

FACTORS PREDICTING DEGREE OF INTENTION FOR EXCLUSIVE BREASTFEEDING AMONG VIETNAMESE PREGNANT WOMEN

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ABSTRACT

This study was aimed to determine the degree of intention for exclusive breastfeeding during the first six months and its predictors among Vietnamese pregnant women. Theory of planned behavior was used as the research framework. A random sample of 180 pregnant women visiting antenatal care unit at Tu Du hospital in Ho Chi Minh City, Viet Nam was recruited. Data were collected by self-administered questionnaires. Results showed that most women had strong to very strong intention to breastfeed exclusively. Attitude, subjective norms, perceived control, breastfeeding knowledge, age and family income together explained a significant variation in degree of intention for exclusive breastfeeding. Particularly, perceived control independently predicted degree of intention. Findings suggest that prenatal breastfeeding education and support focusing on improving women's confidence and controllability in breastfeeding may increase the women's breastfeeding intention, in turn increasing exclusive breastfeeding rate.

Keywords: Exclusive breastfeeding, degree of intention, theory of planned behavior.

INTRODUCTION

Exclusive breastfeeding is that infants are fed only breast milk without any additional food or drink, not even water. Considerable benefits that infants and young children can derive from exclusive breastfeeding are well-established, such as lower risks of infections in the respiratory and gastrointestinal tracts, otitis media, diarrhea, or early childhood obesity (Duijts et al., 2010; Ip et al., 2007; Kramer and Kakuma, 2002; Oddy, 2001). Since certain absorption of breast milk micronutrients and increasing maternal care-giving altered by the amount of time spent nursing, exclusive breastfeeding up to the age of six months tends to be significantly more beneficial for infant motor development than exclusive breastfeeding until the age of four months (Dewey et al., 2001). For these reasons, exclusive breastfeeding for the first six months, followed by continued breastfeeding with age-appropriate complementary foods until the age of two, has been endorsed by numerous professional medical organizations (Academy of Breastfeeding Medicine, 2008; American Academy of Pediatrics, 2005; American Congress of Obstetricians and Gynecologists, 2007).

Mothers also receive considerable advantages from breastfeeding, for example, later return of menses, reduced risk of postpartum illness (Langer-Gould et al., 2009), and more rapid postpartum weight loss (Kramer and Kakuma, 2002). Exclusive breastfeeding, moreover, brings far-reaching benefits in term of environment, economy, and society as it eliminates the dependence on costly breast milk substitutes and feeding equipment.

Exclusive breastfeeding, however, is sparsely practiced with only 35% of children less than five-months old breastfed exclusively worldwide (World Health Organization, 2010). Breastfeeding seems universal, yet rates of children breastfed exclusively for the first six months after birth remain too low across developing world, for instance, these rates in Singapore, Malaysia, and Thailand are 0% (Foo et al., 2005), 14.5% (Tan, 2011), and 14.5%, respectively (Hangchaovanich and Voramongkol, 2006). In Viet Nam, although recommendations about exclusive breastfeeding were included in the

2001-2010 National Nutrition Strategy, only 19.6% of children under six months were exclusively breastfed (National Institute of Nutrition and United Nations Children's Fund, 2011).

Theory of planned behavior indicates that the primary determinant of breastfeeding behavior is intention which is, in turn, predicted by three variables: (a) attitude which is a person's positive or negative evaluation of performing the behavior, (b) subjective norms which shape a person's perception of other people's opinion regarding behavioral performance, and (c) perceived behavior control which refers to a person's sense of control over performing the behavior (Ajzen, 1991; 2006). Research has repeatedly found that women intending to breastfeed were those who had higher levels of breastfeeding knowledge (Swanson et al., 2006; Wen et al., 2009), older age (Forster et al., 2006; Mitra et al., 2004), and higher family income (Mitra et al., 2004; Singh, Kogan and Dee, 2007). Using theory of planned behavior as the research framework, this study aimed to examine whether attitude, subjective norms, perceived control, maternal knowledge, maternal age, and family income could predict the degree of intention for exclusive breastfeeding throughout the first six months.

METHODOLOGY

Pregnant women receiving antenatal care at Tu Du Hospital were surveyed for their intention to exclusive breastfeeding, and the results were analyzed with a predictive cross-sectional design. In multiple regression analyses, experts recommend at least 30 participants per predictor (O'Rourke et al., 2005). Given that, sample size was calculated as $30 \times k = 30 \times 6 = 180$ (where k is the number of independent variables). Women were selected on the following inclusion criteria: (1) singleton pregnancy, (2) gestational age ≥ 28 weeks, (3) pregnancy without medical contraindications to breastfeed, or fetal conditions that would prevent breastfeeding, and (4) be able to speak and read Vietnamese. Pregnant women mostly visited the antenatal unit in the morning, especially from 6 to 7 a.m. Therefore, the number of women during this period who met

the study criteria was attained, and randomly drawn out to obtain the study sample.

Self-administered questionnaires were used to collect data. The questionnaires were developed in English and were translated into Vietnamese using back-translation techniques (Cha et al., 2007). Content validity was evaluated by a panel of three nurse professors. Internal consistency by Cronbach's alpha of intention, attitude, subjective norms, and perceived control were 0.96, 0.74, 0.91, and 0.90, respectively. KR-20 of maternal breastfeeding knowledge questionnaire was 0.71.

Degree of intention for exclusive breastfeeding was defined as the strength that a woman plans to exclusively breastfeed her baby throughout the first six months. It was measured by three 10-point Likert scale items. Total score was calculated by summing the score of each item. The score then was classified into four categories representing low (0–9), moderate (10–19), strong (20–29), and very strong (30) intention to breastfeed exclusively throughout the first six months.

Attitude referred to a woman's feelings about performing exclusive breastfeeding. It was measured by six bipolar adjective pairs including unpleasant-pleasant, unhealthy-healthy, difficult-easy, inconvenient-convenient, time consuming-time saving, unnatural-natural. Keyed responses were summed with high scores reflecting positive attitudes.

Subjective norms referred to a woman's perceptions of what her specific referents think about exclusive breastfeeding. It was measured by four 5-point Likert scale items. These items were used for each of the women's referents, including family (husband, parents, parents-in-law), friends and/ or colleagues, and health care providers (nurse, midwife, obstetrician). The possible range on the scale was 0 to 16, with higher score representing positive perception of referent support for exclusive breastfeeding.

Perceived control was defined as a woman's confidence in her ability to perform exclusive breastfeeding, and her controllability has over this behavior. It was measured by four 5-point Likert scale items. Response to each item was summed

with higher the score indicating greater the perceived control to obtain exclusive breastfeeding.

Breastfeeding knowledge was defined as a woman's understanding about breastfeeding benefits and appropriate breastfeeding practices. It was measured by 14 items which required "True," "False," or "Don't know" responses. All items were equally weighted (0 point if not correct; 1 point if correct). Higher scores indicated higher level of breastfeeding knowledge.

Data collection. This study was approved by the Institutional Review Board, Faculty of Nursing, Burapha University and the director of Tu Du hospital. Pregnant women visiting antenatal care were randomly recruited to the study. During the waiting time for antenatal checkup, those meeting the eligibility criteria were approached with a letter of invitation and information about the study purposes.

Data analysis. Statistical software was used for data analysis, with level for significance set at .05. Descriptive statistics, Pearson moment correlation and standard multiple regression were performed.

RESULTS

The age of respondents ranged from 19 to 42 years old with more than half of the subjects aged between 26-35. The majority of respondents (76.1%) lived in urban areas and was well-educated with 51.7% having a college or university degree. Over half of the participants were government officers (38.9%) or housewives (21.1%). Concerning financial status, the average of family income ranged widely, from 2,000,000 VND to 20,000,000 VND per month (approximately 96 to 960 USD).

In this study, 54.4% of participants were first-time pregnant women. As a result, more than half of the respondents (64.4%) had no previous breastfeeding experience. Most participants (95%) answered that they had at least three times antenatal visits during their current pregnancy, and more than half (51.7%) received information on breastfeeding from health care providers.

Table 1. Demographic characteristics of pregnant women (N = 180).

Characteristics	Frequency	Percent (%)
Age (years)	(Mean = 30.2, SD = 5.0, Range = 19- 42)	
18 – 25	31	17.2
26 – 35	121	67.2
36 – 45	28	15.6
Living location		
Rural	43	23.9
Urban	137	76.1
Education level		
Primary	4	2.2
Lower secondary	47	26.1
Upper secondary	36	20.0
Higher [college/ university]	93	51.7
Occupation		
Housewife	38	21.1
Government officers	70	38.9
Unskilled workers	37	20.6
Agriculturalist	6	3.3
Private business	29	16.1
Family structure		
Nuclear family	112	62.22
Extended family	68	37.78
Family income (VND per month)	(Mean = 7,882,222 (approximately 378 USD), Median = 8,000,000.00, Range = 2,000,000 – 20,000,000)	
< 5,000,000	38	21.1
5,000,000 - 10,000,000	117	65.0
> 10,000,000	25	13.9

Table 2. Pregnancy and breastfeeding experience of women (N = 180)

Variables	Frequency	Percent (%)
Gravidity		
Primigravida	98	54.4
Multigravida	82	45.6
Previous EBF experience		
Yes	64	35.6
No	116	64.4
6 months	21	11.7
Number of antenatal visits		
< 3 times	9	5.0
≥ 3 times	171	95.0
Receiving health education on breastfeeding		
Yes	93	51.7
No	87	48.3

Pearson correlation analysis showed that degree of intention significantly correlated with attitude ($r = 0.22$, $p < 0.05$), perceived control ($r = 0.17$, $p < 0.05$), and age ($r = 0.15$, $p < 0.05$). Standard multiple regression analysis indicated that attitude, subjective norms, perceived control, maternal breastfeeding knowledge, maternal age, and family

income together explained a statistically significant 8.5% of variation in degree of intention ($R^2 = 0.08$, *Adjusted R*² = 0.05, $F [6,173] = 2.66$, $p < 0.05$). In particular, perceived control independently predicted degree of intention for exclusive breastfeeding throughout the first six months ($\beta = 0.20$, $p < 0.05$) (Table 3).

Table 3. Summary of regression analysis (n = 180).

Variables	b	SE	β	t	p-value
Attitude toward EBF	0.541	0.276	0.165	1.962	0.051
Subjective norms toward EBF	-0.579	0.384	-0.149	-1.509	0.133
Perceived EBF control	0.786	0.397	0.203	1.979	0.049
Maternal breastfeeding knowledge	-0.114	0.401	-0.022	-0.284	0.777
Maternal age	0.271	0.175	0.115	1.552	0.122
Family income	-1.542 ^{ab}	0.000	-0.053	-0.725	0.469
Constant = -2.873					
$R^2 = 0.085^*$					
Adjusted $R^2 = 0.053$					
$F (6, 173) = 2.666$					

* $p < 0.05$

DISCUSSION

The total intention score among respondents was relatively high. The finding that most women (66.1%) had strong to very strong intention to breastfeed is similar to that of Nomsen-Rivers et al. (2010). The current study examined the strength of the women's intention for exclusive breastfeeding might be an obvious difference from literature since most previous studies on breastfeeding (Bai et al., 2010; Bai et al., 2011; Chezem, 2012; Darmawan, 2005; Khatun et al., 2010; Stuebe and Bonuck, 2011; Wen et al., 2009) did not carefully investigate this aspect.

Vietnamese pregnant women expressed strong intention towards exclusive breastfeeding for six months, which was higher than other populations in similar studies. For example, Wen et al. (2009) found that only 42% Australia first-time mothers intended to meet the recommendation on exclusive breastfeeding. In the United States, this rate was even lower with 27% women reporting intent to exclusively breastfeed (Saunders-Goldson and Edwards,

2004). A possible explanation of high breastfeeding intention in this study is that a substantial number of women had a high level of education, which influences their awareness of health recommendations.

The fact that all predictors together explained a significant variation in degree of intention supports the theory. The prediction, however, was weaker than expected. This can be explained by the dynamics, complexity, and specificity of the population (Ajzen, 1991). Also, a homogeneous sample and the fact that exclusive breastfeeding is a relatively new concept in Viet Nam indirectly contribute to the weak prediction.

The finding that perceived control was a significant predictor of the degree of intention is consistent with previous studies (Bai et al., 2011; Dodgson et al., 2003; Rempel, 2004; Wambach, 1997). Given this, perceived control emerges as a factor in need of modification to improve exclusive breastfeeding intention. Breastfeeding promotion programs should take into consideration women

having low perceived control in order to improve the strength in their intention for breastfeeding. Interventions focusing on improve perceived control is worthwhile to be studied. Nursing intervention should focus on enhancing breastfeeding confidence and controllability, for example, providing education on how to protect and enhance breast milk in working women.

Women generally expressed strong intention to breastfeed, suggesting that nurse-midwives need to pay attention on how to reinforce, maintain and transfer this intention into breastfeeding behavior. There were approximately 30% of pregnant women whose intention for exclusive breastfeeding remained low. Nurse-midwives need to produce more efficient nursing interventions in order to improve the level of strength in breastfeeding intention among these women, so the translation from intention to behavior will be fostered.

Despite the fact that many women breastfeed successfully without any intervention from health professionals, women are more likely to initiate breastfeeding and breastfeed for longer if nurse-midwives support and encourage them to do so. To strengthen this role, nurse-midwives should be trained to identify the predicting factors of breastfeeding intention in managing and evaluating breastfeeding practice among women. Moreover, educating nurse-midwife students about predictors of breastfeeding intention is crucial to assist them in their ongoing practice and study, and should be included in nursing curricula.

Since this study relies on cross-sectional data, the researcher is unable to assess whether the intention changes throughout the experience of delivery and the postpartum period. Further exploration of breastfeeding behavior will help identify whether intention is really transformed to actual behavior. Studies in other hospitals will validate these findings and bring the issue of breastfeeding to the attention of nurse-midwives in Viet Nam.

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