

Effect of Nursing Intervention on Prevention of Exclusive Breastfeeding Discontinuation

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Abstract

Introduction: Planned nursing intervention and health education regarding exclusive breastfeeding (EBF) improved knowledge, practice and attitude of mothers and contributed to prevention of EBF discontinuation which can consequently reduce the worldwide infants' morbidity and mortality rates. **Aim of the Study:** The present study aimed to investigate the effect of nursing intervention on prevention of EBF discontinuation. **Study Design:** A quasi-experimental 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/Cairo/Egypt. **Subject:** A purposive sample of 100 mothers of infants aged from birth up to 6 months. **Tools of the Study:** Predesigned questionnaire to assess: mothers and infants characteristics, knowledge regarding factors affecting EBF discontinuation and its prevention, Iowa Infant Feeding Attitude Scale and observational checklists to assess mothers' breastfeeding practice. **Results:** It was clear that the majority of the studied mothers had good knowledge, positive attitude towards prevention of EBF discontinuation and improved practice of breastfeeding post implementation of nursing intervention. There was statistical significant difference between total knowledge of the studied mothers regarding factors affecting EBF discontinuation and its prevention and total practice of breastfeeding pre/post nursing intervention. **Conclusion:** Nursing intervention had a positive effect on prevention of EBF discontinuation. **Recommendation:** Developing initiatives, pre and postnatal health education programs for protecting, promoting and supporting breastfeeding which aid in the prevention of EBF discontinuation.

Keywords: Exclusive breastfeeding, prevention, discontinuation, nursing intervention.

Introduction

Exclusive breastfeeding is the cornerstone of child survival, nutrition, development and maternal health. Infants who take EBF have higher intelligence scores, resulting in higher educational achievement. Breastfed 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. The World Health Organization recommends EBF, including initiation

within the first hour of life and continues for up to 2 years.¹

Discontinuation of EBF can negatively affect a child's physical and emotional development in both short and long-term achievement. Annually EBF could prevent 823,000 deaths in children under age 5 and 20,000 deaths in mothers from breast cancer. Only 42% of mothers begin breastfeeding within an hour of birth, and 41% practice EBF.² In Egypt; breastfeeding practices are not always optimal. The EBF among infants under two months of age constitutes 71%. By age 4-6 months, only 13% are exclusively breastfed.³

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Nurses have an important role in protecting, promoting, supporting and preventing EBF discontinuation through initiatives to improve positive attitudes and enhanced education. Mothers need antenatal

care to reduce perinatal and neonatal problems. Training community health care workers can provide support and knowledge to lactating mothers for prevention of EBF discontinuation.⁴

Material and Method

The aim was study the effect of nursing intervention on prevention of EBF discontinuation using the quasi-experimental design in the current study. It 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/ Cairo/Egypt. The study sample was a purposive sample that composed of 100 mothers of infants aged from birth up to 6 months regardless their characteristics.

The first tool of data collection was the pre-designed interviewing questionnaire which was prepared by the researcher in an Arabic language after reviewing the related literature. It was designed to gather the data regarding characteristics of the studied mothers and mothers' knowledge regarding factors affecting EBF discontinuation and its prevention (pre/post nursing intervention). Items of mothers' knowledge regarding factors affecting EBF discontinuation and its prevention consisted of 30 closed ended questions. Knowledge scores were classified into good (>75%), average (65:75%) and poor knowledge (< 65%).

The second tool was Iowa Infant Feeding Attitude Scale (IIFAS) that was adapted from De la Mora, Russell, Dungy, Losch and Dusdieker (1999) to assess attitude of the studied mothers towards prevention of EBF discontinuation. The IIFAS contains 17 questions. The total score of attitude was 17 point. Score of less than 60% was disagree and the score between 60% to less than 75% was neutral and equal or more than 75% was agree (pre/post nursing intervention).

The third tool was observational checklist that was adapted from Verma et al., (2015)⁵ to assess the studied mothers practice regarding breastfeeding (pre and post nursing intervention). Each step is checked either done correctly (1 score) or not done (zero). Then the total practice of breast feeding was scored competent ($\geq 85\%$) and incompetent (<85 %).

The study tools was assessed and ascertained by a panel of five experts in Pediatric Nursing Department/ Ain Shams University/Cairo/Egypt to validate its 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 1. The reliability of the attitude tool 2 and practice tool 3 were 0.80 and 0.85 respectively.

A pilot study was carried out, involving 10% (10) of mothers with their infants aged from birth up to 6 months and they were excluded from the study sample later. It helped in modification of the study tools, where some items were corrected, omitted and added as necessary.

The nursing intervention was developed based on the actual needs assessment of the studied mothers in the form of educational program. Nursing intervention appraisal was done by using study tools pre and post to determine the effect of implemented nursing intervention regarding prevention of EBF discontinuation.

The data collected were statistically analyzed by using computer program (SPSS) version 20. Descriptive statistics like mean and percentage were used to analyze the data.

Findings: Table (1) revealed that $\bar{x} \pm SD$ of mothers' age was 27.45 ± 5.62 . More than two fifths (42%) of the studied mothers had technical diploma, nearly two thirds (63%) were employed and more than half (52.4%) of the employed mothers worked six hours outside home.

Figure (1) showed that, nearly two thirds (62%) of the studied mothers had good knowledge about prevention of EBF discontinuation post nursing intervention compared to less than one third (29%) of them pre nursing intervention of prevention EBF discontinuation.

As noticed from **figure (2)**, nearly two thirds (61%) of the studied mothers had positive attitude towards prevention of EBF discontinuation post compared to 23% pre nursing intervention of prevention EBF discontinuation.

Figure (3) illustrated that more than three fourths (78%) of the studied mothers performed steps of breast feeding practice correctly post compared to only two fifths (41%) of them pre nursing intervention of prevention EBF discontinuation.

Table (2) showed that there was statistical significant difference between total knowledge of the studied mothers regarding factors affecting EBF discontinuation and its prevention and total practice of breastfeeding pre/post implementation of nursing intervention about prevention of EBF discontinuation (P -value= ≤ 0.001).

Table (1): Distribution of the studied mothers according to their characteristics (n=100).

Sociodemographic characteristics of mothers		No	%
Age (in years)	15- < 20	14	14
	20- < 25	40	40
	25- < 30	22	22
	30-35	24	24
$\bar{X} \pm SD$ 27.45 \pm 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	Work	63	63
	Not work	37	37
Working hours outside home (n = 63)	6	33	52.4
	8	24	38.1
	More than 8	6	9.5

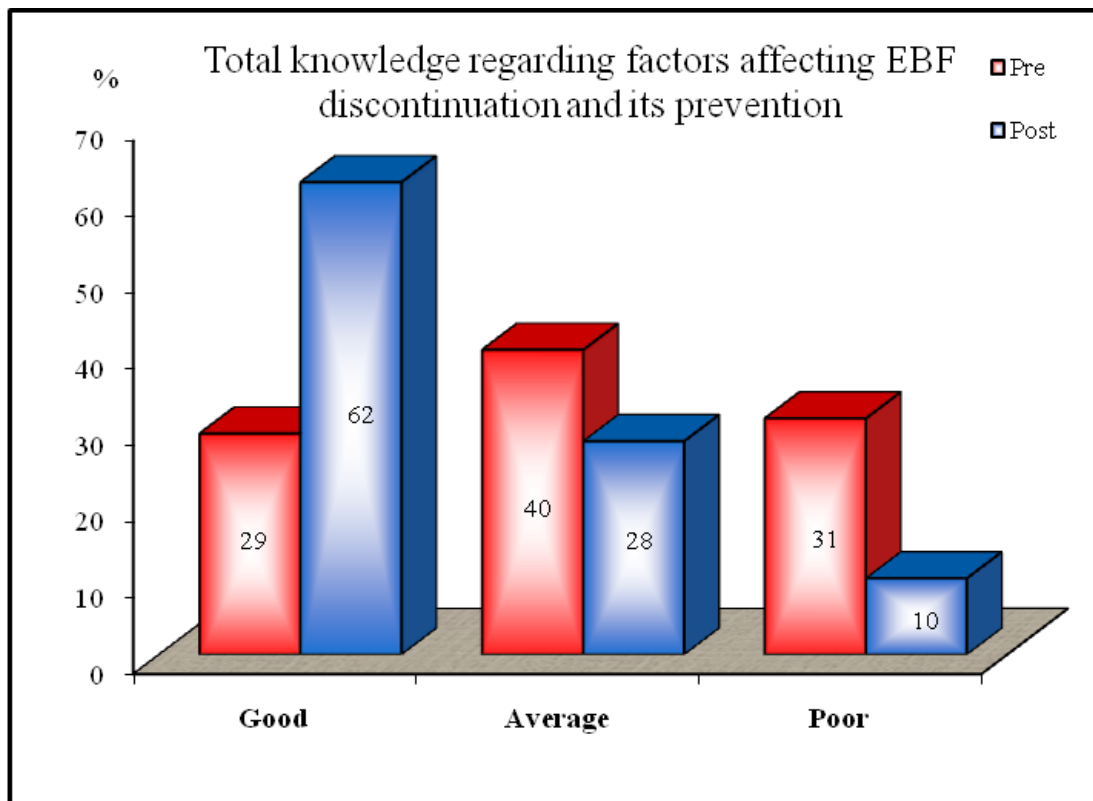


Figure (1): Distribution of the studied mothers according to their total knowledge regarding factors affecting EBF discontinuation and its prevention (pre/post nursing intervention) (n=100).

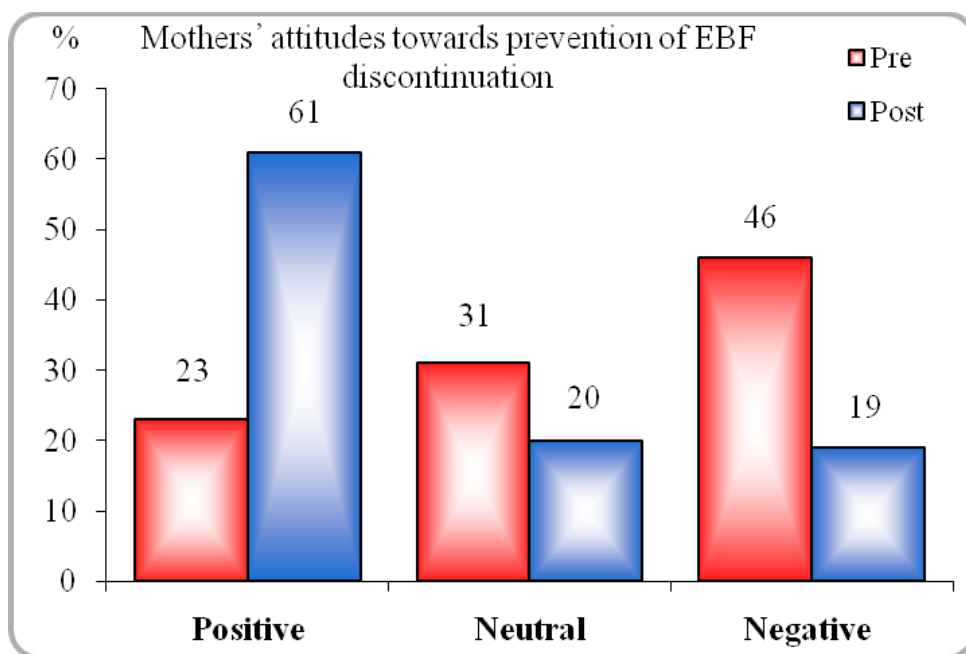


Figure (2): Distribution of the studied mothers according to attitude towards prevention of EBF discontinuation (pre/post nursing intervention) (n=100).

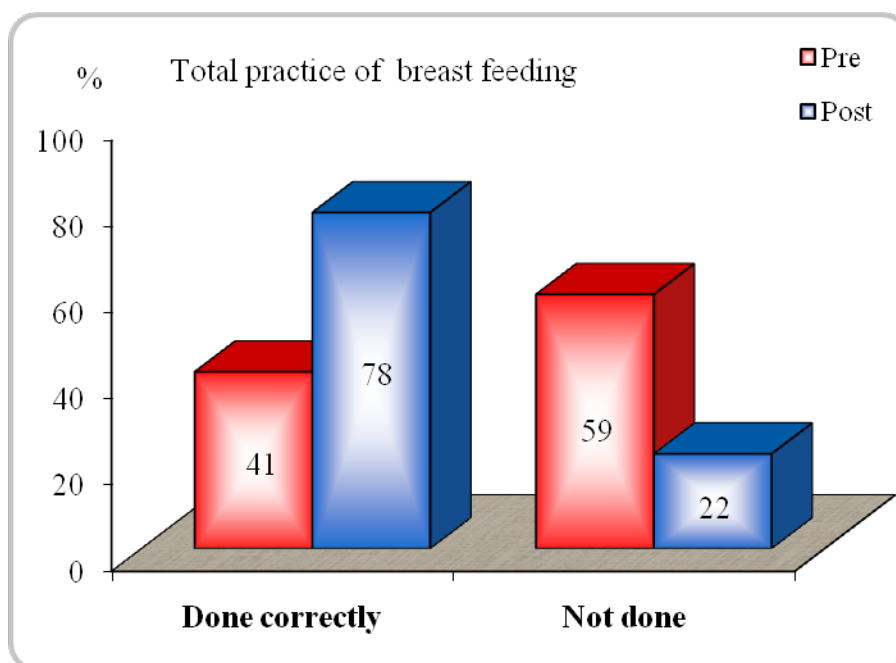


Figure (3): Distribution of the studied mothers according to total practice of breast feeding (pre/post nursing intervention) (n= 100).

Table (2): Relation between total practice of breastfeeding and total knowledge regarding factors affecting EBF discontinuation and its prevention (pre/post nursing intervention) (n=100).

Total practice of breast feeding	Total knowledge regarding factors affecting EBF discontinuation and its prevention	
	r	P-value
Pre	0.543	<0.001**
Post	0.386	<0.001**

Discussion

Every day, 4,000 infants and young children die worldwide because of not exclusively breastfeeding. Increases the rate of non-communicable diseases such as obesity, autoimmune disorders and Cardiovascular Disease (CVD) is likely associated with a decrease in the practice of the EBF. Nursing intervention and peer support is the most effective strategy for prevention of EBF discontinuation.⁶

Regarding characteristics of the studied mothers, the current study revealed that $\bar{x} \pm SD$ of mothers' age was 27.45 ± 5.62 . This finding is almost in accordance with **Mélo et al. (2016)** who mentioned in a study entitled "Nurses participation in promoting exclusive breastfeeding", that regarding the age of the participants, it was varied from 18 to 42 years old ($\bar{x} \pm SD$ was 26.84 ± 5.84).⁷ This similarity may because the age of marriage and having children is nearly similar in different 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 in contrary with **Rahman et al. (2017)** who mentioned in a study entitled "Factors related to EBF among mothers in the city of Palu, Central Sulawesi, Indonesia", that the educational level of the most of subjects was junior high school and the most of the studied mothers were housewives.⁸

The current study revealed that nearly two thirds of the studied mothers were employed and more than half of them worked six hours outside home. This result is in contrary with **Tadesse et al. (2019)** in a study 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" that the most of the studied mothers were unemployed and EBF was less common among employed mothers due to being engaged at work place for more time than unemployed mothers.⁹

Concerning the total knowledge about prevention of EBF discontinuation, the current study showed that two thirds of the studied mothers had good knowledge post implementation of nursing intervention about prevention of EBF discontinuation. This result is in accordance with **Abdulahi et al. (2018)** in a study entitled "Effect of breastfeeding education and support intervention versus routine care on timely initiation and exclusive breastfeeding in Southwest Ethiopia", that the majority of mothers had good knowledge in posttest.

In researcher point of view, community-based health education provided prenatally and postnatal is effective in increasing mothers' knowledge which prevents EBF discontinuation.¹⁰

Concerning mothers' attitude towards prevention of EBF discontinuation, the current study revealed that, nearly two thirds of the studied mothers had positive attitude post compared to nearly one fourth of them pre nursing intervention of prevention EBF discontinuation. This result is similar to **Alnasser et al. (2018)**, in a study of attitude impact and knowledge on intention to EBF who mentioned that the percentage of mothers with a positive attitude towards prevention of EBF discontinuation was much higher post implementation of education regarding the EBF. In researcher point of view, this change in attitude toward prevention of EBF discontinuation is due to increased awareness regarding importance of EBF for mothers, infants and society.¹¹

Regarding the mothers total practice of breastfeeding, the current study illustrated that more than three fourths of the studied mothers performed breastfeeding correctly post compared to only two fifths of them pre nursing intervention of prevention EBF discontinuation. This result is in accordance with **Okoyere et al. (2014)** in the study about the effectiveness of health education in increasing the duration of EBF which stated that health education intervention was an effective strategy in promoting the practice of EBF and prevention of EBF discontinuation. In researcher point of view, mothers need to follow breastfeeding steps orderly through planned health education to prevent any problems may arise and subsequently prevent EBF discontinuation.¹²

The current study showed that there was statistical significant difference between total knowledge of the studied mothers regarding factors affecting EBF discontinuation and its prevention and total practice of breastfeeding pre/post nursing intervention about prevention of EBF discontinuation ($P\text{-value} = < 0.001^*$). This result is in accordance with **Wan et al. (2016)** in a study entitled "Effects of a theory-based breastfeeding promotion intervention on exclusive breastfeeding in China" which stated the statistical significant difference between total knowledge and total practice of breastfeeding. The nursing intervention program and planned health education promotes mothers' breastfeeding knowledge, practice and EBF continuation. Routine prenatal education and breastfeeding interventions after delivery at hospital and at home were needed to prevent EBF discontinuation.¹³

Conclusion

In the light of the present findings, it can be concluded that mothers had good knowledge, positive attitude towards prevention of EBF discontinuation and improved breastfeeding practices; nursing intervention had a positive effect on prevention of EBF discontinuation.

Conflict of Interest: Nil

Source of Funding: Nil

Ethical Clearance: The research approval was obtained from the Scientific Ethical Research Committee, Faculty of Nursing/Ain Shams University/Egypt. An oral approval to carry out the study was taken from each mother in the study sample. Mothers were assured that all the gathered data will be treated confidentially. Mothers were also informed about their right to withdraw from the study at any time without giving any reason.

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