

# Breast Feeding in Hail Region: Pattern and Variables of Practice and Attitude in Hail Women, Saudi Arabia

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**Abstract:** ***Background:** Breastfeeding (BF) has always been the ideal feeding practice for infants. The health benefits of BF have been previously documented. BF is said to be down and there is a trend toward artificial feeding . Knowledge as well as the sociodemographic factors have been reported to affect BF. **Aim of the Study:** the current study aimed at detection of the percentage of BF among mothers attended the primary health care centers (PHCC) in Hail region , demonstrating the percentage distribution of BF practice in relation to the sociodemographic data and determination of the level of awareness of the mothers about BF. **Subject and Methods:** The current study was carried out on mothers attended to PHCC seeking for vaccination program for their kids or to attend the health education classes through the period of 2011-2012 . Using simple random sampling. 1000 subjects was selected randomly from the different PHCC. A questionnaire was used to gather data about different demographic factors , knowledge , practices and attitude towards BF. **Results:** BF different practices in relation to demographic characteristics of the mothers participating in the current study has been reported . It was found that (64.9%) only of mothers breastfed their infants and only (22%) have breastfed their babies for 2 years . The maternal ages were ranged from 18 – 44 years with a the mean age of 24.3 years . Most of the mothers have intermediate and secondary school education (45.8%). The majority of them were multiparous (93.7%) , working (67.9%), and delivered through the normal way (80.1%). The number of mothers who initiated BF within one hour after delivery was 383 (59%), while others delayed breastfeeding of their babies till after one hour postpartum. Only (30.5%) of the mothers exclusively gave their infants breast milk for 6 months while the mean duration of BF was 11.9 months among the BF mothers . Unfortunately knowledge and attitude in the current study was not satisfactory and suboptimal. **Conclusion and recommendation :** In spite of the great development in health services in Saudi Arabia, the current study have reported a downward trend in BF practice . So, there is a need for a national community-based BF program and for encouraging it as a part of a public health plan to decrease health risks and problems in the KSA .*

**Keywords:** Breastfeeding, Saudi Arabia, Hail region, primary health care centers , awareness

## 1. Introduction

Breastfeeding (BF) has always been preferred as the best feeding practice for babies. Benefits of BF for both infants and mothers have been proved<sup>(1-4)</sup>. In addition to the health usefulness for both infants and mothers, BF also benefits the community by reducing the cost, and accompanied loss of family income<sup>(5)</sup>. The World Health Organization (WHO) encourages exclusive breast milk only without other liquids or solid food except medications for the first six months of life<sup>(4)</sup>. BF is also recommended to continue for the first two years from the baby life<sup>(6)</sup>. Moreover , BF is an important community health need for minimizing of infant and maternal morbidity and mortality<sup>(7)</sup>.

The prevalence of BF in developed countries such as USA and UK is increasing<sup>(8)</sup>. In spite of the great development of health services in the KSA , recent researches have declared a magnificent decline in BF practice<sup>(9,10,11)</sup> and there is a trend toward artificial milk supply all over the country<sup>(12)</sup>. Furthermore , it is well known that knowledge as well as the sociodemographic factors such as mothers' age, work , education, , obesity and parity were found to affect BF<sup>(13,14)</sup>.

A few number of studies have evaluated BF in different parts of Saudi Arabia in respect of prevalence , affecting

factors and attitudes towards BF<sup>(11,15)</sup>. However and to our knowledge , no available data have been reported about BF in Hail region . Awareness and giving knowledge about BF are known to have an important impact on child health which may lead to better practice for the mothers and benefits for the community<sup>(16)</sup>.

## 2. Aim of the work

**The aims of the current work were:**

- 1) To detect the percentage of BF among mothers visited the PHCC in Hail region , Saudi Arabia seeking for their kids' vaccination or attended the health education classes through the period of 2011-2012 .
- 2) To demonstrate the percentage distribution of BF practice in relation to the sociodemographic factors among the BF females.
- 3) To determine the level of awareness and attitudes of the mothers towards BF .

## 3. Subject and Methods

The current study was carried out on mothers attended PHCC seeking for vaccination program for their kids or attended the health education classes . Using simple random

sampling. 1000 persons was selected randomly from the different centers . Mothers other than Saudi nationality were excluded. Each mother gave an informed consent before filling the questionnaires . The questionnaire was used to collect sociodemographic data such as maternal age, education ... etc . The questionnaire also collected data about different feeding knowledge , practices and attitude . The data were tabulated and percentages were counted.

#### 4. Results

One thousand mothers attended different PHCC in Hail region , were included in the present study .

Table and figures (1-6) show the percentage of BF and demographic characteristics of the mothers participating in the current study in relation to BF different practices.

It was found that (64.9%) only of mothers breastfed their infants and only( 22%) have breastfed their babies for 2 years . The range of the mothers' ages was 18 – 44 years and the mean was 24.3 years. Most of the mothers have intermediate and secondary school education (45.8%). The majority of them were multiparous (93.7%), working (67.9%), and delivered through the normal way (80.1%).

The number of mothers who gave BF as early as one hour postpartum was 383 (59%), while others delayed it. About (30.5%) of the mothers granted an exclusive BF , whereas the rest offered bottle feeding with breast milk.

It was noted that the mean period of BF was 11.9 months . It was also found that multifarious, non working , older mothers with vaginal delivery breastfed their infants for a longer duration than did the primiparous, working , younger and CS mothers . However, the more educated the mothers , the less the period of lactating their babies . Moreover, the initiation of BF within the first hour was detected in case of mothers aged 30-35 , intermediate and secondary school , educated and working mothers. Additionally, older , intermediate and secondary school and non working mothers have more ratios of exclusive BF for a continuous 6 months .

Table and figures (7-11) demonstrated that more than half of the patient of the present study , were found to have knowledge about the exact time of the start feed (59.6%) . However Knowledge about the kind of start diet revealed that most of the mothers had the idea that breast milk is the correct kind of start diet while (22.9%) of the mothers had the knowledge of Early supplementation with formula milk instead. The percentage of knowledge about the exact duration of exclusive BF was (33.4%), whereas the knowledge about the benefits of colostrum have been detected in a percentage of (30.1%).

The results of the present work revealed that the most common well known knowledge about the benefits of BF for the mothers are that it decrease the possibility of contraception followed by that of psychological illness. It was revealed that most of women included in the present study have the knowledge that HIV is an absolute contraindication for BF, while only (8.7%) of them knew that radiotherapy is absolutely contraindicated for lactation.

**Table 1:** Percentage of BF mothers among attendants of the health care centers in Hail region , Saudi Arabia(2011-2012):

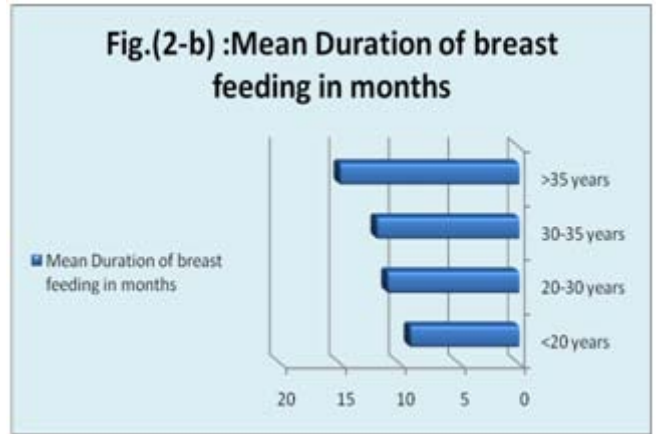
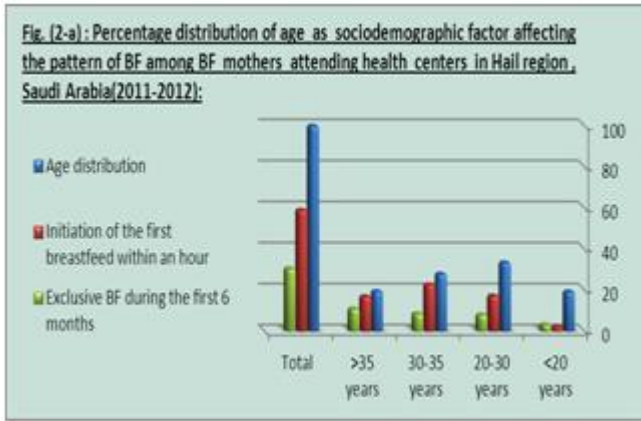
	Number	Percentage
Mothers practiced BF	649	64.90%
Mothers don't practice BF	310	31.00%
Pregnant	41	4.10%
Total attendant	1000	100



**Table 2:** Percentage distribution of age as sociodemographic factor affecting the pattern of BF among BF mothers attended health centers in Hail region , Saudi Arabia(2011-2012):

	Age distribution		Mean Duration of BF in months *	Initiation of the first breastfeed Within an hour**		Exclusive BF during the first 6 months***	
	No	%		No	%	No	%
<20 years	125	19.30%	9.3	14	2.10%	20	3.10%
20-30 years	217	33.40%	11.2	112	17.30%	52	8.00%
30-35 years	181	27.90%	12.1	147	22.70%	55	8.50%
>35 years	126	19.40%	15.2	110	16.90%	71	10.90%
Total	649	100%	11.9	383	59%	198	30.50%

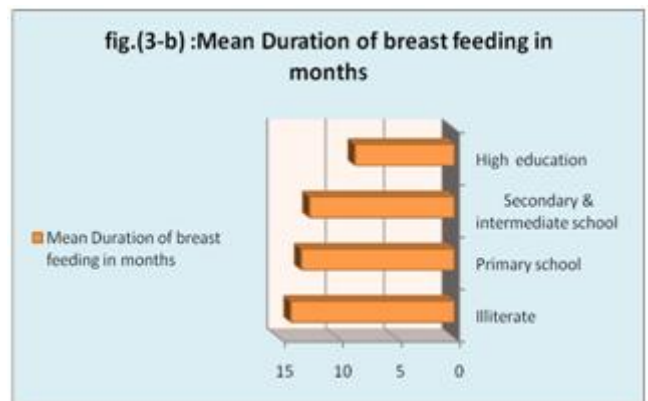
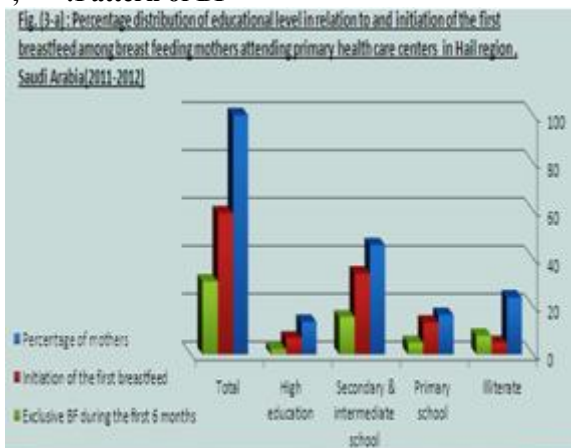
\*, \*\*, \*\*\* :Pattern of BF



**Table 3:** Percentage distribution of educational level as sociodemographic factor affecting the pattern of BF among BF mothers attended health centers in Hail region , Saudi Arabia(2011-2012)

	Educational level		Mean Duration of breast feeding in months *	Initiation of the first breastfeed		Exclusive BF during the first 6 months***	
				Within an hour **			
	No	%		No	%	No	%
Illiterate	155	23.90%	14	32	4.90%	51	7.90%
Primary school	108	16.60%	13.1	87	13.40%	32	4.90%
Secondary & intermediate school	297	45.80%	12.4	220	33.90%	101	15.60%
High education	89	13.70%	8.5	44	6.80%	14	2.10%
Total	649	100%	11.9	383	59%	198	30.50%

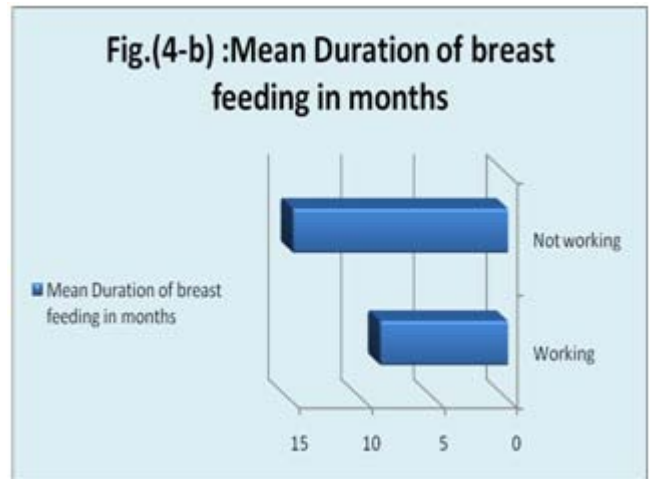
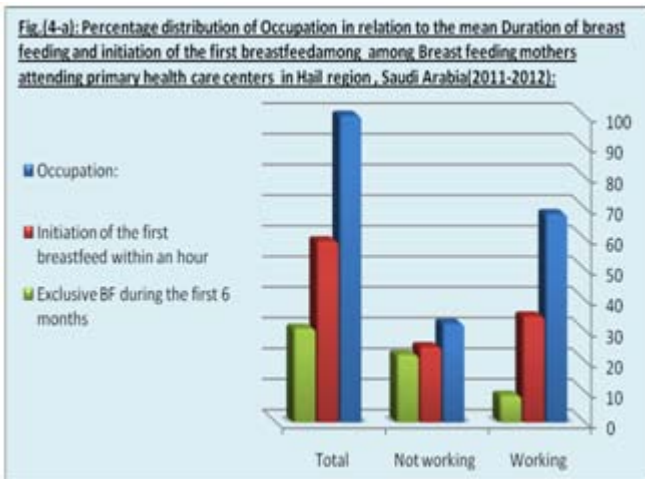
\*, \*\*, \*\*\* :Pattern of BF



**Table 4:** Percentage distribution of occupation as sociodemographic factor affecting the pattern of BF among BF mothers attended health centers in Hail region , Saudi Arabia(2011-2012):

Occupation:			Mean Duration of breast feeding in months *	Initiation of the first breastfeed		Exclusive BF during the first 6 months***	
				Within an hour**			
	No	%		No	%	No	%
Working	441	67.90%	8.9	224	34.50%	56	8.60%
Not working	208	32.10%	14.9	159	24.50%	142	21.90%
Total	649	100%	11.9	383	59%	198	30.50%

\*, \*\*, \*\*\* :Pattern of BF



**Table 5:** Percentage distribution of parity as sociodemographic factor affecting the pattern of BF among BF mothers attended health centers in Hail region , Saudi Arabia(2011-2012):

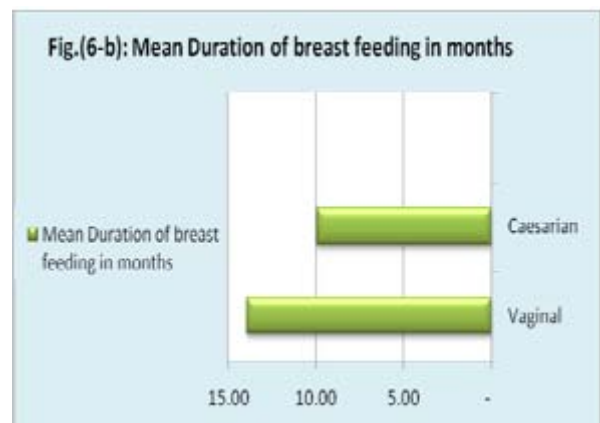
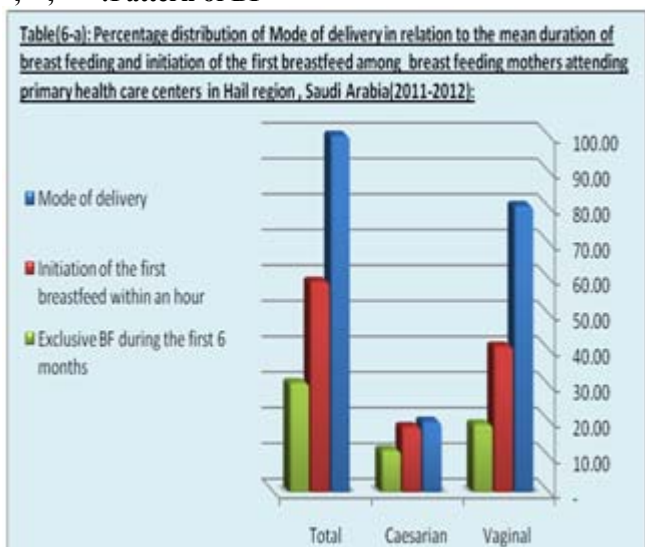
Parity	Mean Duration of breast feeding in months *		Initiation of the first breastfeed Within an hour**		Exclusive BF during the first 6 months ***	
	No	%	No	%	No	%
Para 1	41	6.30%	12	1.80%	33	5.10%
Para 2	98	15.20%	39	6%	41	6.30%
Para 3	176	27.10%	87	13.40%	58	8.90%
>Para 4	334	51.40%	245	37.80%	66	10.20%
Total	649*	100%	383	59%	198	30.50%

\*, \*\*, \*\*\* :Pattern of BF

**Table 6:** Percentage distribution of mode of delivery as a factor affecting the pattern of BF among BF mothers attending the health centers in Hail region , Saudi Arabia(2011-2012):

Mode of delivery	Mean Duration of breast feeding in months *		Initiation of the first breastfeed Within an hour**		Exclusive BF during the first 6 months ***	
	No	%	No	%	No	%
Vaginal	521	80.30%	265	40.80%	123	18.90%
Caesarian	128	19.70%	118	18.20%	75	11.60%
Total	649	100%	383	59%	198	30.50%

\*, \*\*, \*\*\* :Pattern of BF

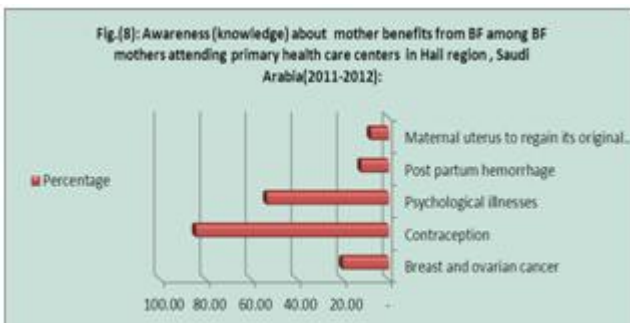


**Table 7:** Awareness (knowledge) about BF among mothers attending health centers in Hail region , Saudi Arabia(2011-2012):

Knowledge about the correct start time of first breast-feed	<1 hour	596	59.6
	> 1 hour	404	40.4
kind of start diet	Formula	209	20.9
	Breast milk (Clostrum)	632	63.2
	Glucose	148	14.8
	Others	11	1.1
Breastfeeding after getting pregnancy	Stop breastfeeding immediately	680	68
		257	25.7
	Never stop till the end	63	6.3
Continue for a few weeks	334	33.4	
benefits of clostrum	301	30.1	
providing children with water as early as one month	496	49.6	

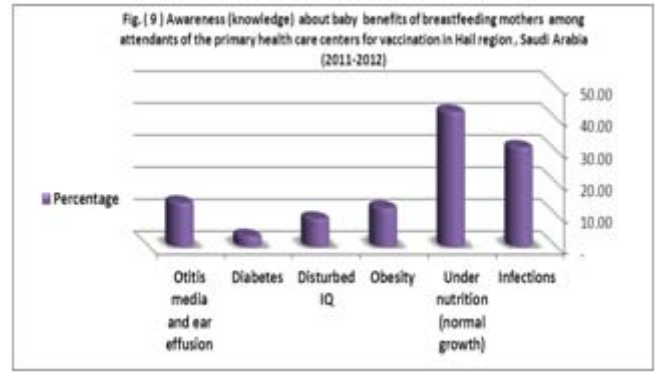
**Table 8:** Awareness (knowledge) about mother benefits from BF among BF mothers attending primary health centers in Hail region , Saudi Arabia(2011-2012):

Decrease the possibility of	Number	Percentage
Breast and ovarian cancer	210	21.00%
Contraception	853	85.30%
Psychological illnesses	542	54.20%
Post partum hemorrhage	129	12.90%
Maternal uterus to regain its original size	87	8.70%



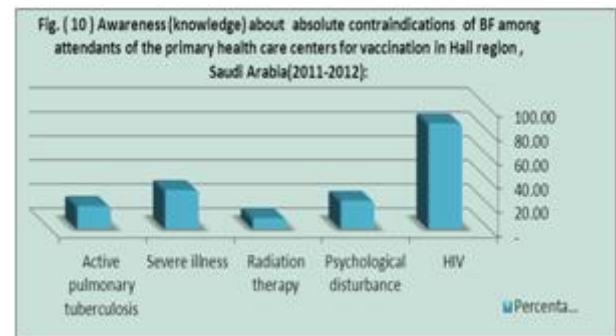
**Table 9:** Awareness (knowledge) about baby benefits of BF mothers among attendants of the health centers in Hail region, Saudi Arabia (2011-2012):

Decrease the possibility of	Number	Percentage
Infections	312	31.20%
Under nutrition (normal growth)	423	42.30%
Obesity	123	12.30%
Disturbed IQ	89	8.90%
Diabetes	35	3.50%
Otitis media and ear effusion	139	13.90%



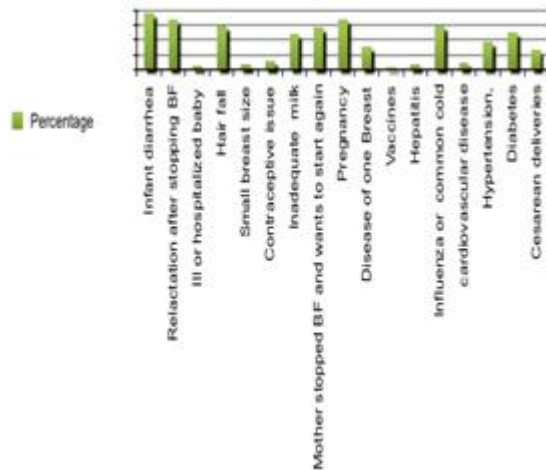
**Table 10:** Awareness (knowledge) about absolute contraindications of BF among attendants of the health care centers in Hail region , Saudi Arabia(2011-2012):

Absolute contraindications	Number	Percentage
HIV	873	87.30%
Psychological disturbance	231	23.10%
Radiation therapy	87	8.70%
Severe illness	319	31.90%
Active pulmonary tuberculosis	187	18.70%



**Table 11:** Awareness about false contraindications of BF among attendants of the health care centers for vaccination in Hail region, Saudi Arabia (2011-2012):

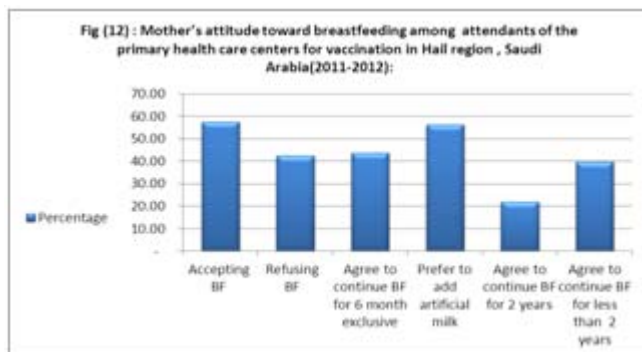
False Contraindications	Number	Percentage
Cesarean deliveries	317	31.70%
Diabetes	568	56.80%
Hypertension, cardiovascular disease	421	42.10%
Influenza or common cold	119	11.90%
Hepatitis	658	65.80%
Vaccines	98	9.80%
Disease of one Breast	34	3.40%
Pregnancy	765	76.50%
Mother stopped BF and wants to start again	634	63.40%
Inadequate milk	543	54.30%
Contraceptive issue	132	13.20%
Small breast size	94	9.40%
Hair fall	675	67.5%
Ill or hospitalized baby	57	5.70%
Relocation after stopping BF	762	76.20%
Infant diarrhea	865	86.50%



**Figure 11:** Awareness about false contraindications of breastfeeding among attendants of the primary health care centers for vaccination in Hail region, Saudi Arabia(2011-2012):

**Table 12:** Mother’s attitude toward BF among attendants of the primary health care centers asses in Hail region, Saudi Arabia(2011-2012)

Attitude	Number	Percentage
Accepting BF	576	57.60%
Refusing BF	424	42.40%
Agree to continue BF for 6 month exclusive	438	43.80%
Prefer to add artificial milk	562	56.20%
Agree to continue BF for 2 years	219	21.90%
Agree to continue BF for less than 2 years	397	39.70%



## 5. Discussion

It should be noted that following Quranic advices, Muslim mothers used to continue to nurse their babies for at least two years<sup>(17)</sup>. Yet, the modern life and the attractive promotions have affected the traditions of BF. This can explain why only (64.9 %) of the mothers in the current study practiced BF.

Although the first two years of life are important stage for a child's growth, the current work reported that only( 22% )out of the mothers breastfed their babies offered BF for 2 years. Similar percentages were also reported in many Muslim countries<sup>(18,19,20)</sup>. Here the mothers always prefer artificial feeding, and ignore the Quranic rules of BF for two years. In the present study, several sociodemographic factors were reported to affect practicing of BF. The older the mothers, the e better BF practice than younger ones. In developed

countries, maternal age was proved to be the main factor affecting the duration of BF<sup>(21)</sup>. Similarly, many studies revealed a positive link between BF duration and mothers' ages<sup>(22)</sup>. On the contrary, few studies reported opposite findings that younger mothers commonly give their breast milk to their babies<sup>(23)</sup>.

In the current work, the BF was terminated as early as a mean age of 11.9 months. Among the causes given for cessation of BF was inadequate breast milk<sup>(24,25)</sup> followed by the mothers' work<sup>(26,27)</sup>.

In the present study, only (59%)of the women initiated BF as early as an hour after delivery which run hand in hand with the WHO advices for beginning BF at that early period of time<sup>(16)</sup>.

In general, multiparous mothers in the present research as well as in others initiated BF earlier and an exclusive BF for a longer time than primiparous mothers. The association of parity with BF initiation, exclusivity and duration was studied and similar results were found<sup>(28,29)</sup>.

Another factor affecting BF in the present work was education which was found to affect BF negatively. On the other hands mothers with higher education in developed countries have moved to the practice of BF<sup>(30,31)</sup>, while in less developed countries, less educated mothers have switched to artificial feeding<sup>(32,33)</sup>. Abada et al,2001 stated that highly educated mothers in developing countries have followed foreign ideas which let the women acquire strange behavior and practices about BF<sup>(34)</sup>.

Although Saudi females work in a comfortable environment, working of the mothers in the present study was reported to affect BF greatly. This results could be explained on the basis that BF was affected by the work environment or because of the short paid vacation in Saudi Arabia. The same negative effects of the mothers' work has been noticed in many studies about the exclusive BF<sup>(35,36)</sup>. However, other studies didn't find any effect of mothers' work on exclusive BF<sup>(37,38)</sup>.

Exclusive BF was reported in the current work only in (30.5%) of our participants. This result is better than what has been detected by some Saudi<sup>(39)</sup> and US researches<sup>(40)</sup>. On the contrary, it is lower than a result of a study from Ugandan (49.8%)<sup>(41)</sup>. Moreover, much lower percentages were revealed from other cities of Saudi Arabia. In Riyadh, babies were given exclusive BF only in a percentage of (0.8%)<sup>(42)</sup> and the rate slightly increased among those infants of Jidda<sup>(43)</sup>. In addition, Higher percentages were noticed in Al-Kharj<sup>(44)</sup> and in Dammam<sup>(45)</sup>, respectively.

The low rate of knowledge about BF data are necessary factors in decreasing BF practice which was clear in the current work as evidenced by the high number of cases who didn't try BF before. Only ( 30.1 % ) of our participants were found to have knowledge about the benefits of colostrum to their babies. This is similar to what was reported from other studies in KSA<sup>(12)</sup>. On the contrarily the current results was opposite to the study of Singh, 2010 who found that (77%) of mothers used to discard colostrum<sup>(27)</sup>.

In the current work, more than half of the women (68.0%) have the knowledge that once pregnancy occurs BF has to be stopped. The idea that a mother should terminate BF as early as she discovered her pregnancy is an old belief. Even in UK, where the level of health education is higher, a number of health care providers accept that idea<sup>(46)</sup>. Knowledge about this topic was also reported Eastern Province of Saudi Arabia in a ratio of (38%)<sup>(47)</sup> and mothers who had only female than male babies gave it as a reason for cessation of BF<sup>(48)</sup>. Moreover, lot of Arab people may have ideas and beliefs that the pregnant mothers' milk is harmful for the infants.

The World Health Organization (WHO)<sup>(16)</sup> stated that encouragement of BF may play a role in the prevention of children overweight because the first months in baby life may have a critical role in development of obesity during adulthood and late life<sup>(49)</sup>.

Several studies have reported that diabetes, obesity and cardiac diseases are commonly linked to the BF practice<sup>(7,15)</sup>. Moreover It is well documented that BF decreases the possibilities of otitis media, GIT, respiratory and sudden baby death syndrome<sup>(15)</sup>.

The Knowledge about absolute and false contraindication of BF among mothers in the present study revealed insufficient knowledge except for some parameters. Unfortunately, (63.4%) have a false knowledge that mother stopped BF once they get pregnancy. Others had false knowledge the mild diseases like Influenza is considered as contraindication for giving BF. So, mothers should be educated that BF does not affect mothers' nutrition, as long as she keep following healthy diets with enough fluids<sup>(15)</sup>.

The belief that BF causes hair fall in the current work is probably not true, as hair loss is an unrelated condition to BF occurring in the postpartum period and is commonly because of the hormonal disturbance<sup>(15)</sup>.

The wrong idea that a mother cannot relactate her baby if she stopped it for a period of time may due to the absence of the idea of relactation which is surprisingly ignored even by the health professionals<sup>(15)</sup>. Although it is possible to succeed in starting to breastfeed her baby once again<sup>(27)</sup>.

It was not surprising to find that (86.5 %) of mothers in the current work have the knowledge that they have to stop BF as long as the child has diarrhea. Unfortunately, this false knowledge are spreading to the public by some health workers. On the contrary, the role of BF in the cessation of diarrhea has been previously proven<sup>(15,27,50)</sup>.

Another misperception encountered in the present study is the wrong idea that the breast size affects BF which was actually proved to have no such correlation<sup>(27)</sup>.

Although (57.6%) of mothers in the present study were found to have positive attitude towards BF, only (21.9%) of them had negative attitude towards going on BF for 2 years. This behavior should be improved by health awareness to know the differences between true and false contraindications of BF. The most important reason given by the partici-

pants for accepting and initiating BF was their Islamic religious background that teach them Holy Quran verse which states "And mothers shall breastfeed their children for two whole years, for those who desire to complete the appropriate duration of breastfeeding".

## 6. Recommendations

- 1) There is an urgent need to have BF health educational program or campaigns at the PHCC specially those who are in the gestational ages as the most targeted group.
- 2) Find solutions for the problems encountered to face the Saudi mothers during BF that lead to stopping of lactation.
- 3) More researches are needed to follow women as early as they begin their marital life

## 7. Expected Impact of the Study

- 1) The findings of this study should be the foundation of future studies that investigate the feeding patterns in Hail region and eventually assist in creating a national infant feeding policy.
- 2) To attract the attention of the health authorities about the deficient knowledge of the BF among Hail population so as they can set a program for awareness.

## 8. Limitation of the Study

- 1) The study sample in the present work was only females attended PHCC for their infant vaccination or attending the health education classes. This may be not applicable to other Saudi women.
- 2) Cultural differences between Hail District and other Saudi provinces may limit the generalization of our results to other Saudi areas.

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