



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF  
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.2556819>Available online at: <http://www.iajps.com>

Research Article

**KNOWLEDGE, ATTITUDE AND PRACTICES OF MOTHERS  
REGARDING TO BREAST FEEDING IN SUDAIR AND ZULFY  
AREAS, SAUDI ARABIA, 2015**<sup>1</sup>Abdullah Jehad Alotaibi, <sup>2</sup>Mohammed Fahad Aldhahi, <sup>3</sup>Ahmed mohammad Almosallm,  
<sup>4</sup>Asim Dyab Alanezi, <sup>5</sup>Bander mohammad alotaibi, <sup>6</sup>Ibrahim Mohammad Almotairi**Abstract:**

**Background:** Breastfeeding is the ideal way of providing young infants with nutrients they need for healthy growth and development.

**Objectives:** To study the knowledge, attitude and practice regarding breastfeeding and to determine barriers of breastfeeding in Sudair and Zulfy areas

**Materials and Methods:** A non-experimental, cross-sectional design was used to collect data. It included all mothers, who have a child aged 0-24 months, attending primary health care centers within Sudair and Zulfy areas. An Arabic validated questionnaire was used for data collection. It comprises four parts as follows: sociodemographic data, knowledge, attitude and practice toward breastfeeding.

**Results:** A total of 306 women, with children aged 0-24 months, from PHCC in Sudair and Zulfy areas. Most of the participants were from Majmaah area (50.7%). Majority of them were between 28-38 years (57.2%). Most of them were Saudi (91.8%) and University or higher graduated (63.1%). Overall mothers' breastfeeding knowledge was excellent among the majority of them (80.72%). Positive attitude towards breastfeeding was reported among (63.49%) of the participants while negative attitude was reported among more than one-third of them (36.51%). Breastfeeding in the first 6 months was practiced by (93.1%) of the participated mothers. Of them, only (19.3%) practiced exclusive breast feeding. The most common perceived barriers cited by the mothers was the perception of insufficient milk production (53.3%).

**Conclusion:** The knowledge of the exclusive breastfeeding in our study was better than the other studies in Saudi Arabia. The perception of insufficient milk production was the leading reason that mothers reported for their decision to stop breastfeeding.

**Key words:** Breastfeeding; Exclusive; Prevalence; Knowledge; Attitude; Practice, Barriers Saudi Arabia

**Corresponding author:****Dr. Talal Shakas Alghamdi**

Assistant professor, family medicine, basic sciences department,  
College of Medicine, Majmaah University, Kingdom of Saudi Arabia.

QR code



Please cite this article in press Abdullah Jehad Alotaibi et al., *Knowledge, Attitude And Practices Of Mothers Regarding To Breast Feeding In Sudair And Zulfy Areas, Saudi Arabia, 2015.*, Indo Am. J. P. Sci, 2019; 06(02).

## INTRODUCTION:

### Background:

Breastfeeding is the ideal way of providing young infants with nutrients they need for healthy growth and development. Most breastfeed provider have an accurate information, and support [1]. However, for some women breastfeeding may not be possible or milk supplies not sufficient despite their best efforts. Benefits for maternal and infants health are well recognized, and extensive efforts to promote breastfeeding have been implanted in many countries. Breastfed babies gain nutritional, growth benefits, and enhanced immune system by receiving antibodies from breast milk, which protects against infection in the early postpartum period [2,3]. In addition, it has a possible protective effect on the risk of obesity later in life [4], promotes sensory and cognitive development, reduces infant mortality due to common childhood illnesses such as diarrhea or pneumonia, and helps for a quicker recovery during illness.

Moreover, Exclusive breastfeeding contributes to the health and well-being of mothers, it helps to space children, reduces the risk of ovarian and breast cancers, increases family and national resources [5]. Breast-feeding should be initiated during the first hour after birth because Colostrum, the yellowish, sticky breast milk formed immediately after delivery. WHO recommend colostrum as the most excellent food for the newborn. Exclusive breastfeeding is recommended up to 6 months of age, with continued breastfeeding by the side of suitable complementary foods up to two years of age. [6]

Factors associated with a high prevalence of breastfeeding and longer duration include increase maternal age, low education levels, rural residence, low income, multiparity and avoiding contraceptives. The most common reason for breastfeeding cessation was insufficient breast milk. Other reasons include sickness, new pregnancy and breastfeeding problems. [7]

Thus, Interventions that seek to increase breastfeeding should consider focusing on women who are most at risk of early discontinuation of breastfeeding. Lack of knowledge, non-supportive behaviors and attitudes of maternity nurses, inconsistent advice, and minimal prenatal encouragement to breastfeed have been cited as barriers to breastfeeding. [8] Some nurses and physicians are less than supportive of breastfeeding and tend to encourage mothers to supplement with formula or to give up all together if they experience difficulties with breastfeeding.

### Problem statement:

In industrialized countries, A 2012 review study found the prevalence of exclusive breast feeding initiation was the highest in Norway, Denmark, and Japan with respectively, 99, 98.7, and 98.3%. This prevalence was the lowest in the United Kingdom, the United States, and France with respectively, 70, 69.5, and 62.6%. [9]

In Malaysia, since the 1990s, several breastfeeding promotion programs had been implemented. The total prevalence of ever breastfed among children aged less than 12 months was 94.7%. The overall prevalence of exclusive breastfeeding below 6 months was 14.5%. Prevalence of timely initiation was 63.7% and the continued prevalence of breastfeeding up to two years was 37.4%. These findings suggest that the programs implemented in the last ten years were effective in improving the prevalence of ever breastfeeding, timely initiation of breastfeeding and continued breastfeeding up to two years. [10]

According to UNICEF nutrition indicators, the highest rates of exclusive breastfeeding are currently found in Eastern/Southern Africa (49%) and South Asia (45%), and the lowest in West/Central Africa (24%). [11]

An Ethiopian study showed a high prevalence of exclusive breastfeeding (70.2%). Age of the mother, age of the child and postnatal care were found statistically significant with exclusive breastfeeding. [12]

In Nigeria, MO et al Noted that 31% of the mothers had adequate knowledge of exclusive breastfeeding with 53% of them initiating breastfeeding immediately after birth. Only 31% of the mothers practiced exclusive breastfeeding. [13]

In 2011, an Indian study found that early initiation of breastfeeding was practiced by only 36% mothers, where as 47% had knowledge about it. Mothers having correct knowledge about continued duration of Breast Feeding up to 2 years were 38%. A total of 96% mothers were aware of benefits of BF to child & only 13% mothers knew of its benefits to themselves, of which 10% were educated. Many (60%) practiced colostrum feeding & 46% gave pre-lacteal feeds. Only 43% mothers practiced Exclusive Breast Feeding (EBF). [14]

Despite of great advances in health services of Saudi Arabia, a declining trend of exclusive breastfeeding from 90% to 30% at the age of 3 months has been reported. The rate of the continuation of breastfeeding for up to 2 years has dropped from 32% in

1987 to 3.2% in 2000. Only 0.2% of mothers in Saudi Arabia exclusively breast feed their infants at 2 years of age. [15]

A recent Saudi study, in 2014, reported that overall mothers' breastfeeding knowledge was good among 55.3% and excellent among 30.7% of them while it was unsatisfactory among 14% of the mothers. Positive attitude towards breastfeeding was reported among 62.2% of the participants while negative attitude was reported among more than one-third of them (37.8%). Breastfeeding in the first 6 months was practiced by 24.7% of the participated mothers. Of them, only 7.3% practiced exclusive breast feeding despite the relatively higher level of knowledge.[16]

#### Rationale:

Nowadays, there is a lack in the awareness of the importance and the benefits of breastfeeding and most of the females have a wrong believes and ideas about it. Also, there are many myths about Infant formula passed around by the family, friends and the formula companies which limit breastfeeding practice such as "Infant formula is basically the same as breast milk" and "the breastfeeding will make the breast saggy".

The sample size was calculated as follow:

$$N = \frac{Z^2 \times pq}{d^2}$$

(N= sample size, Z: standard normal deviate =1.96, p:prevalance, q:1- p, d: error accepted=0.05).

Lastly, there is no data on knowledge, attitude and practice of breastfeeding in our study area. For these reasons, this study was carried out.

#### Objectives

##### General:

1. To measure the prevalence of breastfeeding among women
2. To investigate the knowledge of mothers regarding breastfeeding.
3. To depict the maternal attitudes towards breastfeeding.
4. To explore practices of mothers regarding breastfeeding.

##### Specific:

1. To determine barriers to breast feeding.
2. To identify breastfeeding promotion programs needs and support services in Sudair and Zulfy areas.

## MATERIALS AND METHODOLOGY

### Materials and Methodology Study design:

A cross-sectional study including all mothers, who have a child aged 0-24 months, attending king Khalid hospital & primary health care centers within Sudair and Zulfy areas.

### Study area:

Sudair area, which include (Majmaah and Hotat Sudair), is a historical region in Najd in the central of Saudi Arabia, and is located approximately 150 km north of the Saudi capital, Riyadh. The area lies in a valley directly to the east of the Tweig escarpment, which runs across Najd starting from Sudair in the north and ending near Wadi ad-Dawasir in the south. Sudair area include Majmaah, which is a city and a governorate in Riyadh Province, Saudi Arabia. Majmaah has an area of 30 000 square kilometers. In addition, it is the capital of the Sudair area. The population of the town is around 48,000. Hotat Sudair is a part of Sudair area, which is a city in Riyadh Province in central Saudi Arabia, about 140 kilometers northwest of Riyadh. The population of the town is around 19000. Al Zulfy also is a city in Riyadh Province in central Saudi Arabia, about 260 kilometers northwest of Riyadh. [17]

### Study population:

All mothers, who have a child aged 0-24 months, attending king Khalid hospital & primary health care centers within Sudair and Zulfy areas constitute the study population.

**Sampling:** the sample size is needed is 329

P=312 [16]

### DATA COLLECTION:

The data were collected by using a questionnaire previously used in similar designed study. [16] The questionnaire was administrated by the female health worker staff to the participants during a period of 3 months (January through March 2016).

The questionnaire was translated into Arabic by the researchers and the content validation was done by three experts : tow family medicine & one community medicine consultants.

The questionnaire contain four parts:

1. Infant and mother Sociodemographic Characteristics.
2. Knowledge regarding breastfeeding.
3. Attitude of mothers towards breastfeeding.
4. Breastfeeding practices.

A pilot study was conducted to test the wording and clarity of the questionnaire. The result was helped in refining the questionnaires

Total knowledge score range from 0 to 29, with higher scores indicating more knowledge. Knowledge of mothers whose scores are less than 50% (i.e., <15) was considered as “unsatisfactory”, 50% to <75% (i.e., 15-21) was considered “good”, while mothers’ knowledge scores 75% or more (i.e., 22-29) was considered as “excellent”.

#### Data analysis:

The data were analyzed by a computer software (SPSS version 18).

#### Ethical concern:

The ethical committee of Majmaah University approved the proposal. The participants consent was obtained prior to the questionnaire.

All information kept purely confidential and only be used for statistical analysis. The participants were informed about the advantages of this research.

## RESULTS:

| Area         | Number of participants |
|--------------|------------------------|
| Majmaah      | 155 (50.7)             |
| Zulfy        | 97 (31.7)              |
| Hotat Sudair | 54 (17.6)              |
| <b>Total</b> | <b>306 (100)</b>       |

(Table-1) shows the Distribution of the participant women on the study areas, most of the participants were from Majmaah area 155 (50.7%) then from Zulfy are 97 (31.7%) and the least participants were from Hotat Sudair 54 (17.6%).

| <i>Socio-demographic Data</i> |                      | <i>Frequency</i> | <i>%</i> |
|-------------------------------|----------------------|------------------|----------|
| <b>Age of the mothers</b>     | 16 -27 years         | 78               | 25.5     |
|                               | 28 – 38 years        | 175              | 57.2     |
|                               | 39-49 years          | 53               | 17.3     |
|                               | Total                | 306              | 100.0    |
| <b>Infants age in months</b>  | from 0-6 months      | 87               | 29.3     |
|                               | from 7-12 months     | 77               | 25.9     |
|                               | from 13-18 months    | 58               | 19.5     |
|                               | from 19-24 months    | 75               | 25.3     |
|                               | Total                | 297              | 100.0    |
| <b>Nationality</b>            | Saudi                | 281              | 91.8     |
|                               | non-Saudi            | 25               | 8.2      |
|                               | Total                | 306              | 100.0    |
| <b>Education Level</b>        | Non                  | 9                | 2.9      |
|                               | primary              | 20               | 6.5      |
|                               | Intermediate         | 21               | 6.9      |
|                               | High school          | 63               | 20.6     |
|                               | University or higher | 193              | 63.1     |

|   |                         |     |       |
|---|-------------------------|-----|-------|
|   | Total                   | 306 | 100.0 |
| <b>Employment</b>                               | Employed                | 171 | 55.9  |
|   | Not employed            | 135 | 44.1  |
|   | Total                   | 306 | 100.0 |
| <b>Monthly Income</b>                           | <5000 S.R               | 90  | 29.4  |
|   | 5000–10000 S.R          | 131 | 42.8  |
|   | >10,000 S.R             | 85  | 27.8  |
|   |                         |     |       |
| <b>Marital Status</b>                           | Married                 | 292 | 95.4  |
|   | Divorced                | 14  | 4.6   |
|   | Total                   | 306 | 100.0 |
| <b>Housekeeper availability</b>                 | Yes                     | 107 | 35.0  |
|   | No                      | 199 | 65.0  |
|   | Total                   | 306 | 100.0 |
| <b>Number of children in the family</b>         | 1                       | 85  | 27.8  |
|   | 2                       | 83  | 27.1  |
|   | more than 2             | 138 | 45.1  |
|   | Total                   | 306 | 100.0 |
| <b>infant sex</b>                               | Male                    | 123 | 40.2  |
|   | Female                  | 183 | 59.8  |
|   | Total                   | 306 | 100.0 |
| <b>mode of delivery</b>                         | Normal                  | 213 | 69.6  |
|   | Caesarean section       | 93  | 30.4  |
|   | Total                   | 306 | 100.0 |
| <b>pregnancy duration</b>                       | >= 37 weeks             | 281 | 91.8  |
|   | <37 weeks               | 25  | 8.2   |
|   | Total                   | 306 | 100.0 |
| <b>Attended breast feeding health education</b> | Yes                     | 68  | 22.2  |
|   | No                      | 238 | 77.8  |
|   | Total                   | 306 | 100.0 |
| <b>Parity</b>                                   | Primiparous             | 92  | 30.1  |
|   | Multiparous             | 214 | 69.9  |
|   | Total                   | 306 | 100.0 |
| <b>Use of contraception</b>                     | Non                     | 103 | 33.7  |
|   | progesterone only pill  | 48  | 15.7  |
|   | combined hormonal pills | 103 | 33.7  |
|   | others                  | 52  | 17.0  |
|   | Total                   | 306 | 100.0 |

(Table-2) Shows that the Majority of age of the mothers who participate was between 28 – 38 years (57.2 %), while the age between 16-27 years was (25.5%) and age between 39-49 years was (17.3 %). The Majority of Nationality Participant in the research was Saudi (91.8 %) While the Non-Saudi Was (8.2 %).

The Majority of Mother participant in the Research was Multiparous (69.9%) and the Primiparous was (30.1%). The highest Infant's Age in Months Was Age from 0-6 months (29.3%) and the lowest was from 13-18 months (19.5%). The majority of the infant sex was female (59.8%) and the Male was (40.2%). Regarding to the attendance of breastfeeding health education, only 22.2% of the participants attended breastfeeding health education.

| Table-3 knowledge of the participants about breastfeeding                                  |              |      |
|--|--------------|------|
| Statements   | RIGHT ANSWER |      |
|  | N            | %    |
| <b>Benefits to babies</b>  |              |      |
| Formula milk has the same Benefits as Breast milk (F)                                      | 246          | 80.4 |
| Breastfeeding reduces the risk of respiratory infection among babies ( T )                 | 277          | 90.5 |
| Breastfeeding increases the baby's intelligence ( T )                                      | 269          | 87.9 |
| Baby who received breastfeeding is less prone to get diarrhea ( T )                        | 263          | 85.9 |
| Breast milk provides baby with more protection from allergy compared to formula milk ( T ) | 260          | 85.0 |
| Breastfeeding causes good development of baby's teeth and gum ( T )                        | 276          | 90.2 |
| <b>Colostrum</b>   |              |      |
| Colostrum is difficult to digest and needs to be discarded (F)                             | 213          | 69.6 |
| Colostrum causes constipation among babies (F)   | 215          | 70.3 |
| <b>Effective feeding</b>   |              |      |
| Babies will gain weight if they receive effective feeding ( T )                            | 184          | 60.1 |
| Correct positioning helps to achieve effective breastfeeding ( T )                         | 261          | 85.3 |
| <b>Practical aspect</b>  |              |      |
| Exclusive breastfeeding must be practiced until the infant is 6 months old ( T )           | 199          | 65.0 |
| Giving water to baby is encouraged after every breastfeeding (F)                           | 136          | 44.4 |
| Belching after feeding shows that the baby is full ( T )                                   | 228          | 74.5 |
| Babies who get enough feeding will pass urine more frequently ( T )                        | 140          | 45.8 |

|  |     |      |
|--|-----|------|
| Oral thrush frequently happens to babies who breastfeed (F)                        | 212 | 69.3 |
| Massage may reduce breast engorgement (F)  | 238 | 77.8 |
| <b>Duration of feeding</b>   |     |      |
| Babies need other feeding sources in the first 6 months ( T )                      | 169 | 55.2 |
| <b>Benefits to mothers</b>   |     |      |
| Mother who practiced breastfeeding has a low risk of getting breast cancer_( T )   | 273 | 89.2 |
| Frequent breastfeeding may prevent breast engorgement ( T )                        | 280 | 91.5 |
| Mothers who practiced breastfeeding may achieve pre- pregnancy weight faster ( T ) | 246 | 80.4 |
| Breastfeeding helps to stimulate uterine contraction ( T )                         | 261 | 85.3 |
| Exclusive breastfeeding is beneficial in spacing birth ( T )                       | 223 | 72.9 |
| Breastfeeding may protect against osteoporosis ( T )                               | 227 | 74.2 |
| <b>Problems</b>  |     |      |
| Breast milk production is influenced by breast size (F)                            | 217 | 70.9 |
| Mothers with inverted nipples cannot breastfeed their babies (F)                   | 128 | 41.8 |
| Breastfeeding must be discontinued if mother has cracked nipple (F)                | 130 | 42.5 |
| Breastfeeding must be discontinued if baby has jaundice (F)                        | 175 | 57.2 |
| Breastfeeding must be discontinued if mother has breast engorgement (F)            | 198 | 64.7 |
| Breast engorgement may be reduced with cold packs (F)                              | 112 | 36.6 |

Table- 3: shows the majority of mothers were aware about the benefit of breastfeeding in reducing the risk of respiratory infection among babies (90.5%), increases the baby's intelligence (87.9%), in providing more protection from allergy compared to formula milk (85%) and in providing good development of baby's gum and teeth (90.2%). In addition, majority of them recognized correctly that formula milk does not have the same benefit of breast milk (80.4%), and baby who received breastfeeding is less prone to get diarrhea (85.9%). Regarding benefits of breastfeeding to the mothers, the majority of the

participants were aware that frequent breastfeeding may prevent breast engorgement (91.5%), helps to stimulate uterine contraction (85.3%), mothers who practiced breastfeeding may achieve pre-pregnancy weight faster (80.4%), mother who practiced breastfeeding has a low risk of getting breast cancer (98.2%), exclusive breastfeeding is beneficial in spacing birth (72.9%) and breastfeeding may protect against osteoporosis (74.2%). Regarding the knowledge of colostrum, majority of the mothers were aware that Colostrum is not difficult to digest and needs to be discarded (69.6%), Colostrum does

not cause constipation among babies (70.3%). In addition, table 3 shows that the knowledge of mothers regarding effective breastfeeding is sufficient as more than 80% of them were aware that correct positioning helps to achieve effective breastfeeding (85.3%), babies will gain weight if they receive effective feeding (60.1%).

It is evident from table 3 that the knowledge of mothers regarding practical aspects of breastfeeding is sufficient in some of them as Massage may reduce breast engorgement (77.8%), Belching after feeding shows that the baby is full (74.5%), Oral thrush frequently happens to babies who breastfeed (69.3%) and Exclusive breastfeeding must be practiced until the infant is 6 months old (65.0%) while it was insufficient in other aspects as Babies who get enough feeding will pass urine more frequently (45.8%) and Giving water to baby is encouraged after

every breastfeeding (44.4%).

It is evident from table 3 that the mothers' knowledge regarding problems with breastfeeding is sufficient. For example, Breast milk production is influenced by breast size (70.9%), Breastfeeding must be discontinued if mother has breast engorgement (64.7%) and Breastfeeding must be discontinued if baby has jaundice (57.2%) while it was insufficient in other aspects as Breastfeeding must be discontinued if mother has cracked nipple (42.5%), Mothers with inverted nipples cannot breastfeed their babies (41.8%) and Breast engorgement may be reduced with cold packs (36.6%) .

On the other hand, their knowledge regarding breastfeeding duration is sufficient as Babies need other feeding sources in the first 6 months (55.2%).

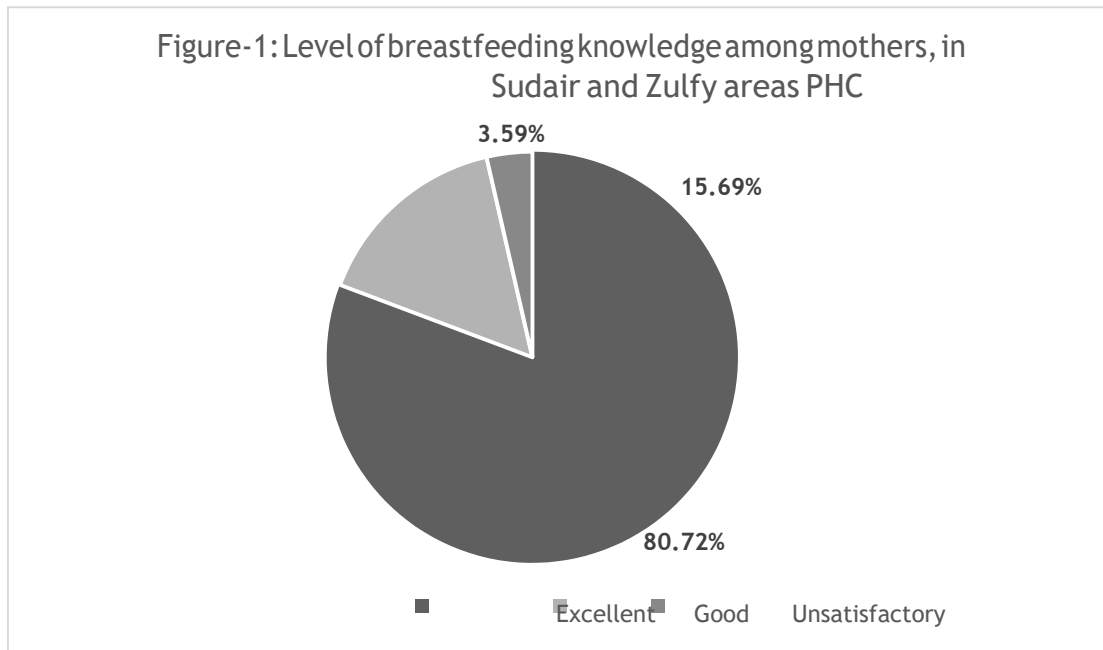


Figure-1, demonstrates that overall mothers' breastfeeding knowledge was excellent among more than majority of them 247 (80.72%) and was good among 48 (15.69%) while it was unsatisfactory among 11 (3.59%).



| <b>Table-4 attitude of the participants toward breastfeeding</b>      |             |             |
|---|-------------|-------------|
| <b>Question</b>   | <b>Yes</b>  | <b>No</b>   |
| <b>Breastfeeding is easier than artificial feeding</b>                | 248 (81%)   | 58 (19%)    |
| <b>It is difficult for breast feeder to take care of her family</b>   | 85 (27.8%)  | 221 (72.2%) |
| <b>Breastfeeding has no effect on marital relationship</b>            | 238 (77.8%) | 68 (22.2%)  |
| <b>Breastfeeding reduces family expenses</b>                          | 275 (89.9%) | 31 (10.1%)  |
| <b>Artificial feeding preserves woman's body and prevents obesity</b> | 174 (56.9%) | 132 (43.1%) |
| <b>The community prefers breastfeeding over artificial feeding</b>    | 222 (72.5%) | 84 (27.5%)  |
| <b>Healthcare workers encourages breastfeeding</b>                    | 265 (86.6%) | 41 (13.4%)  |
| <b>A vacation for 3 months is enough for successful breastfeeding</b> | 142 (46.4%) | 164 (53.6%) |
| <b>Work places offer suitable private places for breastfeeding</b>    | 56 (18.3%)  | 250 (81.7%) |

Table-4 shows that most of mothers agreed that healthcare workers encourages breastfeeding 265 (86.6%) and 41(13.4%) disagreed, breastfeeding is easier than artificial feeding 248(81%) and 58(19%) disagreed, it reduces family expenses 275(89.9%) and 31(10.1%) disagreed. The mothers disagreed that is difficult for breast feeder to take care of her family were 221(72.2%) and 85(27.8%) agreed .More than two third of them 238(77.8%) agreed that breastfeeding has no effect on marital relationship and 68(22.2%) disagreed. More than half of mothers

174(56.9%) agreed that artificial feeding preserves woman's body and prevents obesity and 132(43.1%) disagreed. The mothers agreed that community prefers breastfeeding over artificial feeding were 222(72.5%) and 84(27.5%) disagreed. More than half of working mothers 164(53.6%) disagreed that a vacation for 3 months is enough for successful breastfeeding. Among working mothers, 250(81.7%) disagreed that work places offer suitable private places for breastfeeding and 56(18.3%) agreed

| <b>Table-5 practices of breastfeeding among participants</b>                 |         |      |
|--|---------|------|
|  | numbers | %    |
| <b>Type of feeding</b>   |         |      |
| Breastfeeding  | 58      | 19   |
| Formula Feeding  | 67      | 21.9 |
| Mixed  | 181     | 59.1 |
| <b>Consultation of a doctor before giving Formula</b>                        |         |      |
| only Breastfeeding   | 24      | 7.8  |
| YES  | 145     | 47.4 |
| NO   | 137     | 44.8 |
| <b>age of Formula use started</b>  |         |      |
| after birth  | 88      | 31.7 |
| 1st month  | 49      | 17.6 |
| 2nd month  | 33      | 11.9 |
| 3rd month  | 23      | 8.3  |
| 4th month  | 12      | 4.3  |
| 5th month  | 11      | 4    |
| 6th month  | 18      | 6.5  |
| <b>Child ever breastfed</b>  |         |      |
| Yes  | 285     | 93.1 |
| No   | 21      | 6.9  |
| <b>Starting breastfeeding</b>  |         |      |
| Within one hour of delivery  | 109     | 35.6 |
| Within 6 hours of delivery   | 86      | 28.1 |
| After 6 hours but within 24 hours of delivery                                | 40      | 13.1 |
| After 24 hours of delivery   | 71      | 23.2 |
| <b>Exclusive breastfeeding</b>   |         |      |
| at 0-1.9 months of age   | 175     | 57.2 |
| at 2-3.9 months of age   | 38      | 12.4 |
| at 4-5.9 months of age   | 34      | 11.1 |
| for total 6 months   | 59      | 19.3 |
| <b>Introduction of solid, semi-solid or soft foods in the first 6 months</b> |         |      |
| Yes  | 147     | 56.9 |
| No   | 132     | 43.1 |
| <b>Age on introduction</b>   |         |      |
| 1st month  | 20      | 11.5 |
| 2nd month  | 11      | 6.3  |
| 3rd month  | 19      | 10.9 |
| 4th month  | 29      | 16.7 |

|  |     |      |
|--|-----|------|
| 5th month  | 23  | 13.2 |
| 6th month  | 72  | 41.4 |
| <b>Other thing was giving with breastfeeding</b> |     |      |
| Give nothing                                     | 34  | 11.1 |
| Give water                                       | 174 | 56.9 |
| Give Water with sugar                            | 67  | 21.9 |
| Give Infant Tea                                  | 86  | 28.1 |
| Give Herbals                                     | 136 | 44.4 |
| Give Dates                                       | 100 | 32.7 |
| Give Mint  | 78  | 25.5 |
| Other  | 20  | 6.5  |
| <b>Age of continued breastfeeding</b>            |     |      |
| 6-12 months                                      | 158 | 63.2 |
| 12-18 months                                     | 67  | 26.8 |
| 18-24 months                                     | 25  | 10   |
| <b>Follow-up during pregnancy</b>                |     |      |
| Regular  | 254 | 83   |
| Not-Regular                                      | 52  | 17   |

Table-5: The number of participants who totally breastfed was 85(19%), while those with formula was 96(21.9%) and those whom used mixed feeding represent the majority of the participants 181 (59.1%).

With regarding to age for initiating formula show that the majority of participants 88(31.7%) were started immediately after birth while 49(17.6%) started in 1<sup>st</sup> month, and the least of them 11(4%) started in 5<sup>th</sup> month.

For starting breastfeeding the majority 109 (35.6%) were started Within one hour of delivery while 86 (28.1%) were started Within 6 hours of delivery and those whom started After 6 hours but within 24 hours of delivery were 40 (13.1%) .

For Exclusive breastfeeding the majority 175 (57.2 %) breastfed exclusively for 0-1.9 months

While 38 (12.4 %) breastfed for 2-3.9 months and 34 (11.1 %) breastfed for 4-5.9 months. Moreover, those with breastfed totally for six months were 59 (19.3%).

One hundred-forty-seven of participants (56.9%) gave solid, semi-solid or soft foods in the first 6 months the majority of them 72 (41.4%) started giving at the sixth month.

With regarding for another thing was giving with breastfeeding the majority (56.9%) gave water, herbs (44.4 %), dates (32.7%) , infant tea (28.1%) , mint (25.5 %) and the least (11.1% ) they didn't give any things.

The majority of participants (83%) follow up during pregnancy regularly and (17%) did not regularly follow up.

| Table-6 : barriers of breastfeeding                                   |            |            |
|---|------------|------------|
| Barriers  | Yes (%)    | No (%)     |
| Pain  | 82 (26.8)  | 224 (73.2) |
| Fear of distorted breast shape by breastfeeding                       | 36 (11.8)  | 270 (88.2) |
| Poor prenatal and postpartum support                                  | 41 (13.4)  | 265 (86.6) |
| perception of insufficient milk production                            | 163 (53.3) | 143 (46.7) |
| Father not encourage breast feeding                                   | 26 (8.5)   | 280 (91.5) |
| Embarrassed form lactation in front of family member or public places | 74 (24.2)  | 232 (75.8) |
| Too busy to breastfeed the baby                                       | 61 (19.9)  | 245 (80.1) |
| sick  | 40 (13.1)  | 266 (86.9) |
| Taking contraceptives   | 94 (30.7)  | 212 (69.3) |
| Work  | 111 (36.3) | 195 (63.7) |
| Depressed because my child refused breast feeding                     | 68 (22.2)  | 238 (77.8) |
| I Don't have enough knowledge   | 40 (13.1)  | 266 (86.9) |

In Table-6, which shows the barriers of the breastfeeding, the most common perceived barriers cited by the mothers was the perception of insufficient milk production (53.3%), Work (36.3%), Taking contraceptives (30.7%), Pain (26.8), and the least perceived barriers were the father not encourage breastfeeding (8.5%), fear of distorted breast shape by breastfeeding (11.8%).

| Table-7 Association between Knowledge score and Type of feeding |                 |                 |             |
|---|-----------------|-----------------|-------------|
| Knowledge score   | Type of feeding |                 |             |
|   | Breastfeeding   | Formula Feeding | Mixed       |
|   | <i>P= 0.114</i> |                 |             |
| Unsatisfactory  | 3 (0.9%)        | 1 (0.3%)        | 7 (2.2%)    |
| Good  | 9 (2.9%)        | 17 (5.5%)       | 22 (7.1%)   |
| Excellent   | 46 (15%)        | 49 (16%)        | 152 (49.6%) |

**Table 7** Show that there is no Significant in the Association between Knowledge score and Type of feeding and P value was  $P= 0.114$ .

| <b>Table-8 Association between Knowledge score and Exclusive breastfeeding</b> |  |  |  |  |
|--|--|--|--|--|
| Knowledge score  | Exclusive breastfeeding<br>$P= 0.058$          |  |  |  |
|  | Exclusive breastfeeding at 0-1.9 months of age | Exclusive breastfeeding at 2-3.9 months of age | Exclusive breastfeeding at 4-5.9 months of age | Exclusive breastfeeding for total 6 months |
| Unsatisfactory   | 5 (1.6%)                                       | 0  | 3 (.9%)  | 3 (.9%)                                    |
| Good   | 35 (11.4%)                                     | 5 (1.6%)                                       | 5 (1.6%)                                       | 3 (.9%)                                    |
| Excellent  | 135 (44.1%)                                    | 33 (10.7%)                                     | 26 (8.4%)                                      | 53 (17.3%)                                 |

**Table 8** Show that there is no significant association was observed in the Association between knowledge score and Exclusive breastfeeding ( $P$  Value = 0.058).

| <b>Table-9 Association between Knowledge score and Follow up during pregnancy</b> |                                      |             |
|---|--------------------------------------|-------------|
| Knowledge score   | Follow up during pregnancy $P=0.252$ |             |
|   | Regular                              | Not-regular |
| Unsatisfactory  | 11 (3.5%)                            | 0           |
| Good  | 38 (12.4%)                           | 10 (3.2%)   |
| Excellent   | 205 (66.9%)                          | 42 (13.7%)  |

**Table-9** Show that there is no significant association was observed in the Association between Knowledge score and Follow up during pregnancy.  $P=0.252$ .

| Table-10 Association between mother's age and Exclusive breastfeeding |  |  |  |  |
|---|--|--|--|--|
| mother's age  | Exclusive breastfeeding<br><i>P= 0.020</i>     |  |  |  |
|   | Exclusive breastfeeding at 0-1.9 months of age | Exclusive breastfeeding at 2-3.9 months of age | Exclusive breastfeeding at 4-5.9 months of age | Exclusive breastfeeding for total 6 months |
| 16-27 years   | 50 (16.3%)                                     | 11 (3.5%)                                      | 11 (3.5%)                                      | 6 (1.9%)                                   |
| 28- 38 years  | 98 (32%)                                       | 22 (7.1%)                                      | 20 (6.5%)                                      | 35 (11.4%)                                 |
| 39-49 years   | 27 (8.8%)                                      | 5 (1.6%)                                       | 3 (0.9%)                                       | 18 (5.8%)                                  |

**Table-10** show that there is a significant association was observed in the association between mother's age and exclusive breastfeeding ( $P= 0.020$ ), the Exclusive breastfeeding at 0-1.9 months of age the highest was the age between 28- 38 years 98 (32%) and the lowest Was the age between 39-49 years 27 (8.8%), the exclusive breastfeeding at 2-3.9 months of age the highest Was Age between 28- 38 years 22 (7.1%) and the lowest Was the age between 39-49 years 5(1.6%),the Exclusive breastfeeding at 4-5.9 months of age the highest was the age between 28- 38 years 20 (6.5%) and the lowest Was the age between 39-49 years 3 (.9%) and the Exclusive breastfeeding for total 6 months the highest was the age between 28- 38 years 35(11.4%) and the lowest Was the age between 16-27 years 6 (1.9%).

| Table-11 Attended breast feeding health education according to the cities |            |             |
|---|------------|-------------|
|   | YES        | NO          |
| Majmaah   | 32 (20.6%) | 123 (79.3%) |
| Zulfy   | 24 (24.7%) | 73 (75.2%)  |
| Hotat Sudair  | 12 (22.2%) | 42 (77.7%)  |

**Table 11** Show that Zulfy was the highest in Attending breastfeeding health education according to the cities (24.7%), then Hotat Sudair was the second in Attendance of breastfeeding health education according to the cities (22.2%), and the lowest was in Al-Majmaah (20.6%).

**DISCUSSION:**

Exclusive breastfeeding consider as the single most effective intervention for child survival and wellbeing. Early initiation (within one hour) and exclusive breastfeeding for 6 months, is viewed as a major public health intervention to reduce the child mortality, particularly, in the neonates and infants. [18]

With regard to knowledge of breastfeeding, we observed that only 65% of participants knew that exclusive breastfeeding must be practiced for six months. That is almost similar to what has been reported in Abha city, which was 75%. [19] This misconception should be taken in consideration in health education services. When we compare it with the other countries, which have excellent health promotion services for example Malaysia, they reported the knowledge about the duration of exclusive breastfeeding for six month was 87.7 % of participants. [20]

Sustained exclusive breastfeeding up to six months without any supplement was observed in our study by 19.3% of participants. This figure is better than what has been reported in Riyadh that only 0.8% of infants were exclusively breastfed for the first 4– 6 months.[21] Moreover, In Abha region, Al-Binali's study report that the exclusive breastfeeding for six months was only 8.3 % [16].In Alhasa the rate of exclusive breastfeeding for six months was higher than what we reported (24.4%). [22]

The rate of exclusive breastfeeding varies in Middle Eastern countries. In United Arab Emirates, only 4% of mothers practiced exclusive breastfeeding during the first month of their infants' lives. [23] In Iran reported rates of 56.8% and 27.7% at 4 and 6 months of age. [24] In Jordan, the exclusive breastfeeding rate was 46% for infants in the first 6 months of life which is about two folds of Saudi Arabia. Also in developed countries the rate of exclusive breastfeeding was vary, In the United States, only 13.3% of infants were exclusively breastfed at 6 months of age. [25] In Canada the rate for five months and six months of exclusive breastfeeding 8.8%, 17.6% respectively despite the high effort in health promotion services. [26] But in Luxembourg 54% of mothers exclusively breastfed their newborns, in The Netherlands 37% and in Austria 46%. [27]

In spite of great advances in health services provided in Saudi Arabia, we found the number of women who attended regular classes during pregnancy were not adequate, we report that there is only 22.2% of women regularly attend the classes, but that slight higher than that was reported in Al-Binali's study which was only 8.6% . [16]

In our study, we found that cesarean delivery adversely affects the adoption of total exclusive

breastfeeding for six months in comparison with spontaneous normal vaginal delivery. In our study area, only 5.8% of participated women with cesarean delivery complete the six month of exclusive breastfeeding which is not highly differ from what have been reported In Abha (2.1%). [19] In Nepal the exclusive breastfeeding Up to 5 months period for women with Cesarean delivery was 12%, which more than what has been reported in our study area. [28]

Mothers faced a number of barriers to exclusive breastfeeding. In our study, the perception of insufficient milk production was the leading reason that mothers reported for their decision to stop breastfeeding (53.3%). And this barrier also reported in previous studies like in Riyadh, Saudi Arabia by Hala and Afaf (2013) which was (61.4%). [16] Also in Abha, Saudi Arabia by Adil Ali (2014) which was (34.2%). [19] These results suggest that women perception of having a low milk supply might be because their lack of knowledge regarding the normal process of lactation or to technical difficulties in feeding rather than to an actual inability to produce a sufficient quantity of milk. In addition, the work was a significant barrier of breastfeeding (36.3%), as supported by the other studies 73.5%, 46.2%. [19, 29]. Probably because the employed mothers typically find that returning to work or working hard after a motherhood vacation is a significant barrier to breastfeeding. In addition, the lack of privacy and breastfeeding places in the work are reasons to be considered. Moreover, the use of contraceptives was an important reason of breastfeeding cessation (30.7%) as what mentioned in the other studies like Abha study (52%). [19]

**LIMITATION:**

This study has several limitation in data presented on breastfeeding in Sudair and Zulfy areas. These mainly related to paucity of the studies. The small sample size and the lack of standard definitions.

**CONCLUSION:**

The knowledge of the exclusive breastfeeding in our study was better than the other studies in Saudi Arabia, but it still low in compared to the other countries, which have excellent health promotion services and programs. The perception of insufficient milk production was the leading reason that mothers reported for their decision to stop breastfeeding.

**RECOMMENDATIONS:**

It is important to educate the mothers about the breastfeeding and its benefits compared to formula milk. In addition, we should initiate more of breastfeeding promotion programs in our areas to

increase the awareness about this problem.

## REFERENCES:

1. World health organization. Breastfeeding. Accessed July 2009. available from: URL:<http://www.who.int/topics/breastfeeding/en/>
2. Yanikkerem E, Tuncer R, YILMAZ K, Aslan M, Karadeniz G. Breast-feeding knowledge and practices among mother in Manisa, Turkey. *Midwifery* 2009;25: e19- e32.
3. Oddy WH. Breastfeeding protects against illness and infection in infants and children: a review of the evidence. *Breastfeed Rev* 2001;9:11-18.
4. Armstrong J, Reilly JJ, Child Health Information Team. Breastfeeding and lowering the risk of childhood obesity. *Lancet* 2002;359:2003-2004.
5. World health organization. Maternal, newborn, child and adolescent health. Accessed November 2015. Available from: URL:[http://www.who.int/maternal\\_child\\_adolescent/topics/child/nutrition/breastfeeding/en/](http://www.who.int/maternal_child_adolescent/topics/child/nutrition/breastfeeding/en/)
6. Dr. S. Kalavathi. NIGHTINGALE NURSING TIME. 2007. August: 12
- i. UNICEF. PROTECTING, PROMOTING AND SUPPORTING BREAST FEEDING. THE NURSING JOURNAL OF INDIA. 2003 June; Vol-5 No. 11, 3-7.
7. Daifellah A M Al Juaid1, Colin W Binns2 and Roslyn C Giglia3\*. Breastfeeding in Saudi Arabia: a review. Al Juaid et al. *International Breastfeeding Journal* 2014, 9:1.
8. G. Ibanez , N. Martin, M. Denantes, M.-J. Saurel-Cubizolles, V. Ringa, A.-M. Magnier. Prevalence of breastfeeding in industrialized countries. *ScienceDirect*. August 2012.
9. Fatimah S Jr1, Siti Saadiyah HN, Tahir A, Hussain Imam MI, Ahmad Faudzi Y. Breastfeeding in Malaysia: Results of the Third National Health and Morbidity Survey (NHMS III) Malays J Nutr 2006. 16(2):195-206.
10. World health organization. World Breastfeeding Week 2012. Accessed November 2015 available from URL:[http://www.who.int/pmnch/media/news/2012/2012\\_world\\_breastfeeding\\_week/en/index1.html](http://www.who.int/pmnch/media/news/2012/2012_world_breastfeeding_week/en/index1.html).
11. Bahre Teka , Huruy Assefa and Kiday Hailelassie. Prevalence and determinant factors of exclusive breastfeeding practices among mothers in Enderta woreda, Tigray, North Ethiopia: a cross-sectional study. *International Breastfeeding Journal* 2015 10:2.
12. MO Oche, AS Umar, and H Ahmed. Knowledge and practice of exclusive breastfeeding in Kware, Nigeria. *US National Library of Medicine National Institutes of Health*. 2011 Sep; 11(3): 518–523.
13. Shafee MLeena MS; Firdous R; Jogdand GS. Knowledge, attitude and practices (KAP) of mothers regarding breast feeding in South India. *Indian Journal of Maternal and Child Health*. 2011 Apr-Jun; 13(2):[7] p.
14. Khalid M. AlFaleh. Perception and knowledge of breast feeding among females in Saudi Arabia. *Journal of Taibah University Medical Sciences*. June 2014
15. Ali Mohamed Al-Binali. Breastfeeding knowledge, attitude and practice among school teachers in Abha female educational district, southwestern Saudi Arabia. *International Breastfeeding Journal*. August 2012
17. Central Department of statistics & information in KSA 2010. Accessed November 2015. Available from ULR: <http://www.cdsi.gov.sa/>.
18. Infant and young child feeding. WHO, Media center. Fact sheet N°342.
19. Ayed AAN. Knowledge, attitude and practice regarding exclusive breastfeeding among mothers attending primary health care centers in Abha city. *Int J Med Sci Public Health* 2014;3:1355-1363.
20. Radzniwan AR, Azimah NM, Zuhra H, Khairani O. Breast Feeding Practice and Knowledge among Mothers Attending an Urban Malaysian Maternal and Child Health Clinic. *Med & Health* 2009; 4(1): 1-7
21. Al-Jassir MS, El-Bashir BM, Moizuddin SK. Surveillance of infant feeding practices in Riyadh City. *Ann Saudi Med* 2004, 24(2):136–140.
22. El-Gilany A, Shady E, Helal R. Exclusive Breastfeeding in Al-Hassa, Saudi Arabia. *BREASTFEEDING MEDICINE* Volume 6, Number 4, 2011
23. Al-Mazroui MJ, Oyejide CO, Bener A, et al. Breastfeeding and supplemental feeding for neonates in Al-Ain, United Arab Emirates. *J Trop Pediatr* 1997;43:304–306
24. Koosha A<sup>1</sup>, Hashemifesharaki R, Mousavinasab N. Breast-feeding patterns and factors determining exclusive breast-feeding. *Singapore Med J*. 2008 Dec;49(12):1002- 6.
25. Li R<sup>1</sup>, Darling N, Maurice E, Barker L, Grummer-Strawn LM. Breastfeeding rates in the United States by characteristics of the child, mother, or family: the 2002 National Immunization Survey. *Pediatrics*. 2005



- Jan;115(1):e31-7. Epub 2004 Dec 3.
26. Duration of Exclusive Breastfeeding in Canada: Key Statistics and Graphics (2009-2010). Canadian Community Health Survey (CCHS)
  27. Yngve A, Sjostrom M. Breastfeeding in countries of the European Union and EFTA: Current and proposed recommendations, rationale, prevalence, duration and trends. *Public Health Nutr* 197. 2001;4:631–645.
  28. Khanal V, Sauer K, Zhao Y. Exclusive breastfeeding practices in relation to social and health determinants: a comparison of the 2006 and 2011 Nepal Demographic and Health Surveys. *BioMed Central* 2013 13:958
  29. Khaing E, Diamond-Smith N, Sudhinaraset M, Oo S, Aung T. Barriers to exclusive breastfeeding in the Ayeyarwaddy Region in Myanmar: Qualitative findings from mothers, grandmothers, and husbands. *ELSEVIER, Appetite*, Volume 96, 1 January 2016, Pages 62–69