Association between Breastfeeding Motivation and Breastfeeding Competency Among Expectant Women

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Abstract

The advocacy for breastfeeding lead to a rise in family income through the preservation of infants' growth and development, as well as aiding in the recovery of women following childbirth. Consequently, this could result in increased labor force participation and demographic benefits for society.Moreover, it can contribute to the reduction of family and social medical costs by lowering the likelihood of short-term and long-term illnesses in women and infants.

Methods:

Data was collected through structured interviews by the student researcher (SR) for the period from January 22nd, 2024 to March 28th, 2024. Data was collected from mothers from primary healthcare centers in Diwanyia Governorate. The total number of primary healthcare centers is 24
that are distributed into two sectors (12 primary healthcare centers for each sector)

Results:

The study results display that total effect of breastfeeding motivation on breastfeeding competency is .4419, $p < 0.05$. The direct effect of breastfeeding motivation on breastfeeding competency is .4608, $p < 0.001$.

Conclusions:

The students researcher concluded the following: The older the woman, the better the breastfeeding competency she exhibits. The better the socioeconomic status the family has, the better the breastfeeding competency the woman mirrors. The more perceived

valuable breastfeeding to mothers and babies, the better the breastfeeding competency the woman
reflects.

Key words: breastfeeding , competency , woman

Introduction :

Breast milk serves as a vital source of nutrition for infants during the initial six months of life, offering a comprehensive array of essential nutrients.(1,2) Breast milk serves as the optimal source of nutrition for infants, contributing to enhanced health outcomes throughout their lifespan and offering significant advantages to both families and society as a whole. (3,4)The advocacy for breastfeeding can lead to a rise in family income through the preservation of infants' growth and development, as well as aiding in the recovery of women following childbirth. Consequently, this could result in increased labor force participation and demographic benefits for society.(5–7) Moreover, it can contribute to the reduction of family and social medical costs by lowering the likelihood of short-term and long-term illnesses in women and infants.(8,9)Despite the ecognized benefits of breastfeeding recommended by the World Health Organization (10) actual breastfeeding practices in numerous countries do not meet these guidelines. Globally, around 30% of countries have an exclusive breastfeeding rate below 20% for infants aged 0 to 5 months. The global exclusive breastfeeding (EBF) rate for infants at 6 months is 43%. (11) A study has found that only 37% of infants under six months in low- and middle-income countries were exclusively breastfed (12), and the rate of EBF for up to 6 months in China was only 29.2%. (13)Also, about 78 million babies are not breastfed early within the first hour of life and receive the few benefits they deserve. Therefore, effective breastfeeding intervention studies are still necessary. (14) Interestingly, lower and middle-income countries tend to sustain breastfeeding for longer durations compared to their higher-income counterparts. (15)The commencement and continuity of breastfeeding practices are influenced by various factors encompassing individual attributes, socioeconomic conditions, and

healthcare systems. (16) Psychological research indicates that competency plays a crucial role in shaping behaviors. To delve into breastfeeding behaviors, a psychological competency iceberg model has been employed to create and validate an assessment scale specifically for breastfeeding competency. The competency iceberg model was initially introduced in 1973 by Harvard psychologist McClelland. This model serves as a widely used tool for evaluating competency levels, enabling the differentiation between individuals who excel in their performance and those who perform at an average level.(17) The competency iceberg model comprises four components: knowledge, skills, self-concept, and motivation.
(18, 31) The iceberg analogy illustrates that knowledge and skills represent the surfacelevel, visible portion, while motivation and traits are concealed beneath the

surface. Meanwhile, self-concept occupies a middle ground, influenced by education, psychology, and accumulated experience over time. (19)The competency iceberg model has been applied in various studies on capacity development across different fields. For instance, Gardner utilized this model to design training initiatives for nurses in Australia and New Zealand (20); Supamane developed the framework for qualitative interviews

on clinical nurse leadership and implemented the model for clinical nurse leadership in Thailand (21); This model was implemented by Wang Xiaoyun to oversee the safety and quality assurance of pediatric nursing, with the goal of mitigating the occurrence of adverse events (22); Ma Chifen developed a competency model for senior caregivers in order to enhance the progress of older adults care services (23). To establish a comprehensive and evidence-based assessment tool for evaluating breastfeeding skills, elements pertaining to breastfeeding were incorporated into the competence iceberg odel. The integration of breastfeeding knowledge with general knowledge, practical breastfeeding proficiencies with model skills, breastfeeding self-belief and maternal selfperception with self-concept, attitudes and social support related to breastfeeding are merged with traits and motivation. The assessment of breastfeeding competency may be

dissected into various components, each of which can be evaluated separately. These components are interconnected yet distinct, allowing for a more accurate representation and assessment of breastfeeding competency.In this competency iceberg model, abilities are categorized as individual, underlying, and ingrained traits distinguishing high performers from average ones in any given task. These abilities may include personal

features, attitudes, knowledge, cognitive skills, or any measurable attributes. (24, 25)

Competency, as depicted in this model, is shaped, developed, and expressed through activities, serving as a prerequisite for active engagement. Breastfeeding competency, falling within this framework, is defined as a mother's understanding of various breastfeeding factors—such as cognition, motivation, skills, and other elements— that collectively influence breastfeeding behavior. Breastfeeding competency significantly impacts the initiation, duration, and overall experience of breastfeeding. (26,27) Moreover, it serves as a prerequisite for the implementation of effective breastfeeding

interventions. Hence, the significance of breastfeeding competency warrants heightened attention and consideration. Women's attitudes towards breastfeeding encompass their inclination to articulate their emotions, thoughts, and behaviors related to mental mindfulness as they develop their subsequent exclusive breastfeeding practices.
(28) Breastfeeding attitudes, being a variable factor, represent a key focus area for strategic interventions aimed at enhancing breastfeeding practices.

The aims of the study:

1. To identify whether women's age, family's socioeconomic status, gravidity, parity, abortion, breastfeeding motivation, and breastfeeding comprehensive knowledge can predict breastfeeding competency.
2. To investigate the differences in the breastfeeding competency between the groups of women's levels of education, family's socioeconomic class, and fetus's gender.

Study design:

A descriptive predictive correlation study was used to direct this study.

Setting and Sample of the Study:

The study included a convenience sample of 180 mothers in their third trimester who were recruited from mothers from primary healthcare centers in Diwanyia Governorate center.

Data analysis:

The SR used the statistical package for social science, version 27 to analyze the data. The descriptive statistical measures of frequency and percent, the arithmetic mean and standard deviation were also used. Stepwise regression was used to identify the variable(s) that can predict
the dependent variables.

Power analysis (Study size):

Study instrument:

The study instrument encompasses woman's age (years). It also includes couple's level of education, household's occupation, and family's monthly income. It also includes The Breastfeeding Competency Scale, The Comprehensive Breastfeeding Knowledge Scale, and The Breastfeeding Motivation Scale

Ethical considerations:

The student researcher obtained the approval of the ethics committee at the College of Nursing – University of Baghdad. The SR also obtained the approval of the Ministry of Planning – Central Statistics Bureau. The SR also obtained the approval of Al-Diwaniya Directorate of Health to conduct the current study. The SR assured the study participants that they can voluntarily participate in this study, and they have the option to withdraw at any point of time they want to do so. The SR assured the study participants that she securely maintains and safeguard all data supposed to be obtained from the current study and the data would be for scientific purpose only, anyone other than the SR would not have access to it at any phase of the study and after publication.

Result:

Table 3. ***Stepwise regression model for predicting breastfeeding competency***

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	61.785	10.429		5.924	.000
	Age	1.955	.366	.372	5.340	.000
2	(Constant)	52.659	10.429		5.049	.000
	Age	1.446	.383	.275	3.778	.000
	Family's socioeconomic Status	1.302	.367	.258	3.544	.001
3	(Constant)	3.697	28.625		.129	.897
	Age	1.254	.405	.238	3.099	.002
	Family's socioeconomic Status	1.336	.387	.264	3.450	.001
	Breastfeeding Motivation	.403	.223	.153	1.810	.072
	Importance to mothers and babies	3.539	1.402	.210	2.525	.013
	Recommendations	-2.464	2.373	-.078	-1.038	.301
	Skin to skin instincts/attachment	-.903	2.510	-.028	-.360	.719
	Position and latch	1.706	2.799	.044	.609	.543
	Risk of bottles/soothers	1.080	2.243	.035	.482	.631
	BFI Hospital practices 24 h rooming in	.975	3.414	.022	.285	.776

How the breast makes milk	1.240	1.980	.046	.626	.532
Maintaining milk supply through removal	-.366	3.631	-.008	-.101	.920
Feeding frequency	-.663	3.787	-.014	-.175	.861
Cue based feeding	-.974	1.855	-.041	-.525	.600
Hand expression	.901	3.726	.018	.242	.809
Signs of effective breastfeeding	-3.608	2.729	-.094	-1.322	.188
Breastfeeding concerns and solutions	-1.067	1.740	-.046	-.613	.541
Breastfeeding and peer support in community	6.112	3.195	.147	1.913	.058
Partner support	-6.812	2.960	-.168	-2.302	.023
Women’s right to breastfeed	2.154	2.769	.058	.778	.438

a. Dependent Variable: Breastfeeding Competency

The stepwise regression model demonstrates that women’s age, family's socioeconomic status, breastfeeding knowledge about the importance to mothers and babies, and partner’s support statistically positively predict more their breastfeeding competency (p-value = .000, .001, .013, .023) respectively.

Table 4. Total and direct effect of breastfeeding motivation on breastfeeding competency

Total Effect	se	t	p	LLCI	ULCI	c_cs
.3055	.1922	1.5891	.1138	-.0739	.6848	.1159
Direct Effect	se	t	p	LLCI	ULCI	c_cs
.4608	.2054	2.2440	.0262	.0554	.8663	.1748

coef: Coefficient, LLCI: Lower limit confidence interval, p: P-value, se: Standard Error, t: T-statistics, ULCI: Upper limit confidence intervalThe study results display that total effect of breastfeeding motivation on breastfeeding competency is .4419, $p < 0.05$. The direct effect of breastfeeding motivation on breastfeeding competency is .4608, $p < 0.001$.

Discussion:

The stepwise regression model demonstrated that women's age statistically positively predicts more their breastfeeding competency. This finding implies that the older the woman, the better the breastfeeding competency she exhibits. This finding could be explained as women get older, they are anticipated to attained higher level of education the matter which acquire them more information about breastfeeding either through curricula or extracurricular scientific inquiry. (Table 3) This finding is supported by that of Yu and colleagues who concluded that older women enjoy better breastfeeding competency (146.184 ± 16.775 for those who age 35-year or older vs 137.70 ± 21.176 for those who are younger than 35-year). In the same context, Britten and colleagues found that maternal age had a significant influence on the duration of breastfeeding, with younger mothers experiencing adverse effects on both breastfeeding intention and duration.

The stepwise regression model displayed that family's socioeconomic status statistically positively predicts more their breastfeeding competency. This finding implies that the better the socioeconomic status the family has, the better the breastfeeding competency the woman mirrors. This finding could be explained as family's socioeconomic status would be good, the woman is anticipated to adhere to healthy lifestyle including balanced diet and healthy dietary patterns that matter that makes her perceive she needs to reflect the extract of these healthy efforts on her baby through following Chapter Four: Discussion of Study Results 75 breastfeeding. (Table 3) Ajami and colleagues (197) concluded that the duration of breastfeeding was found to be significantly linked to socioeconomic status (SES), with individuals falling into the middle SES category demonstrating a notably longer period of breastfeeding in comparison to those in the low and high SES

groups (19.5 ± 7.3 months versus 18.0 ± 8.0 months for low SES and 17.5 ± 7.9 months for high SES).The stepwise regression model revealed that the importance of breastfeeding to mothers and babies statistically positively predicts more their breastfeeding competency. This finding implies the more perceived valuable breastfeeding to mothers and babies, the better the breastfeeding competency the woman reflects. This finding could be explained as when women believe that breastfeeding would be more valuable both for them and their babies, they would be more motivated to adhere to it and breastfeed their babies as competent as possible. (Table 3) The stepwise regression model demonstrated that partner's support statistically positively predicts more their breastfeeding competency. This finding implies that the greater the support the partner provides, the better the breastfeeding competency the woman reflects. (Table 3) The study results displayed that there was a statistically significant difference in breastfeeding competency among wife's level of education groups. The Kruskal-Wallis test displayed that women who hold bachelor's degree displayed greater breastfeeding competency.

Conclusions:

- The older the woman, the better the breastfeeding competency she exhibits.
- The better the socioeconomic status the family has, the better the breastfeeding competency the woman mirrors.
- The more perceived valuable breastfeeding to mothers and babies, the better the breastfeeding competency the woman reflects.
- The greater the support the partner provides, the better the breastfeeding competency the woman reflects.
- Women who hold bachelor's degree displayed greater breastfeeding competency.

- Women whose husbands hold bachelor's degree demonstrated better breastfeeding competency.

Recommendations:

The student researcher recommends the following:

- There is a need for community health nurses to design health promotion activities that seek to raise women's health awareness of the value of breastfeeding, particularly young woman and those with lower level of education which in turn can better the breastfeeding competence.
- There is need for community health nurses to collaborate with health officials in primary healthcare centers with the goal of initiating health promotion activities that seek to better women\s breastfeeding competence, particularly women who are of poor socioeconomic status.
- The is need for community health nurses to launch home visits for expectant women and enhance partners' support for breastfeeding.

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Conflict of interest

The study does not have any conflicts of interest.

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