places, perception of insufficient breast milk, and ability to provide prelacteal food to their infants after the mothers gave birth. The majority of participants with moderate family income maybe influence by advertistments in various media to mislead mothers to buy formula milk for their infants. Mothers who received limited breast-milk information, and those who perceived insufficiency of milk (32.9%), may design to follow the advertisement by selected formula milk to their infants in the younger age. Therefore, these reasons may have affected the breastfeeding practice among mothers in this study.

The present study found that there was no statistically significant association between breastfeeding knowledge, attitude towards

breastfeeding, and breastfeeding practices among the mothers. This findings are consistent with previous studies [7, 13, 14] which reported that mother's knowledge and attitude towards breastfeeding did not contribute to breastfeeding practice as suggested. The possible reason for the present findings might be due to traditional practice in Medan to provide infants with other foods including honey, sugar water, rice porridge, banana, and infant formula milk before reaching six months of age. Even though, the participants had moderate to high level of knowledge related to breastfeeding, but traditional practice had influenced participants to give other liquids or foods to their infants after birth. This finding is also supported by a qualitative study done in Indonesia which suggested that the barriers to provide breastfeeding practice was due to behavior and traditional practice to provide banana, rice porridge, and apple before infants reaching six months of age [4]. Therefore, it could be the reason why breastfeeding knowledge and attitude towards breastfeeding did not have a significant relationship to breastfeeding practice.

The result also showed that husband support was significantly associated with breastfeeding practice. This indicated that mothers who received good husband support would perform better breastfeeding practice. This finding was consistent with the previous studies that showed mothers who received support from husbands during breastfeeding period would perform more successful exclusive breastfeeding practice compared to the mother who insufficient support from their husbands [8]. The majority of participants in this study received adequate husband support, at moderate level of support, that could influence

mothers to practice breastfeeding. This result was supported by a previous study [20]. There are possible reasons to explain the findings of this result that all participants were living with their husbands. As stated by previous study that mothers who stayed with a partner performed breastfeeding practice for a longer time than those living without their partner [24]. The presence of support from a significant person helped lactating mothers to increase and prolong their breastfeeding practice [23, 25]. Another reason is related to a common characteristic of patriarchal system in Medan. Patriarchal system puts a husband in the higher position including such as economy, social culture, and family decisions [8, 18, 19]. This means that a husband is the head of a family and has responsibilities which includes making a decision to support wife for breastfeeding their infants. Husband can assist his wife to provide exclusive breastfeeding and prolong the breastfeeding practice for their infants. In addition, the husband can take action roles that involving in seeking information related to breastfeeding during ANC, involvement in the delivery process and give breastfeeding initiation, providing financial support and taking care of infants. Therefore, women who received adequate or good support from their husbands are more likely to perform a better breastfeeding practice.

This study has the strength that deployed a set of questionnaires, with acceptable standards of reliability and was designed to be appropriate to cultural value of Indonesian people particularly in Medan. However, there were some limitations including focusing the subjects only in Medan, the outcome of this study could not be generalized to other populations in different cultures. The study used self-administered questionnaires for collecting data, which may affect the reliability of the results.

RECOMENDATION

Based on the findings, health care providers should be aware of the importance of husband support for lactating mothers. Health care providers should involve husband to provide emotional, instrumental, and appraisal support for breastfeeding mothers. Husband should be also motivated to learn information related to breastfeeding which can be used to support lactating mothers during the infants ages 1-6 months.

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