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RELATIONSHIPS BETWEEN LEVEL OF EDUCATION, BREASTFEEDING EXPERIENCE, WORKING HOURS AND INTENTION TO EXCLUSIVE BREASTFEEDING PRACTICE AMONG PREGNANT WORKING WOMEN

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ABSTRACT
Breastfeeding is a natural human behaviour between mother and her baby. Mother's decision for breastfeeding as a first nutrition starting on their pregnancy periods. Although a mother facing the difficulty role as a working women, she should have intention to practice exclusive breastfeeding. The purpose of this study was to examine the relationships between level of education, breastfeeding experience, working hours and intention of pregnant working women to practice exclusive breastfeeding. A cross sectional study was employed in this study. Participants were recruited from Antenatal care unit of primary healthcare services in Jakarta, Indonesia. Pregnant working women (N=118) completed a self administered questionnaire that measure their intention to practice exclusive breastfeeding. The bivariate correlation was performed to identified the correlation between level of education, breastfeeding experience, working hours and intention. The result of the study found that level of education had significantly correlated with intention to practice exclusive breastfeeding ($r = 0.22$, $p< 0.05$) and having been breastfeeding experience significantly correlated with intention to practice exclusive breastfeeding ($r = 0.18$, $p< 0.05$) among pregnant working women. However, working hours has no significant correlated with intention exclusive breastfeeding. In conclusion, providing breastfeeding knowledge among pregnant working women, particularly in the low level of education are important for promoting breastfeeding exclusively. Moreover, mother who had no breastfeeding experience should be our concern for giving them encouragement about their obstacle and motivation to fulfil their successful role as a mother and as a worker.

KEYWORDS: Exclusive breastfeeding, Intention, Pregnant working women, Level of education, Working hours, Breastfeeding experience.

INTRODUCTION

Breast milk is an essential nutrition for the babies to support the optimal growth and development of the babies. Many previous studies mentioned that breast milk could increase the immunological protection, reduce the respiratory infection, reduce the gastrointestinal disease, and protect babies from infectious disease (Lawrence, 1997; Geena, 2008; American Academy of Pediatrics, 2012). Moreover, not only babies who get many benefits of breastfeeding but also the mothers, mothers who breastfeed have a chance to avoid from the occurrence of postpartum haemorrhage, ovarian cancer and breast cancer (Lawrence, 1997; Groër, 2005; Gaskin, 2009).

Although there are a lot of benefits of breastfeeding, the exclusive breastfeeding rates are still low. According to the data of WHO in 2005-2008, infants in developing countries that were exclusive breastfed at 6 months were only 24-32% (World Health Organization, 2012). Moreover, the World Breastfeeding Trends Initiative discovered that exclusive breastfeeding practice rate in Indonesia in 2010 was only 27.5% (World Breastfeeding Trends, 2012). Indonesia as a developing country, is facing a rapid pace of industrial development that requires a person should be working

to fulfil their family daily needs. Recently, not only the father that has responsibility to work but also the mother has responsibility to fulfil the daily needs. The number of working women in Indonesia reaches 39 million people and it is predicted that it will increase soon (Central Bureau of Statistic Indonesia, 2012).

Working women are facing many challenges to adopt the practice of exclusive breastfeeding. A finding of formative research in urban setting in Indonesia shows that the practice exclusive breastfeeding rates among non working women 3.4 times greater than working women (Wibowo *et al.*, 2008). The working women have to combine two roles as a mother who has responsibility to fulfil the best nutrition for her baby and as a worker who should have disciplinary act in her workplace.

Mother's individual characteristics have been identified as factors that influence the long duration of breastfeeding. These include level of education and breastfeeding experience. The previous studies in Canada, Taiwan, and Australia were found that mothers with high level of education were more likely practicing exclusive breastfeeding (Wen *et al.*, 2009; Jessri *et al.*, 2013; Tsai, 2013). In contrast, the previous studies in China and Netherland were found that less educated women were more likely practicing breastfeed compared to women with higher education level (Ouyang *et al.*, 2012).

Moreover, previous study found that breastfeeding experience influences breastfeeding intention among mothers. Multiparaous women were more likely 2 times to breastfeed exclusively for 6 months (Jessri *et al.*, 2013). However, multiparaous women who tried unsuccessfully to breastfeed at the first birth, did not initiate breastfeeding at their second birth (Sutherland *et al.*, 2012).

Furthermore, maternal employment characteristic such as working time, professional occupation or technical position have been related to practice breastfeeding exclusively(Hirani and Premji, 2009; Rojjanasrirat and Sousa, 2010).

The intention to practice exclusive breastfeeding in the pregnancy period is an initial step of breastfeeding behaviour process for pregnant working women. Previous studies found that, pregnant women with stronger intention to breastfeed were more likely to initiate breastfeeding (Bai *et al.*, 2009; Bai *et al.*, 2010; Giles *et al.*, 2010; Lau, 2010; Lawton *et al.*, 2012).The pregnant working women who intent to adopt the practice of breastfeeding should anticipate the challenges faced by them, and prepare themselves well by determining her intention. Therefore, the aim of this study was to examine the relationship between level of education, breastfeeding experience, working hours and intention to practice breastfeeding exclusively.

METHOD

Design

This study involved a descriptive cross-sectional survey by using non probability sampling with purposive sampling.

Sample

The total participants in this study were consisted 118 pregnant women who work, the age older than 18 years, without pregnancy complication. The exclusion criteria included pregnant women who: do not supply written informed consent, could not read, and having pregnancy complication. The participants were selected from three Antenatal care unit of Public Health Centre Department of Sint Carolus Jakarta, Indonesia. The data was collected during August to September 2014.

Data Collection

The study was approved by Institutional Review Boards of Ethics Reviews Committee for Research Involving Human Research Subjects, Boromarajonani College of Nursing Nopparat Vajira (EBCNNV), ethic committee Sint Carolus Hospital Jakarta, Indonesia. Furthermore, the researcher was permitted the permission from The Head of Public Health Centre Department of Sint Carolus Hospital, Jakarta, Indonesia.

The researcher asked the participants to determine their willingness to involve in the study. After all of the participants agreed to participate in the study by signing an informed consent form, the researcher distributed the questionnaires. During the data collection, the researcher was observed tirednesses, issues, problems, or discomfort feelings of the participants.

Measurement Tools

1. Maternal Characteristics

The maternal characteristics questionnaire was developed by the researcher. This questionnaire consisted of level of education, breastfeeding experience, and working hours

2. Intention to Exclusive Breastfeeding

The Intention to exclusive breastfeeding was derived from the breastfeeding survey questionnaire. The Breastfeeding Survey questionnaire was developed by Yeon Bai (Bai *et al.*, 2010). It was conducted based on the Theory of Planned Behavior theoretical framework. The term exclusive breastfeeding for 6 months was defined on the questionnaire as using only breast milk, fully breastfeeding, no solids, no water, and no other liquids for the full 6 months from birth (Bai *et al.*, 2010). Intention was measured by using two items that used a scale to rate the likelihood of exclusive breastfeeding for 6 months. The items was scored between 1 to 7 (1=extremely unlikely; 4= neither; 7= extremely likely). In this study, the content validity was examined. The internal consistency reliability was high, with a Cronbach's alpha 0.96.

Translation of the Questionnaire

The breastfeeding survey questionnaire was translated by back translation technique (Cha *et al.*, 2007). The specific translation procedures was used in this study are as follows: (1) the original English version was translated into Bahasa Indonesia by the first person who is fluent in both English and Bahasa Indonesia, (2) Indonesian-native bilingual who has expertise related to this study was reviewed and revised the Bahasa Indonesia version, (3) the revised Bahasa Indonesia version of the instruments will translated back into English by another person who is fluent in both English and Bahasa Indonesia, and (4) the two English versions of the instruments (the original and the back translation) were reviewed and compared for its equivalence.

Data Analysis

Descriptive statistics was used to identify the characteristics each variable. Categorical variables such as level of education and breastfeeding experience was calculated by percentage and frequency.Furthermore, Spearman's rho was used to estimate the relationship of level of education and intention to exclusive breastfeeding practice. Point Biserial was used to estimate the relationship of breastfeeding experience, working hours and intention to exclusive breastfeeding practice.The statistical analysis was used Statistical Package for the Social Science (SPSS) version 15.0 for Windows (SPSS Inc., Kasesart University, Thailand).

G. Ethical Approval

The study was approved by Kasetsart University and Ethical Review Committee for Research Involving Human Research Subjects, Boromarajonani College of Nursing Nopparat Vajira (EBCNNV). The study was permitted the permission from the Director of Sint Carolus Hospital, Jakarta, Indonesia and the Head of Public Health Centre of Sint Carolus Hospital, Jakarta, Indonesia to conduct the study.

RESULT

A. Descriptive Analysis

Maternal characteristics are presented for the overall sample of pregnant working women in Jakarta, Indonesia (N=118), to measure level of education, breastfeeding experience, and working hours of pregnant working women who had breastfeeding experience in their previous child. (Table 1)

In regards to the level of education, the most frequency of participants hold a bachelor degree (37.3%), moreover the highest level of education is master degree (5.1%) and the lowest level of education is less than high school (2.5%).

Table-1. Distribution of maternal characteristics among pregnant working women (N=118)

Maternal characteristics	Frequency (N)	Percent (%)
Level of education		
Lower than high school	3	2.5
High School	32	27.1
Diploma	33	28.0
Bachelor	44	37.3
Master	6	5.1
Breastfeeding Experience		
Yes	49	41.5
No	69	58.5
Working hours		
≤ 30 hours/ week	41	34.7
> 30 hours/ week	77	65.3

Furthermore, more than half of participants had no breastfeeding experience (58.5%). In addition, the majority of participants were work more than 30 hours/ week (65.3%).

B. Relationship Analysis

Spearman's rho was performed to estimate the correlation of level of education and intention to practice exclusive breastfeeding. Moreover, Point biserial was performed to estimate the correlation of breastfeeding experience, working hours and intention to practice exclusive breastfeeding.

Table-2. Relationships between level of education, breastfeeding experience, working hours, and intention (N=118)

Variables	Intention	
	r	*p*
Level of education	0.22[a]	0.02
Breastfeeding experience	0.18[b]	0.04
Working hours	-0.04[b]	0.61

[a])Spearman rho correlation coefficient;
[b])Point-biserial correlation coefficient

The data revealed that level of education (r = 0.22, $p< 0.05$) was positively significant correlated with intention. Pregnant working women with the high level of education were more likely intent to practice exclusive breastfeeding. Moreover, the data demonstrated that breastfeeding experience (r = 0.18, $p< 0.05$) was positively significant correlated to intention. Pregnant working women with having breastfeeding experience on their previous child were more likely intent to practice exclusive breastfeeding. Furthermore, the data showed that working hours (r = -0.04, $p> 0.05$) was no statistical significant correlated to intention (Table 2).

DISCUSSION

A. The Relationships between Level of Education and Intention to Practice Exclusive Breastfeeding.

The study confirmed that level of education was positively significant correlated with intention to practice exclusive breastfeeding. This finding was consistent with a previous study which stated that there was significant relationships between level of high education and intention to breastfeed. This previous study revealed that women with high education as white-collar working mothers

have more control over their environment and are able to combine breastfeeding and working more successfully than blue-collar working mothers in low level education (Tsai, 2013). Moreover, regarding to the level of education, a previous study found that less educated mother were less likely to agree with benefits of breastfeeding (Vaaler *et al.*, 2010).

In this study, 42.4% of the participants held graduate university. In line with this study, a previous study found that mothers who held post graduate university degrees were 3.76 times more likely intent to practice exclusive breastfeeding for 6 months than those who without university degree (Jessri *et al.*, 2013). This may due, the participant who those without university degree had limitation to reach breastfeeding knowledge. Otherwise, the participants who held university degree were had greater insight and broader knowledge about breastfeeding. In addition, the study experience in university was influence their insight for intent to do breastfeeding exclusive practice. Although, high education level may only a little influence to get the intention to do exclusive breastfeeding, however, scientific experience in their level of education was enabling their breastfeeding management skill to do breastfeeding exclusively. As a previous study mentioned that one of the factor influencing mother decision to practice exclusive breastfeeding was obtained knowledge by searching through electronic media (e.g. internet) for breastfeeding information (Ku and Chow, 2010).

B. The Relationships between Breastfeeding Experience and Intention to Practice Exclusive Breastfeeding

Breastfeeding experience was one of the factors that have linked with intention to exclusive breastfeeding practice. This current study found that there was positively significant relationships between breastfeeding experience and intention to practice exclusive breastfeeding. This finding is consistent with a previous study stated that women with no breastfeeding experience were not intent to practice exclusive breastfeeding. This finding also stated that women with no breastfeeding experience were four times as likely to intend to give formula feed for their first infant (Dyson *et al.*, 2010).

In regard with breastfeeding experience among multiparaous women, a previous study found that, about 70% of multiparaous women (N=2,149) repeated the duration of exclusive breastfeeding of their first child for their second child (Phillips *et al.*, 2011). It is important to note that pregnant working women who had breastfeeding experience were more likely intent to repeat the breastfeeding experience for the subsequent child. This finding is consistent with other study reporting that multiparaous women who have successfully previous breastfeeding experience were more likely 2 times to breastfeed exclusively for 6 months (Jessri *et al.*, 2013). However, multiparaous women who tried unsuccessfully to breastfeed at the first birth, did not initiate breastfeeding at their second birth (Sutherland *et al.*, 2012). To conclude, the successful experience of breastfeeding could increase their intention to practice exclusive breastfeeding. Thus, they more likely had self confidence since they had skill either to breastfeed or express breast milk when they should go to work. They having been capability for breastfeeding management. In addition, a previous study stated that for primiparaous women who did not intent to breastfeed, the strongest concerns were that breastfeeding would be painful, difficult, and have a negative impact on their bodies (Jessri *et al.*, 2013). The maturity of the mother are influencing her behaviour for giving the best nutrition for her baby. Therefore, it is important to note that either primiparaous women or multiparaous women who had no breastfeeding experience should be our concern for giving them encouragement about their obstacle and motivation to fulfil their successful role as a mother and as a worker.

C. The Relationships between Working Hours and Intention to Practice Exclusive Breastfeeding

This study showed that working hours had no statistically significant relationship with intention to exclusive breastfeeding. In line with this finding, a previous study in Indonesia revealed that there was no significant relationship between working hours and intention. In addition, this previous study stated that, among working mothers, it is not so much the circumstances at work that determine the plans for breastfeeding (Idris *et al.*, 2013).

On the contrary, a previous study in Taiwan, found that working hours was significant correlated with intention to practice exclusive breastfeeding. This previous study stated that women had a low intention to breastfeed because of lack of time to breastfeed due to long working hours (Tsai, 2013).

This present study found that more than half of pregnant working women (65.3%) had long duration to work. Although pregnant working women had long working time in the office, it is not the circumstances for the mother if the office were facilitated the mothers to pump breast milk. Therefore, it is important to note that baby friendly workplace could facilitate mother by providing breastfeeding room, breast milk storage, and giving time permission for pump breast milk. However, the different types of employment have different experience in breastfeeding practice, therefore study on this factor is needed for further investigation to provide appropriate intervention in particular type of employment.

CONCLUSION

The aim of this study was to examine the relationships between level of education, breastfeeding experience, and intention of pregnant working women to practice exclusive breastfeeding. There were statistically significant relationship between level of education, breastfeeding experience and intention to exclusive breastfeeding. However, working hours has no statisticaly significant relationship with intention to exclusive breastfeeding. Providing breastfeeding knowledge among pregnant working women, particularly in the low level of education are important for promoting breastfeeding exclusively. Moreover, educating primiparaous women should be concern on her mental maturity to being a new mother. The supports from family and friends especially co-workers are important to enhance intention to exclusive breastfeeding among pregnant working women who never been breastfeeding experience. Furthermore, by providing favorable environment at the workplace will help the mothers to be successfully on practicing exclusive breastfeeding.

LIMITATION

There were several limitations of this study. Firstly, generalizability of the study population is limited due to purposive sampling. Secondly, the current study used at one point in time. Further study, longitudinal data collection is needed for monitoring the obstacles that could be happen on breastfeeding practice among working women.

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