

Exclusive Breastfeeding, Prevalence and Maternal Concerns: Saudi and Egyptian Mothers

Hoda Mohamed NafeeElsayed^{1*} Latifa Abdullah Al-Dossary²

1. Lecturer of pediatric nursing, College of Nursing, Mansoura University, Egypt

2. Master of pediatric nursing, College of Nursing, University of Dammam, King Dom Saudi Arabia

Abstract

Breast milk is rich in nutrients and anti-bodies and contains the right quantities of sugar, water, fat and protein that promotes not only growth and development of infants but also important for their survive. Exclusive breastfeeding is enough to the needs of infants less than six months without any addition. Several studies mentioned that the mothers who breastfeed were less risks for certain poor health outcomes. Aim is identifying, prevalence and maternal concerns of exclusive breastfeeding in KAS and ARE. Tools: an interview questionnaire sheet that assessed socio-demographic data of infants and their mothers, maternal satisfaction and concerns and infants' feeding types. Results, 65% from Egyptian mothers feed their infants exclusively while in Saudi mothers was 14%. Regarding maternal concerns, 86% from Saudi mothers unsatisfied with EBF while in the Egyptian mothers was 35% and the main concerns in Saudi mothers returned to, EBF not enough to satisfying the baby, not applicable outdoor, need effort and not suitable for working mothers.

Keywords: Exclusive breastfeeding, maternal concerns, formula feeding and partial breastfeeding.

Introduction

Exclusive breastfeeding is unequalled for healthy growth and development in young infants⁽¹⁾. It is one of interventions that reduce infant morbidity and mortality and allows the infant to receive breast milk only, with no other liquids or foods, not even water, except drops of syrups, vitamins, minerals or medicines^(2, 3)

Muslim countries are expected to support, promote and protect breastfeeding based on religious. Also WHO recommended that breastfeeding is the optimal method of infant feeding bringing short- and long-term benefits for infants, mothers, environment, economy and the entire society especially in developing countries.^(4, 5)

Infants exclusively breastfed for 6 months, presented with fewer infectious episodes such as acute respiratory infection, acute otitis media, and gastroenteritis than their partially breastfed or non-breastfed peers⁽⁵⁾. To enable mothers in establishing and sustaining exclusive breastfeeding for six months, WHO and UNICEF recommended^(6, 7):-

- Early initiation of breastfeeding within the first hour of infant life
- The infant only receives breast milk without any additional food or drink, not even water.
- Breastfeeding on demand – often as the child wants, day and night.
- No use of teats, bottles, or pacifiers.

Globally, no more than 35% of infants during their first four months of life are exclusively breastfed⁽⁸⁾. Global risk assessment of suboptimal breastfeeding indicates that 96% of all infant deaths in developing countries are attributable to inappropriate feeding during the first six months of the infant's life.⁽⁹⁾

Regarding Arabic world, Exclusive breastfeeding rates increased by 10% over the past decade especially in Syria and Egypt, the rates were more than 50% at their national data of breastfeeding comparing to the decline and downward trend in breastfeeding practices in King Dom Saudi Arabia^(10, 11)

Exclusive breastfeeding is common but not universal in very early infancy in Egypt. Among infants under two months of age, 79 % were reported to have received only breast milk. However, the proportion exclusively breastfed drops off rapidly among older infants by the age 4-5 months. Around seven in ten babies are receiving some form of supplementation, with somewhat more than three in ten given complementary foods.⁽¹²⁾

There is insufficient data available on breastfeeding in King Dom Saudi Arabia to monitor progress and development promotion programs. The World Health Organization does not report any breastfeeding data in the country profile because there are no notional data on breastfeeding^(13, 14). But few studies reported that the declining trend of exclusive breast-feed from 90% to 50% at the age of 3 months.⁽¹⁵⁾ In addition, only 33.08% of infant breast feed exclusively for the first four months.⁽¹⁶⁾

The UNICEF, was ranked the indicators of exclusive breast feeding in King Saudi Arabia only was 31% at 1996, while in Egypt was 68% in 1995, 30% in 2003, 38.3% in 2005, and 53.2 % in 2008.^(11, 17)

Variables and factors that may influence breastfeeding successful initiation and continuation are different such as the social, demographic background of the mother, individual characteristics, insufficient milk supply, infant and maternal health problems, parity, method of delivery, maternal interest towards breast feeding, previous lactation experience and other related factors.^(12, 18)

Our main objectives of this study was identify Prevalence and maternal concerns about exclusive breast feeding in king Dom Saudi Arabia and Arab Republic of Egypt

Materials and methods

Research design: Cross-sectional study

Setting:

This study conducted at well baby clinic in two setting, King Fahd Hospital Dammam University (KFH DU), king Saudi Arabia and Al-Mansoura University Child Hospital, Arab Republic of Egypt

Sampling:

Convenient sample of the mothers whom came with their infants from the previous mentioned study setting and agrees to participate in this study and their number equals (100) of each study setting.

Infants Inclusion criteria: Full term Infants aged not more than 6 months, without oral feeding problems and accompanied by their mothers to the well-baby clinics

Tools:

An interview questionnaire sheet was developed and used by the researchers after reviewing the related literatures that assessed prevalence and maternal concerns about exclusive breast feeding. It was three parts:-

Part 1: Socio-demographic data of the mothers as maternal age, educational level, job, working hours, and mother's health status. While for infants was, gender, age, birth order and delivery types.

Part 2: Maternal concerns and satisfaction about exclusive breast feeding.

Part 3: Prevalence of exclusive breastfeeding and other infants feeding methods

Methods:

1. The permission will be obtained from the responsible authorized personnel in King Fahd Hospital of the University, University of Dammam and Mansoura University Child Hospital, for conducting the study .
2. Ethical approval asserted from the ethical committee in Universities of Dammam and Mansoura.
3. Verbal consent will be obtained from the mothers of infants' who participated in the study with respecting their confidentiality and anonymity.

Results:

Table1: Maternal socio demographic data

| Subject's Nation Maternal socio demographic data | KSA | | ARE | | Chi-square | |
|---|----------|------|----------|------|----------------|-----------|
| | No (100) | % | No (100) | % | X ² | P |
| Socio demographic data | | | | | | |
| Age : | | | | | | |
| <20 | 11 | 0.11 | 6 | 0.6 | 8.48 | 0.037+ |
| 20-<35 | 78 | 0.78 | 76 | 0.76 | | |
| 35+ | 11 | 0.11 | 18 | 0.18 | | |
| Educational level | | | | | 39.5 | <0.001+++ |
| Bachelor degree | 19 | 0.19 | 52 | 0.52 | | |
| Secondary education | 60 | 0.60 | 18 | 0.18 | | |
| Primary education | 11 | 0.11 | 15 | 0.15 | | |
| Not educated | 10 | 0.10 | 15 | 0.15 | | |
| Mother job | | | | | 16.3 | <0.001+++ |
| Working mother | 21 | 0.21 | 48 | 0.48 | | |
| Not working mother | 79 | 0.79 | 52 | 0.52 | | |
| Working hours | | | | | 11.9 | <0.001+++ |
| <8 hours | 15 | 0.15 | 13 | 0.13 | | |
| 8+ | 6 | 0.6 | 35 | 0.35 | | |

Table1: Shows that maternal socio demographic data, more than three quadrants of mothers in both groups their age ranged from 20 to less than 35 years old. Concerning level of education, 52% of Egyptian mothers had Bachelor degree while 60% of Saudi mothers had secondary education. Concerning the mothers' job, 48% of the Egyptian mothers had working and the rest 52% had not while in Saudi mothers was 21% and 79 % respectively. The compared findings of maternal socio demographic data in both study groups as age, educational level , job and working hours statistically was significant differences, p Value were, < 0.037 , <0.001, <0.001, <0.001 respectively .

Table 2: Socio demographic data of infants

| Subject's Nation Socio demographic data | KSA | | ARE | | Chi-square | |
|--|----------|------|----------|------|----------------|------|
| | No (100) | % | No (100) | % | X ² | P |
| Gender | | | | | | |
| Male | 57 | 0.57 | 46 | 0.46 | 2.42 | 0.11 |
| Female | 43 | 0.43 | 54 | 0.54 | | |
| Age of the infant /months | | | | | | |
| <1 | 6 | 0.6 | 13 | 0.13 | 2.94 | 0.23 |
| 1-< 3 | 39 | 0.39 | 38 | 0.38 | | |
| 3-6 | 58 | 0.58 | 49 | 0.49 | | |
| Birth order | | | | | | |
| 1 st | 30 | 0.30 | 44 | 0.44 | 7.26 | 0.06 |
| 2 nd | 19 | 0.19 | 8 | 0.8 | | |
| 3 rd | 16 | 0.16 | 16 | 0.16 | | |
| 4 th | 35 | 0.35 | 32 | 0.32 | | |
| Types of delivery | | | | | | |
| Cesarean section | 23 | 0.23 | 26 | 0.62 | 4.36 | 0.11 |
| Normal vaginal | 75 | 0.75 | 66 | 0.66 | | |
| Episiotomy | 2 | 0.2 | 8 | 0.8 | | |

Table 2: Illustrates socio demographic data of infants, 52% of Saudi infants were males compared to 46 % in Egypt while the rest were female .Regarding the gender, nearly 50% of both their age ranged from 3to6 months. Concerningtypes of delivery,75% of the Saudi infants had normalvaginal delivery while66% inthe Egyptian infant .Statistically no significantdifferences.

Table 3: Infant feeding methods.

| Nationality Infant feeding methods | KSA | | ARE | | Chi-square | |
|---|----------|------|----------|------|----------------|----------|
| | No (100) | % | No (100) | % | X ² | P |
| Exclusive breast feeding | 14 | 0.14 | 65 | 0.65 | 70.2 | <0.001++ |
| Formula feeding | 43 | 0.43 | 15 | 0.15 | | |
| Partial breastfeeding | 43 | 86% | 20 | 20% | | |

Table 3:Mentions that the prevalence of feeding methods, 65% of the Egyptian mothers feed their infants exclusively regarding to 14%in Saudi mothers while,.43% of Saudi mothers used formula compared to,15 % in Egyptian mothers . Statistically P value was significant=<0.001

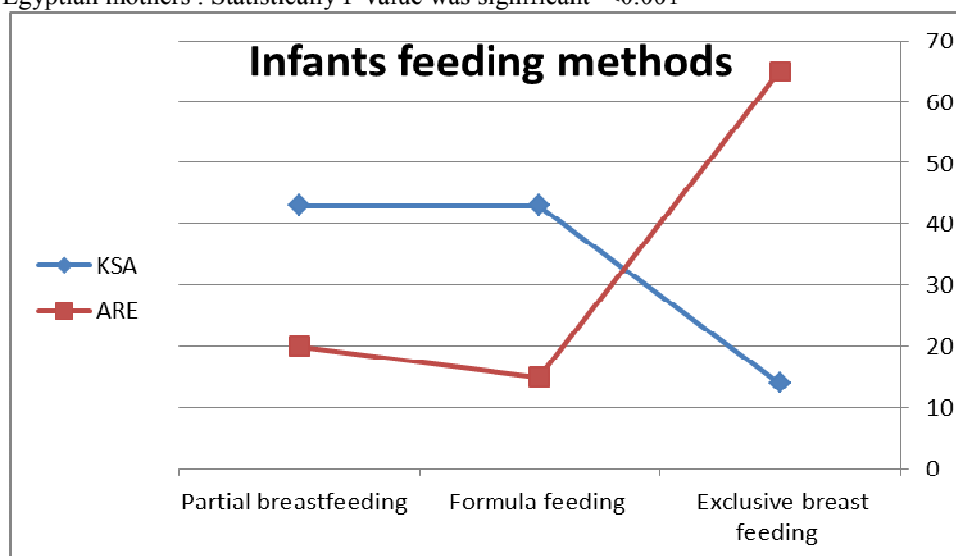


Figure 1: Shows that near two third of the Egyptian mothers preferred and administered EBF compared to less than one third among the Saudi mothers.

Figure 2: Maternal concerns and their satisfaction about exclusive breastfeeding

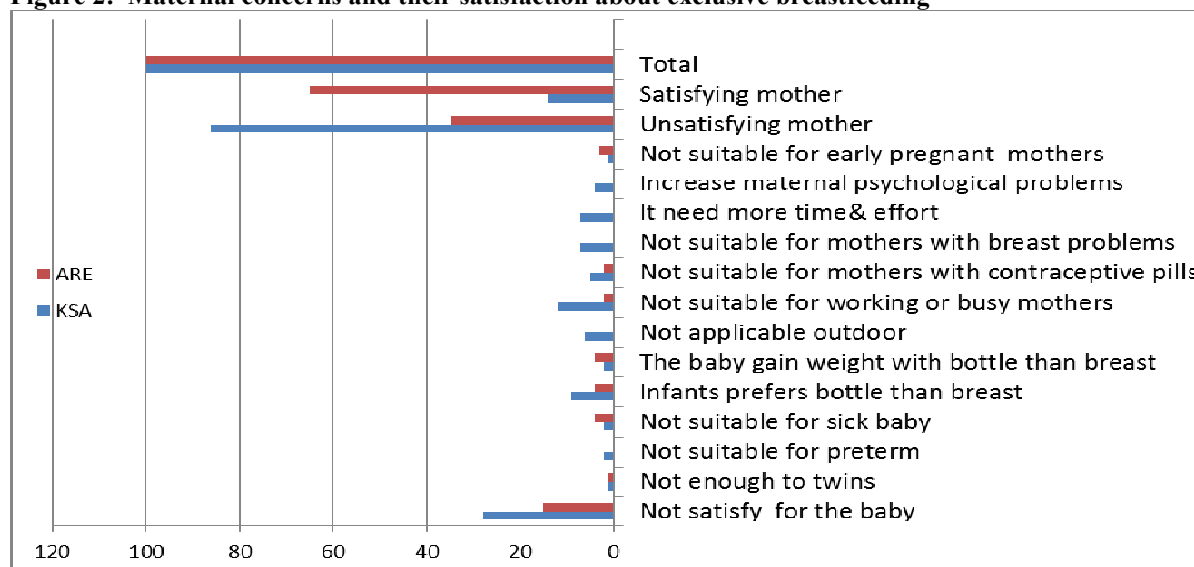


Figure 1: Illustrates Egyptian and Saudi mothers' concerns about exclusive breastfeeding

Table 4: Maternal concerns about exclusivebreastfeeding

| Maternal concerns about EBF | KSA | | ARE | | Chi-square | |
|---|-----------|-------------|-----------|-------------|----------------|--------------------|
| | No (100) | % | No (100) | % | X ² | P |
| Infant's nationality | | | | | | |
| Not satisfy to the baby | 28 | 0.28 | 15 | 0.15 | 5.1 | 0.02 |
| Not applicable outdoor | 6 | 0.6 | 0 | 0.00 | 6.2 | 0.01+ |
| Not suitable for working or busy mothers | 12 | 0.12 | 2 | 0.2 | 7.7 | 0.005++ |
| Not suitable for mothers with breast problems | 7 | 0.7 | 0 | 0.00 | 7.25 | 0.007++ |
| It need more time& effort | 7 | 0.7 | 0 | 0.00 | 6.2 | 0.01+ |
| Others | 26 | 0.26 | 0.18 | 0.18 | 4.9 | 0.03 |
| Unsatisfying mother | 86 | 0.86 | 35 | 0.35 | 54.4 | <0.001++ |

Table 4: Illustrates that Saudi mothers concerns about exclusive breastfeeding **not** (applicable outdoor, suitable for working or busy mothers, proper for mothers with breast problems) and need more time and effort, 6% , 2% , 7% , 7% respectively while the Egyptian mothers were 0.0% discrimination to this concerns except 0.2% of them said that it is not suitable for working or busy mothers . Regarding those concerns, there was a statistically significant difference between Saudi and Egyptian mothers concerns in relation to EBF.

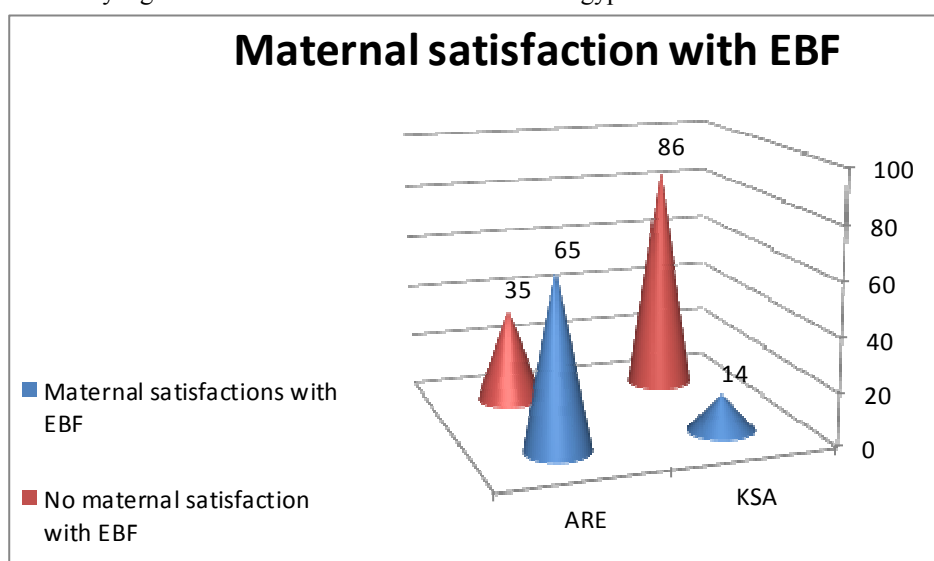


Figure 3: Illustrates that only 14% of Saudi mothers were satisfying with exclusive breastfeeding and the rest of them 86 unsatisfied while in the Egyptian mothers were, 65% and 35% respectively.

Discussion

The World Health Organization (WHO), United Nation Children' Fund (UNICEF) and American Academy of Pediatric recommended exclusive breastfeeding during the first 6 months of infants life. (4, 19, 20). Exclusive breastfeeding for 6 months confers many benefits to the infant and the mother. Chief among these is the protective effect against gastrointestinal infections, which is observed not only in developing but also in industrialized countries (21).

Despite of the Islam had recommended continuing breastfeeding for two years of a child's life. The large percentage of Saudi mothers do not breastfeed their children. Decline in the percentage of nursing mothers and a frightening increase in the number of infant deaths and children's health problems in the ensuing decades. The duration of breastfeeding in Saudi Arabia dropped from 24 months in 1967 to be 12.5 months in 1996. (Al-Batterjee 2010 and Eldeek et al 2012)^(22, 23). Regarding exclusive breastfeeding in Saudi Arabia it was 30 % in 1996, 31% in 2002, 24.4% in 2011 and still an alarming low rate with comparison to international standards^(24,25), and declined to 14% by the present study and this results going in the same direction of the study done by Maysoun (2003)⁽²⁶⁾ which revealed that the duration of exclusive breastfeeding was affected and dropped from almost 100% in 1967 to 33% in 1998, for children less than 4 months.

This study illustrated that the prevalence of exclusive breastfeeding in Egyptian mothers was 65%. This agrees with International Baby Food Action Network (IBFAN) and the World Bank who reported it as 53% in 2008 and also 53.2% in 2010^(27, 28).

The maternal socio-demographic data are predictors of exclusive breastfeeding in Egyptian mothers and had a significant impact which became apparent after that on the prevalence of exclusive breastfeeding as level of education and mother working comparing to the Saudi mothers that agree with Khamnian et al (2013)²⁹ and El-Khedrand Lamadah (2014)⁽³⁰⁾. While disagree with El Gilany (2010)⁽²⁵⁾ and Al Ghwass (2011)⁽³¹⁾ who conducted that the maternal socio-demographic data of the Saudi and Egyptian mothers was not a predictors of breastfeeding patterns and exclusive breastfeeding continuation.

The infants' socio-demographic data in both samples were not predictors on the prevalence of exclusive breastfeeding and so didn't have a significant effect on the prevalence of exclusive breastfeeding. These findings disagree with El Gilany (2010)⁽²⁵⁾ who illustrated that infants' factors and mode of delivery exerted their significant effect on the exclusive breastfeeding patterns.

Researchers cited similar concerns about insufficiency of breast milk as a common reason for early discontinuation of breastfeeding in many different countries.^(32, 33,34) and those results agree with the present study where 28% and 15% from Saudi and Egyptian mothers' dissatisfaction with EBF was inadequate breastmilk to satisfying their babies. Regarding the others maternal dissatisfaction with EBF, the Saudi mothers' concerns were, unsuitable for working mothers 12%, distorted breasts shape and need more effort and time, 7%, embarrassed from lactation in public place 6% these results in consistent with studies done in Riyadh (2005 and 2013)^{35,36,37}. While the Egyptian mothers' concerns about EBF in this study that were not matching with the Saudi mothers' concerns but agree with Mahmoud et al 2014.⁽¹⁵⁾

Regarding formula feeding a clear tendency of Saudi mothers to introduce artificial milk formulas too early which leading to a parallel fast reduction and subsequent failure of breastfeeding. It was 11.4% at birth, 63.9% at two month from birth and increased to be 89.8% at six months⁽³⁸⁾. Various social and environmental peculiarities remain unfavorable to the widespread practice of breastfeeding. The early administration of formula supplements in the maternity ward may contribute to this unfavorable environment. The main reason for starting bottle feeding was "not enough milk" according to the maternal concerns⁽³⁹⁾ and the previous finding were agree with the present study where 43% of Saudi mothers feeding their babies by formula and 28% of them concerned that the breast milk not satisfy and not enough for their babies and the hospital policy insist to separate babies from mothers and initiate early formula feeding.

Formula feeding is associated with more deaths from diarrhea in infants in both developing and developed countries (WHO)⁽⁴⁰⁾

Regarding partial breastfeeding (breastfeeding with more formula feeding) participating 30% in KSA mothers and this result in agreement with the studies which done at Riyadh 2003⁽⁴¹⁾ and in Al Hassa, Saudi Arabia 2011⁽⁴²⁾, which found that 78.8% of infants aged 6 months and less had partial breastfeeding while increased to be 88.6% at birth. Regarding complementary feeding among the Egyptian infants was 20% that agree with WHO and IYCF survey (2008)⁽⁴³⁾ that found 30% of Egyptian infant aged 4-6 months had a complementary feeding.

Study Limitations:

The study design was cross-sectional with inherent limitations basically in the form of recall bias and the representative samples contributed the urban sector only in both countries.

Conclusion

The results of the present study create the basis for planning targeted interventions by policy makers and health professionals in order to bridge the gap between the current practices of EBF and the WHO recommendations. The highest percentage of Egyptian mothers feed their infants exclusively while the majority of Saudi mothers preferred bottle and partial feeding (breast and more bottle feeding). Regarding maternal concerns, the main concern is insufficiency of their breast milk and so not satisfying their babies in both Saudi and Egyptian mothers. While the other concerns in Saudi mothers were breast milk not suitable for working mothers and their babies preferred the bottle feeding than the breastfeeding.

Recommendations

- Increase the Baby-friendly Hospital Initiative (BFHI) in both countries especially in KSA.
- The policy of KFUH that separate neonates from their mothers' immediately after delivery and initiate artificial feeding should be changed to early initiation of breastfeeding.
- Natal and post natal educational program for mothers about importance of breastfeeding.
- WHO and UNICEF recommendations about exclusive breastfeeding should be followed.

Interpretation of abbreviation

KSA: King Saudi Arabia

King Dom Saudi Arabia **KDSA:**

ARE: Arab Republic of Egypt

EBF: Exclusive Breast Feeding

WHO: World Health Organization

IYCF: Infant and Young Child Feeding

KFHU: King Fahd Hospital Dammam University

GDB: Global Data Bank

IBFAN: International Baby Food Action Network

UNICEF: United Nation Children' Fund

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