Original Research Article

Prevalence and obstacles of exclusive breast feeding among women attending primary health care centres in Cairo 2012

Suhaila Abdalkarim Ali, Amani Osman Abdelmola*

Assistant professor, Department of Family and Community Medicine, College of Medicine, Jazan University, KSA

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*Correspondence:
Dr. Amani Osman Abdelmola,
E-mail: nonaosman@hotmail.com

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ABSTRACT

Background: Breastfeeding is the best way of providing nutrition for the healthy growth and development of infants. It is an essential part of the reproductive process with important inferences for the health of mothers. Exclusive breastfeeding for 6 months is the recommended way for infants nourishing. Complementary foods should be introduced after the age of 6 months, and breastfeeding should continue until the age of 2 years. This study was conducted to measure the prevalence of exclusive breastfeeding and to identify the most common obstacles confronting the practice between mothers attending El-Darrassa PHC centre.

Methods: A descriptive cross-sectional study included all mothers attending the PHC centre. The data was collected by a questionnaire. The descriptive method and inferential statistics were used for data analysis.

Results: The prevalence of breastfeeding was 97%, while the prevalence of exclusive breastfeeding was 51%. The obstacles facing breastfeeding were: 38% decreasing amount of mother’s milk, 16.8% the ease of artificial feeding and 16% the mothers’ working status. Nearly half knew the breastfeeding benefits for mother and child. There were no significant relations between exclusive breastfeeding and demographic characteristics, while there were significant relationships, between breastfeeding and medications contraindicated with lactation, easiness of artificial feeding, and decreased amounts of milk.

Conclusions: The study revealed that the key factors for improving exclusive breastfeeding are raising the mothers’ awareness, enhancing health facilities policies to support mothers’ initiation of breastfeeding immediately after birth, promoting effective breastfeeding and enforcing laws protecting working mothers and facilitating their breastfeeding practice during work.

Keywords: Exclusive breastfeeding, Obstacles, Prevalence

INTRODUCTION

Breastfeeding is the best way of providing ideal nutrition for the healthy growth and development of infants. It is essential part of the reproductive process with important inferences for the health of mothers. A recent review of evidence has shown that on a population basis, exclusive breastfeeding for 6 months is the optimal way of feeding infants. Thereafter infants should receive complementary foods with continued breastfeeding up to 2 years of age or beyond. The optimal duration of breast feeding most likely depends on the characteristics of the mother and child. In developing countries, there is considerable evidence to suggest that long term breast feeding can be beneficial by providing a source of key nutrients, increasing birth spacing, and protecting against both the incidence of infections and their adverse nutritional impact. The aim of this study is to measure the prevalence of exclusive breastfeeding, determining the obstacles facing the practice, and according to results to help in promoting the exclusive breast feeding and managing and eliminating the obstacles facing the mothers.
Breastfeeding provides adequate and essential nutrients for the infant’s growth and development, protects infants against infections and increases possibilities of survival. Breastfeeding enhances the active hormonal immune response in the first year of life. Exclusive breastfeeding reduces infant mortality related to common childhood illnesses and helps achieve a quicker recovery during illness. Human milk can transfer specific or nonspecific immunities to the external mucosal surface of the intestine and possibly to the respiratory tract of the new born. Numerous studies have shown that diarrheal infections are much more common in formula-fed babies. This is true throughout the world, despite a common misconception that only people living in areas with contaminated water need be concerned with this issue. Such infections are more likely to be fatal in developing nations, but all formula-fed infants are at greater risk than their breastfed peers. The benefits of breastfeeding, especially exclusive breastfeeding, are well established. The World Health Organization (WHO) recommends that children should be exclusively breastfed during the first 6 months of life, as breastmilk alone is sufficient to meet the nutritional requirements of children until then. To enable mothers to establish and sustain exclusive breastfeeding for 6 months, WHO and The United Nations Children's Fund (UNICEF) recommend initiation of breastfeeding within the first hour of life, breastfeeding on demand (that is, as often as the child wants, day and night), and no use of bottles, teats, or pacifiers. Breastfed babies have fewer allergies than artificially fed babies. Breastfeeding protects against other allergies, such as atopic eczema, food allergies, and respiratory allergies. Human breast milk enhances brain development and improves cognitive development in ways that formula cannot. A study of 32200 Scottish 3 year old children found that the incidence of obesity was significantly lower among those who had been breastfed, after adjusting for socioeconomic status, birthweight, and gender. Additionally, a German study found that 4.5% of formula fed children are obese, while only 0.8% of breastfed children have this condition. There are many studies linking development of insulin dependent type 1 diabetes to lack of breastfeeding. The results of a study from Finland suggest that the introduction of dairy products at an early age, and high milk consumption during childhood increase the level of cow's milk antibodies in the children's systems. This factor is associated with an increased risk of insulin dependent diabetes. Now a new study has indicated that breastfeeding in infancy may help reduce the risk of type 2 diabetes. Several studies intended to define determinant variables in the success or failure of breastfeeding, which could ease the planning of promotional strategies. Most infants today still do not receive the full benefits of breastfeeding, leaving millions at unnecessary risk of illness and death. Studies show breastfeeding has major health benefits to the mothers as well. Many breastfeeding women do not ovulate for the first 6 months or so following the birth of a new baby. This is true only for those who are exclusively breastfeeding (no supplements or solid food) and have not yet gotten their periods back following childbirth. Night nursing encourages longer amenorrhea. Breastfeeding helps the uterus to get back to its original size and lessens any bleeding a woman may have after giving birth. Many studies have shown that women who breastfeed have lower risks of developing breast cancer. Breastfeeding should be added to the list of factors that decrease ovulatory age and thereby decrease the risk of ovarian cancer. A WHO study has shown that the longer a woman breastfeeds, the less likely she is to get endometrial cancer. Regardless of its uncountable advantages, many efforts to promote exclusive breastfeeding (EBF) have achieved less than anticipated outcomes. This may be related to the challenge’s mothers encounter when breastfeeding. Exclusive breastfeeding challenges occur at the maternal, infant, family, healthcare system, and at community and national level. The challenges to the practice of EBF include: cracked or sore nipples, breast engorgement, insufficient breastmilk production, disapproval and discomfort of breastfeeding in public, insufficient breastfeeding support from society and healthcare providers, short maternity leave periods, difficulties associated with combining breastfeeding and other maternal responsibilities, and emotional stress. Several variables have also been noted in the literature to predict EBF practice. Among them are infant’s age, maternal age, marital status, formal educational level, and occupation. Failure of breastfeeding: The lack of adequate familial, social, and professional support and the intensive employment environment facing modern highly educated women discourage mothers from breast feeding. The separation of the infant from the mother during the first hours after birth had a bad effect on the first breast feed as did pethidine given to the mother during labor, as it is difficult to the infant to adopt the correct breast feeding technique. Mothers who work outside the home initiate breastfeeding at the same rate as mothers who stay at home. However, the breastfeeding continuance rate declines sharply in mothers who return to work. A study by Al Ghwass 2011, indicates the low prevalence of exclusive breastfeeding in Egypt. To strengthen this prevalence and to achieve the WHO recommendations, which is 6 months exclusive breastfeeding, a lot of interventions are needed. Although every breastfeeding was 95.8%, only 9.7% of the mothers exclusively breastfeed their children for 6 months, compared with 91.3% and 12.3%, respectively. The Egyptian Demographic Health Survey confirmed that although every breastfeeding was 95.8%, only 9.7% of the mothers remained exclusively breastfeeding for 6 months in the Egyptian Demographic Health Survey. Another study by Dashti 2010, stated that 92.5% of mothers initiated breastfeeding and at discharge from hospital, many mothers were partially breastfeeding (55%), with only 10.5% of infants had been exclusively breastfeed since birth. To improve the exclusive breastfeeding rate, hospital policies should enhance and promote the early establishment and sustain exclusive breastfeeding for 6 months, as recommended by WHO and UNICEF.
initiation of breastfeeding and discourage the unnecessary use of infant formula in hospital.

According to Kimani 2011, about (37%) were not breastfed in the first hour after delivery, only about 2% of infants were exclusively breastfed for six months. Factors associated with the low prevalence include child's sex, perceived size at birth, mother's marital status, ethnicity, education level, family planning, and health seeking behaviour. The researcher referred the inadequate commitment to WHO recommendations for breastfeeding and infant feeding practices to factors such as cultural practices, access to and utilization of health care facilities, child feeding education, and family planning.29

Study done by Kotb, showed high level of mother’s knowledge about the advantages of breastfeeding for their child, as breastfeeding protects the child from infection, and is the healthiest food for the infant. About 84% of mothers-initiated breastfeeding immediately after delivery.

Exclusive breast-feeding was found to be associated with the mother’s education, but not with her age at birth, occupation, or place of birth.30

METHODS

This is a descriptive cross-sectional facility-based study conducted in Cairo city, the capital of Egypt, in Alhadari Aldarassa Health Center in the Aldarassa area during the period time (January, 2012 to June, 2012). According to Egypt Reproductive health profile 2008, women in the reproductive age (15-49 years) in Egypt are estimated to be 17.8 million.

Study population

Inclusion and exclusion criteria

The targeted population was all women in the childbearing period subjected to feed their children, attending El-Darassa PHC center, and they agreed to participate. The excluded criteria are women without children, very ill women, or women who refused to participate.

Sampling

All women in the childbearing period attending El-Darassa PHC center seeking medical advice for any health service during the study time. The included criteria was determined as all women in the childbearing period, residents in the city for the last year and accepting to participate in the study, while the excluded criteria was visiting women, those who moved to the city for less than one year, women with no children and women who were severely ill.

Sample size and design

A sample of 250 women was estimated for the purpose of this study. The sample size was calculated using the formula for a cross-sectional study:

\[ n = \frac{z^2 \alpha P(1-P)}{d^2} \]

Where: n is sample size,
\( z(\alpha) \) is standard normal distribution (1.96 to a confidence level of 95%),
P is anticipated population proportion,
d is absolute precision required on either side of the anticipated population proportion (in percentage points).

The anticipated population proportion (P) of the sample is estimated to be 50%, because this is the safest choice for (P) since the sample size required is largest when P=50%.

For 95% confidence level, \( z(\alpha)=1.96 \).

d=5%, then by using the formula, accounting for 10%.

Women were enrolled regularly from the clinic at an alternate day schedule to ensure the presentation of all strata of women in the sample. The whole period of the data collection extended for 2 months.

Tool of data collection

A questionnaire has been designed to be used for the necessary data divided into 4 sections. The first section includes the demographic data, age, work status, education. The second section includes the obstetric data, parity and number of children including males and females. The third section includes data about breastfeeding: whether exclusive or not, duration of breastfeeding and the duration and type of weaning. The fourth part includes the obstacles that may confront breastfeeding in terms of ideas about breastfeeding, working mother, effect of breastfeeding on the health of the mother and infant.

Pilot study

Training workshop on respondent’s selection and questionnaire completion was conducted. The data collectors were trained to ensure the validity of information, voluntary participation, confidentiality and securing the consent of the participants. The field supervisors conducted daily check on questionnaires. A pilot survey done, and it was a chance to check on the training of data collectors and supervisors, to revise the questionnaire and determine the feasibility of the questionnaire and it comprehend-suability.
Data management and analysis

The questionnaires were reviewed for completeness and consistency, and data was double entered by two different researchers. The data was cleaned and analysed using Statistical Package for the Social Sciences (SPSS). Descriptive statistics, cross tabulation, and pearson chi square to test for statistical associations were conducted. A p-value <0.05 was considered statistically significant. Data is presented in the forms of graphs and tables.

Ethical consideration

Informed written consent was taken from all the interviewed women before completing the anonymous questionnaire during a private session.

RESULTS

Demographic characteristics findings

The demographic characteristics of the interviewed women were as following: educational status of the interviewed mothers, about 36% were either illiterate or can only read and write. 14.80% were highly educated. The working status of the interviewed mothers shows that most of them were housewives. 88.8% of them had between 1 to 3 children. The statistical analysis using Chi-square test showed no significant relations between EBF and demographic characteristics (age, working status and the level of education).

| Demographic characteristics | No. of subjects | Percentage of subjects (%) |
|-----------------------------|-----------------|----------------------------|
| Maternal age (years)        |                 |                            |
| <20                         | 12              | 4.8                        |
| 20-30                       | 112             | 84.8                       |
| >30                         | 26              | 10.4                       |
| Education                   |                 |                            |
| Illiterate                  | 69              | 27.60                      |
| R & W                       | 23              | 9.20                       |
| Primary                     | 31              | 12.40                      |
| Secondary                   | 47              | 18.80                      |
| Tertiary                    | 43              | 17.20                      |
| High education              | 37              | 14.80                      |
| Working status              |                 |                            |
| Yes                         | 170             | 68.00                      |
| No                          | 80              | 32.00                      |
| Total number of children per mother |          |                            |
| 1                           | 23              | 9.20                       |
| 2                           | 138             | 55.20                      |
| 3                           | 61              | 24.40                      |
| 4                           | 18              | 7.20                       |
| 5                           | 6               | 2.40                       |
| 6                           | 3               | 1.20                       |
| 7                           | 1               | 0.40                       |

Prevalence

The prevalence of breast feeding shows that 97% of the interviewed mothers had breast fed their children irrespective of whether it was exclusive or not. The Prevalence of exclusive breastfeeding is 51%, that is indicated that half of the mothers follow the WHO recommendation and introduce supplementary food for their children at the age of 6 month, while 37% exclusively breastfeed their children until the age of 4 months. The shocking result was that 12% of the mothers did not introduce and supplementary food until the age of 1 year, which will affect the children’s growing and health badly because breast milk only will not satisfy the children’s nutritional needs. Regarding the children weaning age Only 18% of the mothers continue to breastfeed their children until the age of 2 years.

| Variables                                      | Number of subjects | Percentage of subjects (%) |
|-----------------------------------------------|--------------------|----------------------------|
| Breastfeeding                                 |                    |                            |
| No                                            | 7                  | 2.80                       |
| Yes                                           | 243                | 97.20                      |
| Age of ending breast feeding and new food introduction |                |                            |
| 4 months                                      | 90                 | 37.00                      |
| 6 months                                      | 123                | 51.00                      |
| 1 year                                        | 30                 | 12.00                      |

Knowledge about breast feeding benefits

Only 0.8% of the mothers realized that breast feeding benefits the mothers, while 46% knew about the breast-feeding benefits to their children.

| Breast feeding benefit | Number of subjects | Percentage of subjects (%) |
|------------------------|--------------------|----------------------------|
| Benefits to mother     | 2                  | 0.80                       |
| Benefits to baby       | 115                | 46.00                      |
| Benefits to both       | 133                | 53.20                      |
| Total                  | 250                | 100.00                     |

Obstacles against breast feeding

38% of the mothers complain that they have decreased in the amount of milk, which is not satisfying the child’s need. 16% stated that the work is the main obstacle for breastfeeding and the other 16% think that artificial feeding is easier for them.
Table 4: Main obstacles against breast feeding.

| Obstacles                                | Number of subjects | Percentage of subjects (%) |
|------------------------------------------|--------------------|---------------------------|
| Congenital anomalies                     | 3                  | 1.20                      |
| Acute or chronic diseases                | 2                  | 0.80                      |
| Medications contraindicated with lactation| 6                  | 2.40                      |
| Working                                  | 40                 | 16.00                     |
| Artificial feeding is easier             | 42                 | 16.80                     |
| Decreased amount of milk                 | 95                 | 38.00                     |
| Following a diet regimen                 | 4                  | 1.60                      |
| Fear of breast redundancy                | 3                  | 1.20                      |

Table 5: Obstacles that interfere with breast feeding.

| Questions                                | EBF | Chi-square | P value |
|------------------------------------------|-----|------------|---------|
|                                          | No  | Yes        | Total   | X²     | P value |
|                                          | N   | %          | N      | %     |        |
| Congenital anomalies                     | 127 | 100.00     | 120   | 97.56 | 247    | 98.80 |
|                                          | 0   | 0.00       | 3     | 2.44  | 3      | 1.20  |
| Acute or chronic diseases                | 127 | 100.00     | 121   | 98.37 | 248    | 99.20 |
|                                          | 0   | 0.00       | 2     | 1.63  | 2      | 0.80  |
| Medications contraindicated with lactation| 127 | 100.00     | 117   | 95.12 | 244    | 97.60 |
|                                          | 0   | 0.00       | 6     | 4.88  | 6      | 2.40  |
| Working                                  | 127 | 100.00     | 83    | 67.48 | 210    | 84.00 |
|                                          | 0   | 0.00       | 40    | 32.52 | 40     | 16.00 |
| Artificial feeding is easier             | 127 | 100.00     | 81    | 65.85 | 208    | 83.20 |
|                                          | 0   | 0.00       | 42    | 34.15 | 42     | 16.80 |
| Decreased amount of milk                 | 125 | 98.43      | 30    | 24.39 | 155    | 62.00 |
|                                          | 2   | 1.57       | 93    | 75.61 | 95     | 38.00 |
| Following a diet regimen                 | 127 | 100.00     | 119   | 96.75 | 246    | 98.40 |
|                                          | 0   | 0.00       | 4     | 3.25  | 4      | 1.60  |
| Fear of breast redundancy                | 127 | 100.00     | 120   | 97.56 | 247    | 98.80 |
|                                          | 0   | 0.00       | 3     | 2.44  | 3      | 1.20  |

The relationship between breastfeeding and the obstacles that interfere with it

The main obstacle facing breastfeeding among the surveyed mothers was the decrease in the amount of milk, which is not satisfying the child’s need. The second obstacle was the work. Using of artificial feeding had significant relationship with 4 of the breast-feeding obstacles (work, mother is on medications contraindicated with lactation, decreased amount of milk and artificial feeding is easier).

DISCUSSION

For healthy growth and development of new-born infants, breastfeeding is the most suitable. Spits of the good breastfeeding prevalence in Egypt, exclusive breast feeding remains low. According to this research, the prevalence of breast feeding is 97%, while the prevalence of exclusive breast feeding is 51%. That matched (Al Ghwass) and (EDHS) were every breastfeeding was 95.8% and 95.8% while the mothers who remained exclusively breastfeeding for 6 months were only 9.7% and 9.7% respectively.26,27 Another study conducted by (Dashti) stated that 92.5% of mothers initiated breastfeeding at discharge from hospital, and only 10.5% of infants had been exclusively breastfed since birth.28 According to (Kimani) study, about (37%) were not breastfed in the first hour after delivery, and only about 2% of infants were exclusively breastfed for six months.29 Another study by (Kotb) declares that about 84% initiated breastfeeding immediately after delivery.30 There were no significant relations between EBF and demographic characteristics (age, working status and the level of education), age of weaning, and the mother’s...
knowledge about breastfeeding benefits. While a study by (Kotb) stated that exclusive breastfeeding was found to be associated with mother’s education but not with mother’s age at birth, her occupation, or place of birth.\(^{30}\)

(65.8\%) of the mothers had two children, and most of the mothers preferred artificial milk as a breast milk alternative. For the introduction of new food for the child, (60\%) of the surveyed mothers introduced new food at 6 months, (36\%) at 4 months, and only (3\%) at one year. Regarding the assessment for the main obstacles against breast feeding, 38\% of the surveyed mothers declare that the decreasing amount of mother milk is one of the obstacles, while 16.8\% think that artificial feeding is easier for mothers and 16\% think that the working status is another obstacle. There were significant relationships between the exclusive breastfeeding and some of the obstacles (medications contraindicated with lactation, working status of the mother, artificial feeding is easier and decreased amount of milk), and study by (Kimani) referred the poor adherence to EBF to factors such as cultural practices, mother's marital status, ethnicity, education level, access to and utilization of health care facilities, child feeding education, and family planning.\(^{29}\)

In this study, only 0.8\% of the mothers realized that breast feeding benefits the mothers, while 46\% knew about the breast-feeding benefits to their children. On the other hand, another study by (Kotb) shows a high level of mother’s knowledge about the advantages of breastfeeding for the child, as breastfeeding protects the child from infections, and it is healthiest food for the infant.\(^{30}\)

The (Dashti) study refers to the importance of creating hospital policies that promote the early initiation of breastfeeding and to discourage the unnecessary use of infant formula in hospital.\(^{28}\)

This study declared that the key factor in improving the exclusive breast-feeding practice is the level of mother’s knowledge about its importance, so we recommend providing activities to raise mothers’ awareness. Enhancing and facilitating the practice by the health authorities through establishment of breastfeeding support groups to help mothers with early initiation of breast feeding within a half-hour of birth, training mothers on the positioning and good attachment for effective breastfeeding, enhancing breast feeding on demand, and giving no artificial teats. To help mothers facing the obstacles, we recommend the enforcement of laws protecting working mothers and facilitating their breastfeeding practice during work.

**CONCLUSION**

The study revealed that the key factor for improving exclusive breastfeeding practice is raising mothers’ awareness and enhancing health facilities’ policies to support mothers’ initiation of breastfeeding immediately after birth and promoting effective breastfeeding. To help overcome the obstacles, we recommend the enforcement of laws protecting working mothers and facilitating their breastfeeding practice during work. There is a need for health care system interventions, family interventions, and public health education campaigns to promote optimal EBF practices, especially among less educated women.

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