Factors Affecting the Practice of Exclusive Breastfeeding Among Mothers, Barakat Alnamozajia Area, Gezira State, Sudan (2013)

By

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M.B.B.S; University of Gezira (2008)

A Dissertation
Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Sciences in

Family Medicine

Department of Community and Family Medicine

Faculty of Medicine

University of Gezira

August, 2013
Factors Affecting the Practice of Exclusive Breastfeeding
Among Mothers, Barakat Alnamozajia Area, Gezira State,
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Date of Examination: 13, August, 2013
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Dedication

To my family....... 
and my friends .....
ACKNOWLEDGEMENT

The contributions of many different people, in their different ways, have made it possible for me to conduct this study.

I would like to extend my appreciation especially to the following.

deepest gratitude to my advisor, Dr. Salwa Alsanossi the head of department of community medicine assistant professor for her excellent guidance.

I am grateful and thanks to The Ministry of Health, Gezira State and University of Gezira for their great support.

Great thanks to my family. They were always beside me and encouraging me with their best wishes.

Thanks to my health center team for their continual support and encouragement throughout this research.

Thanks to my associate friends for their great help and support.
Factors Affecting the Practice of Exclusive Breast Feeding Among Mothers, Barakat ALnamozajia Area, Gezira State, Sudan (2013)

By
Lubna Abd ALrhman Osman
M.Sc Degree in Family Medicine (August, 2013)
Department of Community and Family Medicine

ABSTRACT

Exclusive breastfeeding is defined as feeding infants only breast milk, be it directly from breast or expressed, with no addition of any liquid or solids apart from drops or syrups consisting of vitamins, mineral supplements or medicine, and nothing else. Several studies have shown that exclusive breastfeeding for the first six months plays a great role in preventing morbidity and mortality. This study aimed to identify factors affecting use of exclusive breast feeding and to assess knowledge, and practices of mothers concerning exclusive breast feeding in Baracat Elnamoza area, Gezira State, and to find out the relationship between these factors and practices of exclusive breast feeding. The study depends on primary data collected through structured questionnaire designed to cover all research objectives. A community based cross-sectional study was carried out on 128 mothers of under five age children, which selected randomly from Baracat ELnamozajia area. The result showed that 48% of mothers feed their babies natural breastfeeding for full four month, 35% breast fed exclusively for 6 month and 13% for 2 month. The result showed that there is significant association between practice of exclusive breast feeding and many socio-demographic characteristics like age, education and the number of family member. Which showed that increase the level of education associated positively with use of EBF, and increase the age of mother and increase the number of family member associated negatively with use of EBF. The study recommended to develop health education program concerning exclusive breast feeding based on mothers needs according to the study findings to be implemented in PHC centers.
العوامل التي تؤثر على ممارسة الرضاعة الطبيعية المطلقة وسط الأمهات، منطقة بركات النموذجية، ولاية الجزيرة، السودان (2013)

إعداد:
لبني عبد الرحمن عنان محمد
لين درجة الماجستير في طب الأسرة (أغسطس ، 2013)

ملخص الدراسة

تم تعريف الرضاعة الطبيعية الحصرية بأنها تغذية الرضع حليب الثدي فقط، سواء كان ذلك مباشرة من الثدي أو المعبر عنها، مع عدم وجود إضافة أي سوائل أو مواد صلبة وبصرف النظر عن قطرات أو شراب يتكون من الفيتامينات والنكاح والمواد المعدنية أو البذور، ولا شيء غير ذلك. وقد أظهرت العديد من الدراسات أن الرضاعة الطبيعية الحصرية طيلة الأشهر الستة الأولى يلعب دورا كبيرا في الوقاية من الأمراض والوفيات. هدفت هذه الدراسة إلى تقييم العوامل التي تؤثر على استخدام الرضاعة الطبيعية الحصرية وتقييم المعرفة، وممارسات الأمهات بشأن الرضاعة الطبيعية الخالصة في منطقة بركات النموذجية، ولاية الجزيرة، وعلى معرفة العلاقات بين هذه العوامل وممارسات الرضاعة الطبيعية الحصرية. تتم الدراسة على البيانات الأولية التي تم جمعها من خلال استبيان منظم بهدف إلى تغطية جميع أهداف البحث، وأجريت دراسة مجتمعيه مستعرضه على 128 من الأمهات الذين لديهم أطفال تحت سن الخمس سنوات ، التي تم اختيارها عشوائيا في منطقة بركات النموذجية. تظهر النتائج أن 48% من الأمهات يمارسن الرضاعة الطبيعية حصريا مدة أربعة أشهر، 35% الرضاعة الطبيعية حصرا لمدة 6 شهور و 13% لمدة 2 شهور. واظهرت النتائج أن هناك ارتباط كبير بين ممارسة الرضاعة الطبيعية الحصرية والعديد من الخصائص الاجتماعية _ الديموغرافيا مثل العمر والتعليم وعدد من أفراد العائلة. والتي أظهرت أن زيادة مستوى التعليم يرتبط بشكل إيجابي مع استخدام الرضاعة الطبيعية الحصرية، وزيادة عمر الأم وزيادة عدد أفراد الأسرة يرتبط سلبا مع استخدام الرضاعة الطبيعية الحصرية. ومن التوصيات تطوير برنامج تثقيفي صحي حول الرضاعة الطبيعية الحصرية للأمهات، وفقاً لنتائج الدراسة وتم تنفيذها في مراكز الرعاية الصحية الأولية.
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List of Abbreviations:

**EBF :** exclusive breast feeding

**WHO :** world health organization

**UNICEF :** United Nations Children’s Fund

**UK :** United Kingdom

**MOH :** Ministry of health
CHAPTER ONE

Introduction

Exclusive breastfeeding is defined as feeding infants only breast milk, directly from breast or expressed, with no addition of any liquid or solids apart from drops or syrups consisting of vitamins, mineral supplements or medicine, and nothing else for 6 months (WHO recommends an early initiation of breastfeeding within one hour and breastfeed exclusively for 6 months.[1][2]

Several studies have shown that exclusive breastfeeding for the first six months plays a great role in preventing morbidity and mortality due to diarrhea, respiratory or ear infections and other infectious diseases because breast milk is known to contain antibodies and variety of nonspecific defense factors that add to its antimicrobial effect. For the mother, breastfeeding is economical, breast milk is always available, clean and at the right temperature. Breastfeeding also delays the return of fertility and reduces the risk of developing breast and ovarian cancers. [3]

Globally, less than 40% of infants under six months of age are exclusively breastfed, despite the documented benefits of breastfeeding, and increased rate of exclusive breast feeding is a global goal which is urgently required as an interventional for child survival.[4] According to the United Nations Children’s Fund (UNICEF) “breastfed children have at least six times greater chance of survival in the early months than non-breastfed children.[5]
A large UK study found that 53% of admission to hospital due to diarrhea and 27% due to lower respiratory tract infection, could have been prevented each month by exclusive breastfeeding.[6] In addition, only 38% of infants aged less than six months in the developing world, are exclusively breastfed [7]. In Africa the majority of mothers fail to practice exclusive breast feeding as recommended because there are cultural and social barriers to exclusive breast feeding including practice of giving drinking water and herbal preparation. In some society like Yoruba in Nigeria exclusive breastfeeding is regarded as threatening to the infant because they believe that the infant needs drinking water to suppress thirst and accelerate faster growth.[8] In Sudan as well as in developing countries children are suffered from high risk of death due to poor infant feeding and malnutrition.[9]

**Statement of the problem:**
Exclusive breast feeding is an important worldwide public-health issue, because of its high importance for mothers and babies. The World Health Organization (WHO) has estimated that the prevalence of EBS is 90% which is recommended. In Sudan there is increase in use of EBF but it is still below the wanted level. Non use of EBF is a major cause of mortality and morbidity among under five children. Non-exclusive breastfeeding also has along term impact, including poor school performance, reduced productivity, and impaired intellectual and social development. It can also increase the risk of death due to diarrhea and pneumonia among less than 6 month old infants by more than twofold [10,11].
A number of reviews have found that in developed countries, EBS has benefit on preventing diseases of under 5 children, though, in developing countries (including Sudan) there is a need for increasing rate of EBF to protect against under five diseases, which is the main cause of under five mortality.

**Rationale:**

Although most of mothers who visited Baracat ALnamozajia health care center aware about EBF but most of them not practice it. This study sought to assess various factors responsible for non use of EBF in barakat alnmozajia area, and discover relationships existing between them. This information would assist health care professionals to increase rate of mothers using EBF. It would also assist policy makers in developing policies capable of increasing the number of women using EBF. Ultimately, it is envisioned that the implementation of effective strategies would lead to improved EBF, increased levels of awareness among women and community regarding importance of EBF.

**Hypotheses**

There are factors leading to non-use of exclusive breast feeding among mothers in barakat ALnamozajia area.
Objectives:

General objective:

-To identify factors affecting use of exclusive breast feeding among women in Barakat alnamozajia.

Specific objective:

1_ To estimate rate of use and non use of EBF among mothers in barakt Alnamozajia.

2_To identify factors affecting non use .

3_To estimate knowledge of EBF among mothers and their influences on EBF in April 2013.
Chapter 2

Literature review

Exclusive breastfeeding may give the best start as an effective strategy to protect infant from malnutrition. Evidence shows that of the sixty percent of under-five mortality caused by malnutrition (directly or indirectly), more than two-thirds of those are associated with inappropriate breastfeeding practices during infancy. Not more than (35% of infants worldwide are exclusively, and it is estimated to be 36% in low income countries breastfed during their first four months of life [7,8].

The World Health Organization defines exclusive breastfeeding (EBF) as providing infants with only “breast milk from the mother or a wet nurse, or expressed breast milk and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements, or medicines. [9]

UNICEF & WHO launched Baby Friendly Hospital Initiative in 1992 as apart of global effort to protect, promote and support breastfeeding. However, there are many undesirable cultural practices associated with infant feeding. Based on scientific evidence, the World Health Organization (WHO) recommends the practice of exclusive breastfeeding of infants for the first 6 months after birth, in addition to the continuation of supplementary foods until 2 years or more.[10]

The benefits of breastfeeding, especially exclusive Breast feeding are well established,3,4 particularly in poor environments where early introduction of milk other than mother’s milk is of particular concern because the
risk of pathogens contamination and over dilution of milk leading to increased risks of morbidity and under nutrition.[11] In addition to providing complete nutrition for the development of healthy babies, breast milk has an important role to play in protection against gastroenteritis and severe respiratory infections, acute ear infection, atopic dermatitis, juvenile asthma, obesity, type 1 and 2 diabetes, childhood leukaemia, sudden infant death syndrome (SIDS).[12]

It is estimated that sub-optimal breastfeeding, especially non-exclusive breastfeeding in the first six months of life, results in 1.4 million deaths and 10% of diseases in under-fives. Non-exclusive breastfeeding also has long term impact, including poor school performance, reduced productivity, and impaired intellectual and social development. It can also increase the risk of dying due to diarrhea and pneumonia among 0–5 month old infants by more than twofold [7,8].

Although exclusive breastfeeding rates have been increasing in most developing countries over the past 10 to 15 years, UNICEF’s statistics show the necessity to educate mothers and increase knowledge and attitude about the importance of exclusive breastfeeding during the first six months to help mother knowledge, attitude and practice regard breastfeeding (KAP).[13]

There is several studies done worldwide to assess level use of EBF.

In 2002 a large study in UK (United Kingdom), which was a population-based survey (Cohort Study), for infants who were born in 2000–2002. The main outcome measures were parental report of hospitalization for diarrhea and lower respiratory tract infection in the first 8 months after birth. 70% of infants were breastfed (ever), 34% received breast milk for at least 4 months,
and 1.2% were exclusively breastfed for at least 6 months. By 8 months of age, 12% of infants had been hospitalized (1.1% for diarrhea and 3.2% for lower respiratory tract infection). Data analyzed by month of age, with adjustment for confounders, show that exclusive breastfeeding, compared with not breastfeeding, protects against hospitalization for diarrhea and lower respiratory tract infection. Population-attributable fractions suggest that an estimated 53% of diarrhea hospitalizations could have been prevented each month by exclusive breastfeeding and 31% by partial breastfeeding. Similarly, 27% of lower respiratory tract infection hospitalizations could have been prevented each month by exclusive breastfeeding and 25% by partial breastfeeding.[14]

According to the International Baby Food Action Network (IBFAN) Africa Regional Office Report (2004), exclusive breastfeeding at 3-4 months in 2000 in the region was as follows: Botswana 29.7%, Eritrea 64%, Ghana 36%, Kenya 17%, Lesotho 54%, Malawi 11%, Nigeria 62%, Somalia 7%, Sudan 40.8%, Swaziland 53%, Tanzania 4.1%, Uganda 68% and Zimbabwe 2.5%. These rates compare well with those outside Africa. In Bolivia in 1995, exclusive breastfeeding for children 2-3 months was 48% declining to 27%, at the age of 4-5 months. [15]

There is a wide range of variation in the practice of exclusive breastfeeding among developing countries, with the rates documented being: Brazil (58%), Bangalore (40%), Iran (Zahedan) (69%), Iran (28%) Beruwala (Kalutara) (15.5%), Lebanon (10.1%), Nigeria (20%), Bangladesh (34.5%), Jordan (77%). In Ethiopia, 49% of infants were exclusively breastfed for the first six months, while 56.9% were exclusively breastfed for the first four months [16].
This was a 4-year cohort study conducted from 1998 to 2001 inclusive, by medical students of the Chinese University of Hong Kong. It was done on Hong Kong, China, in 243 mothers of under 4 years old child, there were 66.7% of mothers initiating breastfeeding, with a median duration of 1 month. Only 13.4% met the World Health Organization’s recommendations on breastfeeding. Breastfeeding was found to have a statistically significant relationship with (i) the infant’s birth order and (ii) the mother’s and father’s education level. And in conclusion, the current breastfeeding rate in Hong Kong falls below expectations when compared with other developed nations. Factors influencing Hong Kong Chinese mothers to breastfeed included: higher education level, knowledge about breastfeeding, feelings of responsibility and closeness to baby, and encouragement and support from the husband.

A study conducted by the Hong Kong Department of Health in the year 2000 found that only around 10% of women practiced breastfeeding for at least the initial 6 months of the baby’s life as recommended by the WHO.[17]

A cross-sectional study was conducted in 10 clinics in the Windhoek district, by Justina-Nelago Amadhika, University of the Western Cape in Namibia, in March 2005. A time limited sampling procedure was used to select mothers with children 6 weeks to 11 months old. The prevalence of exclusive breastfeeding at 4 months was 48.5%. The factors that were significantly associated with exclusive breastfeeding are antenatal care attendance, birth order, showing attachment and experiencing breast problems. Age of the mother was a confounding factor in the relationship between birth order and exclusive breastfeeding. The type of delivery, breastfeeding education during pregnancy.[18]
In 2011 a cross-sectional study was carried out on 200 mother-infant pairs in Bilal Colony (semi-urban) and the Aga Khan University (urban) Pakistan, who visited the health care centers, the result show that Exclusive breastfeeding was reported by about 54% of the mothers. Majority of the females were aware of the advantages (92%) and the disadvantages (85%) of breastfeeding. [19]

Prospective cohort of 462 women who delivered at maternity unit of Government Medical College & Hospital, Rajkot, in India, which is a tertiary care centre for the district, was studied. Results show that all 462 mothers reported breastfeeding their newborns. Prevalence of exclusive breastfeeding reported at 3 months was 97% which declined to 62% by 6 months of age of infants. Exclusive breastfeeding prevalence rate found higher than at national level indicating better feeding practices in these part of India. Also, factors classically considered as supportive for breastfeeding had shown no association with breastfeeding pattern in present study. [20]

This descriptive cross-sectional study was conducted from January 2011 through March 2011, with data from 750 mothers who were selected through multistage sampling method and cluster sampling with non-equal clusters pattern to assess exclusive breastfeeding and factors affecting knowledge, attitude and practice of mothers in rural and urban regions of east Azerbaijan, Iran. The result show that breastfeeding situation in this province was good. However, exclusive breastfeeding prevalence had shown a downward trend at four (63.3%) and six months (23.8%); and the results were far away from to the WHO recommendations. Based on the results, EBFD was lower in employed mothers and it demonstrated the need to educate mothers to continue EBFD despite being employed with external
duties at workplace. The results also showed that exclusive breastfeeding duration significantly increased with maternal educational level (p<0.005, Although in the univariate analysis, mothers with high educational levels appeared to have shorter duration of breastfeeding in comparison with illiterate mothers. Most mothers with EBFD were in the poor socio-economic group in the rural region.[21]

A Descriptive Epidemiological study conducted at Rafiq Nagar urban slum, Mumbai, India to assess maternal and environmental factors affecting the nutritional status of children less than 6 years. The study show that Parents' higher education, exclusive breast feeding for 6 months, proper weaning, immunization and higher socioeconomic status had beneficial effect on nutritional status of children. Also environmental conditions, birth order and total number of children in family had effect on nutritional status of children. [22]

A community-based cross-sectional study was conducted from March to February 2010 among mothers in Bale Goba district, south east Ethiopia. A total of 608 mothers were selected randomly. The prevalence of exclusive breastfeeding for infants’ aged less than six months in the study area was 71.3% as measured by last 24 hours recall period preceding the survey date. The results of month-specific lifetime exclusive breastfeeding analysis showed that the majority 88.8% of infants were breastfed exclusively for 2 months, while 84.4% of infants were breastfed exclusively to 2 to 3 months of age, the national exclusive breastfeeding prevalence in Ethiopia (49%).[16]

A cross-sectional study was conducted in March to May 2010 among 402 consenting women in Kigoma region, Western Tanzania. The prevalence of
EBF among women in Kigoma Municipality was 58%. Knowledge of EBF was relatively higher (86%) compared to the practice. Prevalence of EBF in Kigoma municipality was slightly higher than the national figure of 41%, however it was way below the EBF prevalence of 90% recommended by the WHO. Strategies that target improving knowledge and skills for lactation management among women.

This cross-sectional study was carried out in Al-Hassa, Saudi Arabia during June and July 2009, by Abdel-Hady El-Gilany and others. Results show that only 24.4% of infants were exclusively breastfed at the age of 6 months. Despite the great advances in health services in Saudi Arabia, studies have reported a downward trend in breastfeeding practice. Exclusive breastfeeding is more likely to be reported by mothers of rural/hegar residence, housewives, less educated mothers, full-term infants, average-weight infants, infants delivered normally, infants not given prelacteal feed, infants with timely breastfeeding initiation, and infants given on-demand feeding. Much lower rates were reported from other regions of Saudi Arabia. In Riyadh only 0.8% of infants were exclusively breastfed for the first 4–6 months, and the rate rises to 1.7% among infants at the age of 6 months in Jidda. Higher rates of 27.3% and 33.1% were reported in Al-Kharj and in Dammam, respectively. [23]

Across sectional study conducted in Lebanon that aimed to explore demographic, socio-economic and other fundamental issues associated with the initiation and duration of BF by Lebanese mothers. Although 55.9% started breast-feeding their newborns within a few hours after birth, and 18.3% within half an hour, 21.2% replied that they initiated BF a few days...
after birth. Only 4.6% of the mothers replied that they never breast-fed their infant. Of the mothers who breast-fed exclusively beyond 6 months, exclusivity of BF was low, dropping to 52.4% at 1 month. Exclusivity of BF was also associated with place of residence (urban/rural) and negatively associated with educational level of the mother. Rural mothers and those who practiced exclusive BF maintained BF for a longer duration. Initiation rates of BF are very high in Lebanon but rates of exclusive BF are low and duration of BF is short. For the 95.4% of mothers who initiated BF, an ecological perspective on intervention aimed at women and their social support system is required to improve duration and exclusivity. [24]

In Sudan, in Wadmadeni town mothers who exclusively breastfeeding for full four months are the majority, consisting 64.5%. Those who breastfeed for six months were 29.5%, while only 6.0% breastfeed for two months. (Sudanese Journal of Public Health: April 2008, Vol.3 (2) 84) The study found that exclusive breastfeeding was ranged between four and six months because most mothers give their infants complementary food after six months 89.8% and only 10.2% after four months. [25]

Global target 5 according to (WHO. April 2008): Increase exclusive breastfeeding rates in the first six months up to at least 50% by 2022. Globally, exclusive breastfeeding rates increased from 14% in 1985 to 38% in 1995, but decreased subsequently in most regions. However, rapid and substantial increases in exclusive Breastfeeding rates, often exceeding the proposed global target, have been achieved in individual countries in all regions, such as Cambodia (from 12% to 60% between 2000 and 2005),
Mali (from 8% to 38% between 1996 and 2006) and Peru (from 33% to 64% between 1992 and 2007).[26]

**Exclusive breast feeding in Sudan:**

![Graph showing exclusive breastfeeding in Sudan](image)

Incidence of exclusive breast feeding in Sudan (1989-2006).[27]

To enable mothers to establish and sustain exclusive breastfeeding for six months, the WHO and the United Nations Children's Fund (UNICEF) recommend:

“Initiation of breastfeeding within the first hour of life; Exclusive breastfeeding - that is, the infant only receives breast milk without any additional food or drink, not even water; Breastfeeding on demand - that is, as often as the child wants, day and night; No use of bottles, teats or pacifiers.”[28]
CHAPTER THREE

Methodology:

Study design:

The study was quantitative descriptive cross-sectional design, conducted in one month April in year 2013.
This study was carried out to identify factors predicting exclusive breastfeeding among mothers in Baracat ELnamozagia Area, in Gezira State

Study area:

The study was conducted in Barakat ALnamozajia area. Barakat ALnamozajia is big area located to the south part of Gezira state, it is about 11 km to the south from wedmedani the capital of state. It is land is constitute 3km2, number of population are 2016, populations are a mixture of different tribes of Sudan, share same cultures characteristics and ethnic believes.

In Barakat ALnamozajia there is one health center, which is located in center of the area. The health center present primary health care services to the village people, it is directed by one family doctor, in it there is pharmacy provide essential drugs and chronic diseases treatment, also there is laboratory for routine investigation directed by laboratory technician and, the health center provide health insurance services to population.
Study population:

2016 are the total population of Barakat ALnamozajia area, of them (1061) are male and are female (955), the study population are women selected randomly from the females resident in Baracat ALnamosajia area, according to the following inclusion and exclusion criteria.

Inclusion criteria:
- Resident in Brakat. ALnamozajia
- Mothers have baby of less than 5 years
- Mentally sound.

Exclusion criteria:
- Not resident in Barakat ALnamozajia
- Women not have child with under 5 years.
- Women who refused to participate in the study.
- Mental unstable women.

Sample size:

128 mothers with under five child. The sample of study was calculated according to the following equation:

(Steven Sampthon equation)

\[ n = \frac{N \times P \times (1-P)}{((N-1)(d^2/z^2) + p(1-p))} \]

n = sample size
N = under 5 age = 371
\[d = 0.07\]
\[p = 0.5\]
\[z = 1.96\]
\[n = \frac{371 \times 0.5(1-0.5)}{(371-1)(0.07^2/1.96^2)+0.5(1-0.5)}\]

the sample size is = 128 mothers

**Sampling technique:**
The sample was selected by multistate systematic random sampling technique, where the volunteers selected.

**Data collection methods:**
Questionnaire was designed. The data were collected by 4 of well trained immunization staff who took an intensive training on the questionnaire and on general approaches to data collection, and oriented about research objectives and how to deal with mothers questions, and to ensure proper filling of the questionnaire.
Women were first informed about the study and its aim, and those agreeing to participate were given a questionnaire. Face-to-face interviews were then conducted at participant’s home, at a private spot away from other family members, in order to understand each other and for confidentiality. The questionnaire was used to collect information on the socio-demographic characteristics of the mothers and their partners, obstetric factors like parity, type of delivery, and included questions about knowledge of exclusive breast feeding and practice of infant feeding.
Data processing and analysis:

SPSS (Statistical Package and Social Sciences) .
Microsoft excel 2007.
Chi-square test and T.test use to calculate significance.

Validity:
Questionnaire validity was examined by supervisor doctor of community medicine, sensitive questions was reworked, and difficult questions was simplified to became easily understood by the participants.

Reliability:
The questionnaire was tested using 10 women in Barakat ALnamozajia health center by the researcher, those 10 women was excluded from the study subjects.

Ethical consideration:
Approval was obtained from MOH and locality.
Permission was taken from all respondents.
Mothers were informed about objectives of the study.
Researcher was insure high level of privacy and confidentiality and equity for all respondents, confidentiality was ensure by storing data in closed place, and only the researcher who have access to it.
Presests of any sensitive or difficult questions in the questionnaire were avoided.
CHAPTER FOUR

RESULTS

This study was conducted in April 2013, a total number of 128 mothers whom were live in Barakat ALnamozajia area, from the age 18 years to 45 years were selected according to matching set of criteria and agreed to participate in the study.

Figure [1]: Age frequency distribution of mothers of under 5 years old children in Baracat ALnamozajia.

n=128
Table 1: effect of age on use of EBF:

<table>
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<th>age</th>
<th>freq</th>
<th>percentage</th>
<th>use</th>
<th>nonuse</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤30</td>
<td>90</td>
<td>70.3125</td>
<td>72</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>&gt;30</td>
<td>38</td>
<td>29.6875</td>
<td>11</td>
<td>27</td>
<td>0.341691</td>
</tr>
<tr>
<td></td>
<td>128</td>
<td></td>
<td>83</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 above shows that increase of age associated negatively with use of EBF.

Figure [2]: shows Level of education.

n = 128
Table 2: distribution of education level by use and nonuse of EPF:

<table>
<thead>
<tr>
<th>level of education</th>
<th>frequency</th>
<th>percentage</th>
<th>use</th>
<th>nonuse</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>12</td>
<td>9.375</td>
<td>1</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>primary and intermediate</td>
<td>90</td>
<td>70.3125</td>
<td>60</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>and secondary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>university and above</td>
<td>26</td>
<td>20.3125</td>
<td>22</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>128</td>
<td>83</td>
<td>45</td>
<td>0.198527</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 above shows that increase level of education associated positively with use of EBF.

Table 3: effect of family type on EBF:

<table>
<thead>
<tr>
<th>size of family</th>
<th>frequency</th>
<th>percentage</th>
<th>use</th>
<th>non use</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>large family</td>
<td>41</td>
<td>32.03125</td>
<td>13</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>small family</td>
<td>87</td>
<td>67.96875</td>
<td>70</td>
<td>17</td>
<td>0.337792</td>
</tr>
<tr>
<td></td>
<td>128</td>
<td>83</td>
<td>45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 above shows that large family have high proportion of nonuse of EBF.
Table 4: effect of number of children in family on EBF:

<table>
<thead>
<tr>
<th>number of deliveries</th>
<th>frequency</th>
<th>percentage use of EBF</th>
<th>non use</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 3 children</td>
<td>64</td>
<td>50</td>
<td>51</td>
<td>13</td>
</tr>
<tr>
<td>&gt; 3 children</td>
<td>64</td>
<td>50</td>
<td>32</td>
<td>32</td>
</tr>
</tbody>
</table>

Table 4 shows that increase number of children in family decrease the incidence of use of EBF.

Figure [3] occupational status of mothers. n = 128

Most of mothers are housewife, this explain increase incidence of breast feeding (94.5%) and frequency of feeding \ day (87.4%) 12 times or more.
Figure [4] type of delivery of the last baby. \( n = 128 \)

The study found that 98.1% of mothers after normal labour breast feed their infant immediately and the rest after more than 2 hours or more. And after cesarean section 36.9% breast feed after 2 hours or more.

Figure [5] proportion of mothers that breast feed their children.

\( n = 121 \)
Figure [6]: Proportion of initiation of breast feeding. \( n = 121 \)

Figure [7]: Frequency distribution of number of breast feeding \( \text{day} \). \( n = 121 \)
Figure [8]: Proportion of mother knowledge about exclusive breast feeding. 
 n=128

Figure [9]: Source of knowledge about exclusive breast feeding. 
 n=123
Figure [10]: proportion of mothers knowledge about duration of exclusive breast feeding.
\[ n = 123 \]

Figure [11]: practicing of exclusive breast feeding.
\[ n=123 \]
Figure [12]: Do you think breast milk is enough for your baby? 
\[ n = 128 \]

Figure [13]: shows why some mothers think breast milk is not enough for their babies. 
\[ n = 43 \]
Figure [14]: Type of added fluid given to non breast feeding child.

n=43

Figure [15]: shows proportion of mothers who combine breast milk with added milk.

n=128
Figure [16]: shows the onset of introducing added milk to non breast fed baby. 

n = 39

Figure (17) causes of adding added milk to normal breast fed child

n = 39
Figure (18) show practice of mother when her baby developed diarrhea.

n = 128
CHAPTER FIVE

Discussion:

This study identify factors affecting use of EBF among mothers in Barakat ALnamozajia. The study data obtained through structured questionnaire. The data revealed that there are many factors affecting use of exclusive breast feeding among women in Barakat ALnamozajia like increased of age of mother associated negatively with use of EBF, which is similar to the study which done in Namibia duo to association between age and EBF.

Increased level of education associated positively with use of EBF and this is also found in the studies which done in India, Azarepigan (Iran) and Hong Kong (China) where EBF increase positively with education, which show discrepancy with the result of studies which done in AL-Hssa (Saudi Arabia) and in Lebanon where EBF increase negatively with level of mothers education.

large family have high proportion of nonuse of EBF because of cultural and social barriers to exclusive breast feeding including practice of giving drinking water and herbal preparation from grandmothers because they think baby needs drinking water to suppress thirst and this result is cross bound to that in Yoruba in Nigeria. [13]

A study found that 94.5% of mothers initiate breastfeeding immediately after delivery, most of them delivered with normal labour. Combination of breastfeeding and added milk found in the study is 30.1% and 7% of them since the first week, this fluid vary from herbal preparation in 28.9% and added milk from Goat or Cow or milk formula. All these because 33.6% of
them think that breast milk is not enough for their babies (86% of them think breast milk has not enough water).

Exclusive breastfeeding is the sole source of nutrition and energy for infants up to six months of age, according to study 71.1% of mother express that exclusive breast feeding means feeding the child just breast milk, 25% think exclusive breast feeding is breast milk with added fluid and 3.9% do not know what it means.

64.8% said they practice EBF, but practically according to study finding only 48% of the mothers were observe breastfed their children exclusively for 4 month which was similar to the result of study done in Namibia (48.5%). And 35% for 6 month which was similar to result of study done in Sudan in 2006 which show that incidence of EBF was 34%, this result cross bounding to that in Kigoma region, Western Tanzania where the awareness about exclusive breast feeding is higher than practice (41%). however it was way below the prevalence of exclusive breastfeeding 90% recommended by the WHO, and this result (35%) is relatively high when compare to result of (29.5%) of study which done in Sudan, in Wadmadeni town (April 2008), and differ from carried study in Barecat ELnamosjia which is show low incidence of EBF for 4 month (48%) in compare with (64.5%) in wadmadeni town which could be due to the difference in the study population.

There are 13% start to add fluid immediately after 2 month and the rest vary from 3 month to one year as they said.

So knowledge of exclusive breastfeeding was relatively higher (64.8%) compared to the practice prevalence of exclusive breastfeeding (35%).
Also in Bilal Colony (semi-urban) and the Aga Khan University (urban) Pakistan the result is 54% for 4 month, and the national exclusive breastfeeding prevalence in Ethiopia (49%) which is similar to the result found in Baract ELnamosajia and in Bale Goba district, south east Ethiopia. The prevalence of exclusive breastfeeding for infants’ aged less than six months in the study area was 71.3%. so in Ethiopia the practicing of EBF is relatively high in compare to developing countries.

The incidence of exclusive breast feeding in Barecat ELnamosjia is less than prevalence recommended by WHO which was found due to traditional effect and 32% of families are large family and 48.9% not proper educated and according to study incidence of EBF increase negatively with large family and positively with level of education, and increase number of children increase EBF negatively.

64.1% of mother who non use of EBF use the bottle and 35.9% use the cup in feeding their children. The good thing that observed that 63.3% of mothers feed more than 12 times a day, increase frequency increase EBF rate.

When mothers asked about diarrhea 60.9% said they continuo breastfeeding with adding fluid and 39.1% just continuo breastfeeding and this show that the mothers who continuo feeding without fluid are just breast feed their babies exclusively.
Conclusion and Recommendations:

Conclusion:
The study showed that there are many factors affect exclusive breast feeding in Barakat ALnamozajia area. And EBF proportion are 35% and all of them are assessed by this study. The main factors affecting exclusive breast feeding are: age of mother, decrease level of education, high number of children, and lack of awareness about complications of non use of exclusive breast feeding.

The findings from this study will be used to increase the scientific knowledge base to the scientific world. Also the findings will be used to inform the practice and policy makers (Ministry of health and social welfare) with the aim of planning interventions to increase level of EBF and to reduce the impact of non use of EBF and its complications among under five age children.
**Recommendation:**

Doctors should educate and advice mothers about EBF and it is important. Developing health education program concerning Exclusive Breast Feeding based on mothers needs according to the study findings to be implemented in PHC centers.
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بسم الله الرحمن الرحيم

جامعه الجزيره

كلية الطب

شعبه طب المجتمع وطب الاسره

استبيان عن الرضاعه الطبيعية المطلقة (الحصريه)

القسم الأول

البيانات الشخصية :

الاسم:

العمر: تحت العشرين ( ) بين 21 - 25 ( ) بين 26 - 30 ( ) بين 31 - 35 ( ) بين 36 - 40 ( ) فوق الاربعين ( )

المستوى التعليمي:

اميه ( ) ابتدائي ( ) متوسط ( ) ثانوي ( ) جامعي ( ) فوق جامعي ( )

اخرى ( ) حدد............................

الوظيفه:

ربى منزل ( ) موظفه ( ) عامله ( ) اخرى ( ) حدد...............

نوع الاسره :

صغيره ( نوويه) ( ) كبيره(ممتده) ( )

نوع الولاده :

ولاده طبيعيه ( ) ولاده قيصريه ( )

مكان الولاده :

المستشفى ( ) مركز صحي ( ) البيت ( ) اخرى ( ) حدد........

عدد الولادات: 1-3 ( ) 4-6 ( ) اكثر من 6 ( ) حدد........

القسم الثاني: الرضاعه الطبيعيه

كم عمر طفلك الاخير؟

هل ترضعين طفلك رضاعه طبيعيه ؟ نعم ( ) لا ( )

-38-
في حالة الإجابة بنعم متى بدأ الرضاعه: بعد الولادة مباشرة ( ) بعد ساعتين ( ) بعد 24 ساعة ( ) بعد ساعتين ( ) حددى......

في حالة الإجابة بلا حددى السبب: انت مريضه ( ) طفلك مريض ( ) رفض الرضاعه ( ) اخرى حددى......

هل جمعت بين الرضاعه الطبيعية والرضاعه الصناعية؟

نعم ( ) لا ( )

إذا كانت الإجابة بنعم حددى السبب: انت مريضه ( ) طفلك مريض ( ) رفض الرضاعه ( ) اخرى حددى......

إذا كانت الإجابة نعم متى بدأ الجمع بينهما؟ في الأسبوع الأول ( ) في عمر شهرين ( ) بعد 4 شهور ( ) اخرى حددى......

إذا كانت الإجابة نعم حددى السبب: انت مريضه ( ) طفلك مريض ( ) رفض الرضاعه ( ) اخرى ( ) حددى......

متى ترضعين طفلك؟ عندما يبكي ( ) باستمرار ( ) كل ساعتين ( ) اخرى ( ) حددى......

كم مره في اليوم ترضعين طفلك؟ 5 مرات ( ) 8 مرات ( ) 12 مره ( ) اكثر من 12 مره ( ) اخرى ( ) حددى......

ماذا تعني لك الرضاعه الطبيعية المطلقة؟ الرضاعه من الثدي فقط ( ) الرضاعه مع اعطاء بعض السوائل فقط ( ) لا أدرى ( ) حددى......

من اين سمعت بها؟ وسائل الإعلام ( ) الطبيب بالمركز ( ) الجيران والاقارب ( ) اخرى ( ) حددى......

كم مدة الرضاعه الطبيعية المطلقة؟ 6 شهور ( ) 4 شهور ( ) شهرين ( ) اخرى ( ) حددى......

هل ترضعين طفلك رضاعه طبيعية مطلقة؟ نعم ( ) لا ( )

إذا كانت الإجابة لا ماذا تعطيه؟ سوائل منزلية ( ) اخرى ( ) حددى......

متى بدات هذه الإضافات؟ في الأسبوع الأول ( ) في عمر شهرين ( ) بعد 4 شهور ( ) اخرى حددى......

هل يعتبر حليب الأم كافيا للطفل؟ نعم ( ) لا ( )

إذا كانت الإجابة بلا ماذا ؟ عدم احتواءه على الماء الكافى ( ) عدم احتواءه على الفايتمين الكافى ( ) اخرى ( ) حددى......

ماذا تفعلين إذا أصيب طفلك باسهل ؟ توقفين الرضاعه ( ) تستمرين في ارضاعه ( ) تستمرين مع اعطاءه ......