Assessment of Mothers' Knowledge, Practice and Attitude Regarding Prevention of Exclusive Breastfeeding Discontinuation

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Abstract

Introduction: Exclusive breastfeeding (BF) is the cornerstone of child survival, nutrition, development and maternal health. Nursing intervention and health education regarding exclusive BF can improve knowledge, practice and attitude of mothers and contribute to prevention of exclusive breastfeeding discontinuation (BFD). **Aim:** To assess mothers' knowledge, practice and attitude regarding prevention of exclusive BFD. **Design:** A descriptive design was utilized. **Setting:** Obstetric Outpatient Clinic, Breast Feeding Room in NICU of Children's Hospital affiliated to Ain Shams University hospitals and MCH center in Abassia sector affiliated to Ministry of Health/ Cairo. **Subject:** A purposive sample of 100 mothers (24 primipara women at the third trimester and 76 lactating mothers to support maternity practices of exclusive BF). **Tools:** Predesigned questionnaire to assess: mothers and infants characteristics, knowledge regarding factors affecting exclusive BFD, Iowa Infant Feeding Attitude Scale and observational checklists to assess mothers' breastfeeding practice. **Results:** Less than one third of mothers of the studied mothers had good knowledge, only one fifth of the studied mothers had a positive attitude towards prevention of exclusive BF discontinuation and more than half of the studied mothers performed incompetent breast feeding practice. There was highly statistical significant difference between total knowledge of the studied mothers regarding exclusive BF, factors affecting exclusive BFD and total practice of breastfeeding (P-value =<0.001**). **Conclusion**: The majority of the studied mothers had poor knowledge, negative attitude towards prevention of exclusive BFD and incompetent BF practice. **Recommendation:** Developing pre and postnatal nursing intervention for protecting, promoting and supporting breastfeeding which aid in the prevention of exclusive BF discontinuation.

Key words: Knowledge, practice and attitude, prevention, exclusive breastfeeding, discontinuation, nursing.

Introduction

Exclusive breastfeeding (BF) reduces children' morbidity and mortality due to non-communicable disease as diabetes, obesity and infectious diseases. Further, infants take exclusive BF have higher intelligence scores, improved cognitive outcomes, resulting in higher educational achievement and earning potential compared with non-breastfed children. Breastfeed mothers have a lower risk of breast and ovarian cancer, improved birth spacing and may also have a lower risk of diabetes and overweight/obesity **(Griswold and Palmquist, 2019).**

Discontinuation of exclusive BF can negatively affect a child's physical and emotional development in both short and long-term achievement. Exclusive BF is recommended to provide infants with the nutrients required for healthy growth and development. Mother's socio-demographic characteristics and level of motivation are essential in decision to prevent exclusive breastfeeding discontinuation (BFD). However, pediatricians, nurses and general practitioners play an important role in prevention of exclusive BFD **(Cascone et al., 2019).**

Nurses have an important role in promoting, supporting and preventing exclusive BFD. This can be accomplished through initiatives aimed at positive attitudes, enhanced education and advocacy. Nurses have to practice pre and postnatal family centered interventions to encourage greater

support for breastfeed mothers **(Schmied et al., 2018).**

Significance of the Study

Annually exclusive BF could prevent 823,000 deaths in children under age 5 and 20,000 deaths in mothers from breast cancer. Worldwide only 2 out of 5 children under 6 months of age are exclusively breastfed and only 45% of young children continue to be breastfed during first two years of life. In Egypt, infants under 2 months of age, 71% receiving breast milk. By age 4-5 months, only 13% of children are exclusively breastfed **(World Health Organization, 2019).**

Aim of the study

The current study aimed to assess mothers' knowledge, attitude and practice regarding prevention of exclusive BF discontinuation.

The research questions:

1- What is knowledge, attitude and practice of the studied mothers regarding prevention of exclusive BF discontinuation?
2- What are factors affecting exclusive BF discontinuation?

Subject and Method

Research design:

A descriptive design was utilized in this study.

Settings:

This study was conducted at Obstetric Outpatient Clinic, Breast Feeding room in NICU of Children's Hospital affiliated to Ain Shams University and MCH center in Abassia sector affiliated to Ministry of Health in Cairo.

Sampling:

A purposive sample of 100 mothers, (24) were primipara women at the third trimester of pregnancy who attended the mentioned setting for follow up and (76) of them were lactating mothers with infants aged from birth up to 6 months regardless their characteristics to support maternity practices of exclusive BF .

Inclusion criteria:

- Primipara women at third trimester trimester of pregnancy.
- Infants aged from birth up to 6 months.

Tools of data collection:

Data was collected through using the following tools:

I. Structured Pre-designed Interviewing Questionnaire:

Part 1: Characteristics of the studied mothers as: Age, educational level, employment status, family income and residence.

Part 2: Characteristics of infants as: Age, gender, birth order, infant feeding method and health condition.

Part 3: Mothers' knowledge regarding: Exclusive BF, factors affecting exclusive BFD and its prevention.

❖ **Scoring system:**

Items of mothers' knowledge regarding exclusive BF consisted of closed ended questions. According to mothers' responses, each question is checked either correct (1 score) or incorrect (zero). The score of (>75%) referred to good, average (65≤75%) and poor (<65%) knowledge.

II. Iowa Infant Feeding Attitude Scale:

The Iowa Infant Feeding Attitude Scale (IIFAS) was adapted from **Mora, Russell, Dungy, Losch and Dusdieker (1999)** to assess attitude of mothers toward exclusive BF. The IIFAS contains 17 questions about the attitudes towards breastfeeding. Participants respond to a 5-point-scale where one is "strong agreement", two is "agreement", three is "neutral", four is "disagreement" and five is "strong disagreement". Score of (<65%), (65<75%) and (≥75%) revealed negative, neutral and positive attitude of the studied mothers towards prevention of exclusive BFD respectively.

III. Observational checklists that was adapted from Verma et al., (2015): To assess the studied mothers' practice regarding breast feeding [pre (8 steps), during (20 steps) and post nursing intervention (10) steps]. Each step is checked either done correctly (1 score) or not done (zero). Then the total practice of breast feeding was scored either competent (≥85%) or incompetent (<85 %).

Content validity:

The predesigned interviewing questionnaire was assessed and ascertained

by a panel of five experts in pediatric nursing field to validate its format, layout, consistency, accuracy and relevancy.

The reliability of each tool was confirmed by using Cronbach's alpha test and it was 0.77 for knowledge questionnaire tool I. The reliability of the attitude tool II and practice tool III were 0.80 and 0.85 respectively.

Pilot study:

A pilot study was carried out including 10% (10) of pregnant women at third trimester of pregnancy and lactating mothers of children aged from birth to less than 6 months to support maternity practices of exclusive BF and they were excluded from the study sample later. The result of the data obtained from the pilot study helped in modification of the study tools, where some items were corrected, omitted and added as necessary.

Field of the work:

The actual field work was carried out for 6 months from the first of January to the end of June 2019. The researcher was available in the study setting by rotation during morning shift three days per week to assess mothers' knowledge, attitude and practice of the studied mothers towards prevention of exclusive BF discontinuation. The average time needed for the completion of the study tools was approximately 30-40 minutes. The studied mothers filled the study tools by themselves with the aid of the researcher if mother need help or illiterate.

Each mother was assessed, observed and evaluated using the study tool which filled by the researcher during breast feeding.

Administrative design:

An official permission was obtained from administrators of the study settings through a formal letter that was issued from the Dean of the Faculty of Nursing, Ain Shams University.

Statistical analysis:

Data collected were organized, revised, coded, tabulated and statistically analyzed by using computer program (SPSS) version 20. Data were presented using descriptive statistics in the form of numbers, percentage. Means, standard deviation ($\overline{X}$±SD) and chi-square test (χ^2) were used in the study. Proportion probability of error (P value) was used. Significance of the results was considered at p-value < 0.05.

Results

Table (1): revealed that $\overline{X}$ ±SD of mothers' age was 27.45±5.62. More than two fifths (42%) of the studied mothers had technical diploma. Also, nearly two thirds (63%) of the studied mothers were working where (33%) out of (63%) were working for 6 hours. More than half of the studied mothers (54**%)** had family income that fulfills their needs. More than two thirds (68%) of the studied mothers were from urban residence.

Table (2): Regarding factors affecting EBF discontinuation **,** showed that breast engorgement represented 82% of maternal factors. Congenital anomalies, poor sucking and low birth weight represented 38%, 32% and 30% of the infants' factors respectively. Employment represented more than two fifths (43%) of the familial factors.

Figure (1): Regarding total knowledge of the studied mothers about exclusive BF and factors affecting exclusive BFD, showed that only less than one third of mothers (29%) of the studied mothers had good knowledge about exclusive BF and factors affecting exclusive BFD.

Figure (2): As regards to attitude of the studied mothers towards prevention of exclusive BF discontinuation, illustrated that only one fifth (23%) of the studied mothers had a positive attitude towards prevention of exclusive BF discontinuation.

Figure (3): As regards to the studied mothers' total practice of breastfeeding, illustrated that, more than half of the studied mothers (59%) performed incompetent breast feeding practice.

Table (3): Regarding relation between total knowledge of the studied mothers regarding exclusive BF, factors affecting exclusive BF discontinuation and their total practice of breastfeeding, It was clear that there was highly statistical significant difference between total knowledge of the studied mothers and their

total practice of breastfeeding (P-value =<0.001**) were only less than one third of the studied mothers had good knowledge and performed competent breastfeeding practice.

Table (1): Number and percentage distribution of the studied mothers according to their characteristics (n=100).

Mothers' characteristics		No	%
Age (in years)	15- < 20	14	14
	20- < 25	40	**40**
	25- < 30	22	22
	30 ≤ 35	24	24
$\overline{X}$±SD		27.45±5.62	
Level of Education	Uneducated	4	4
	Primary school	16	16
	Preparatory school	10	10
	Technical diploma	42	**42**
	Highly educated	28	28
Employment status:			
Not Work		37	37
Working/ hours/day:		63	**63**
6		33	**33**
8		24	24
12		6	6
Family income/ month: Fulfill family needs	Yes	54	**54**
	No	46	46
Residence	Rural	32	32
	Urban	68	**68**

Table (2): Number and percentage distribution of the studied mothers according to their factors affecting EBF discontinuation (n= 100).

Factors affecting EBF discontinuation	No	%
Maternal factors:		
Breast engorgement	**82**	**82**
Breast tumor	14	14
Breast pus	4	4
Infants' factors:		
Congenital anomalies	**38**	**38**
Poor sucking	32	32
Low birth weight	30	30
Familial factors:		
Employment	**43**	**43**
Family income	30	30
Education	21	21
Age		
Residence	2	2

Total number not mutually exclusive

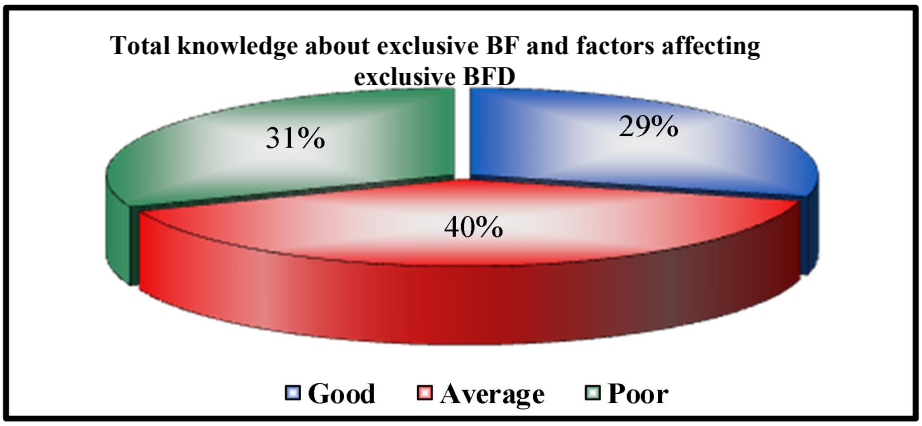

Figure (1): Percentage distribution of the studied mothers according to their total knowledge about exclusive BF and factors affecting exclusive BFD (n= 100).

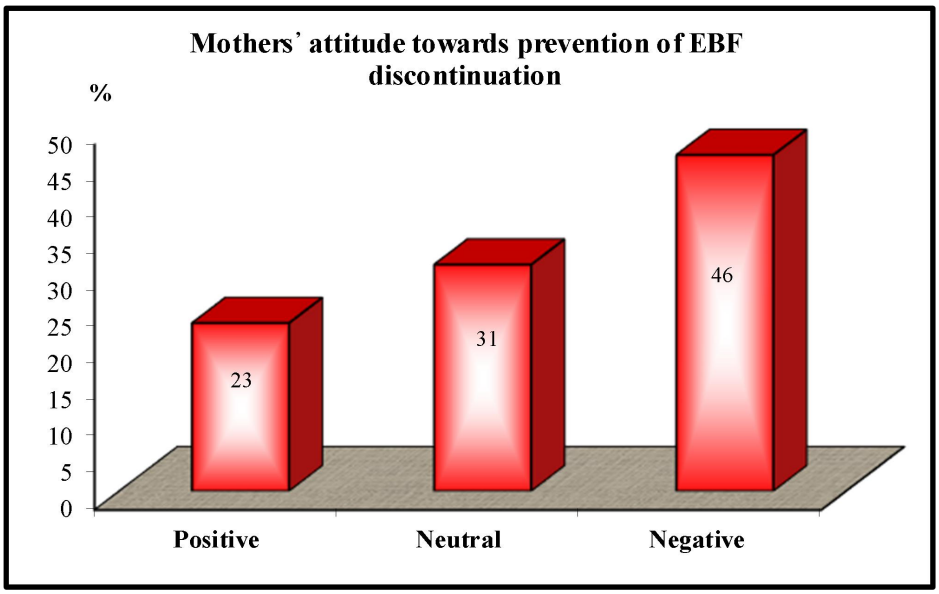

Figure (2): Number and percentage distribution of the studied mothers according to their attitudes towards prevention of exclusive BF discontinuation (n= 100).

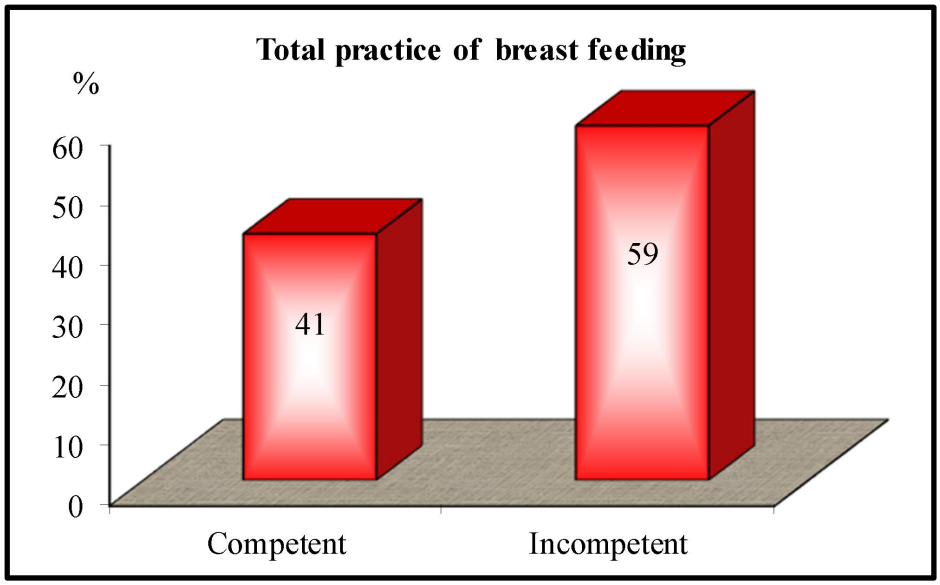

Figure (3): Distribution of the studied mothers according to total practice of breastfeeding (n= 100).

Table (3): Relation between total knowledge of the studied mothers regarding exclusive BF, factors affecting exclusive BFD and its prevention and their total practice of breastfeeding (n=100).

Total practice	Total knowledge						Test of significance	
	Good		Average		Poor			
	No	%	No	%	No	%	χ^2	P-value
Competent	28	28	9	9	2	2	58.758	<0.001**
Incompetent	1	1	31	31	29	29		

Discussion

Worldwide, as many as 4,000 infants and young children die because of non-exclusive BF. The increase in the rate of non-communicable diseases such as obesity, autoimmune disorders and cardiovascular disease is likely associated with a discontinuation of exclusive BF **(Kandeel et al., 2019).**

The present study aims to assess knowledge, practice, attitude of mothers toward exclusive BF and factors affecting exclusive BF discontinuation.

Regarding characteristics of the studied mothers, the current study revealed that $\overline{X}$±SD of the studied mothers' age was 27.45±5.62. This finding is almost in an accordance with **Mélo et al. (2016),** who mentioned in a study entitled "Nurses' participation in promoting exclusive BF" that the age of the participants was varied from 18 to 42 years old ($\overline{X}$ ± SD was 26.84 ± 5.84). From the researcher point of view, this similarity may be due to the age of marriage and having children is nearly similar in the study settings.

In the light of the current study findings, it was found that more than two fifths of the studied mothers had technical diploma. This result is similar to **Rahman et al. (2017),** who found in a study entitled "Factors related to exclusive breastfeeding among mothers in the city of Palu, Central Sulawesi, Indonesia" that the educational level of most of subjects was junior high school. The researcher believed that more educated mothers make better use of health service and provide better infant care including breastfeeding.

The current study revealed that nearly two thirds of the studied mothers were working. More than half of the working mothers were working for 6 hours. These

results are in contrary with **Tadesse et al. (2019),** study which entitled "Exclusive breastfeeding and maternal employment among mothers of infants from three to five months old in the Fafan zone, Somali regional state of Ethiopia" who found that most of the studied mothers were unemployed and the exclusive BF was less common among employed mothers. The researcher believed that working mothers spend much time at work than unemployed mothers which may lead to early BF discontinuation.

Regarding family income, the current study findings showed that more than half of the studied mothers had family income per month that was satisfactory to their needs. This result is in accordance with **Verma et al. (2015),** study which entitled "Assessment of the general breastfeeding practices of postnatal mothers" who reported that family income of the studied mothers per month fulfilled the family needs.

In the light of the study findings, it was found that breast engorgement was the major factor affecting exclusive BFD. The study result is similar to **Odom et al. (2016),** study who stated that breast engorgement was associated with not meeting exclusive BF because it make breastfeeding is too painful.

Also, the current study results revealed that congenital anomalies and poor sucking represented nearly two thirds of the infants' factors that affect the exclusive BFD. This result is emphasized by **Rendon et al. (2016)** and **Chandrika et al. (2015),** studies who reported that the difficulties of infant as congenital anomalies and poor sucking are main infants' leading factors to exclusive BFD. The researcher believed that congenital anomalies and poor sucking are associated with poor latching on which subsequently hinder early BF initiation and continuation.

Moreover, the current study results revealed that mother's employment is one of the most familial factors affecting exclusive BFD. This result is supported by **Saffari et al. (2017),** study who reported that there were a negative association between mother's employment and the exclusive BF continuation. The researcher believed that mothers who spend sufficient time with the infants can more easily exclusively breastfeed than those lacking time due to working.

Regarding total knowledge of mothers about exclusive BF and factors affecting exclusive BFD, it was found that only less than one third of mothers of the studied mothers had good knowledge about exclusive BF, factors affecting exclusive BFD and its prevention. This result is in the same line with **Abdulahi et al. (2018)** and **Habib (2016)** studies who reported that the mothers had a few data on exclusive BF prenatally which affect BF rates. The researcher believed that planned health education and nursing intervention could prevent the problems hinder exclusive BF and eventually prevent exclusive BF discontinuation.

As regards to attitude of the studied mothers towards prevention of exclusive BF discontinuation, the current study results illustrated that only one fifth of the studied mothers had a positive attitude and agree with prevention of exclusive BF discontinuation. This result is similar to **Alnasser et al. (2018), Rahman et al. (2017) and Jessri et al. (2013),** studies who mentioned that the percentage of mothers with a positive attitude towards exclusive BF was low which may contribute to early BFD. The researcher believed that nursing intervention and health care support; contribute to raise BF self-efficacy and positive attitude of mothers towards prevention of exclusive BF discontinuation.

As regards total practice of breast feeding, the current study illustrated that, more than half of the studied mothers performed incompetent breast feeding practice. This result finding is going with **Lutter et al. (2015) and Tengku et al. (2013)** studies who stated that mothers tend not to perform steps of breast feeding while mothers who know how to assess for adequacy of milk supply, including listening for audible swallow during feeding, noting the infant's weight gain tend to continue exclusive BF.

Regarding relation between total knowledge of the studied mothers and their total practice, it was clear that there was

highly statistical significant difference between total knowledge of the studied mothers and their total practice (P-value=<0.001**)). This study result is in accordance with a study of **Girish et al. (2016)** who found that there was a statistical significant difference between total practice and total knowledge of breastfeeding. The nursing intervention program promotes mothers' breastfeeding knowledge, practice and exclusive BF continuation. Mothers need routine prenatal education and breastfeeding interventions after delivery at hospital and at home to prevent exclusive BF discontinuation.

Conclusion

The current study concluded that the majority of the studied mothers had poor knowledge, negative attitude towards prevention of exclusive BFD and incompetent BF practice. Congenital anomalies of infants, breast engorgement and employment were the major factors affecting prevention of exclusive BF discontinuation.

Recommendations

This study recommended that assessment the pregnant women and lactating mothers to determine warning factors and barriers which may lead to exclusive BF discontinuation. Also, developing pre and postnatal nursing intervention may be effective for protecting, promoting and supporting breastfeeding which aid in the prevention of exclusive BF discontinuation.

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