

## Investigating the Knowledge, Attitudes, Practices and Perceived Barriers of Breast Feeding among Saudi Women in the National Guard Hospital Jeddah

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*A descriptive correlational cross-sectional design was used to collect data from a convenient sample of 100 Saudi women. The study participants were recruited from Ward<sub>2</sub>. Women were interviewed face to face. Data was collected by using a five sections structured questionnaire: Socio-demographic background; breastfeeding knowledge; perceived barriers and practice; and an Iowa Infant Feeding Attitude Scale (IIFAS). Two thirds of the participants (62%) had a good knowledge regarding breastfeeding health benefits. However, the minority of them (10%) had a positive attitude toward breastfeeding. The most commonly reported barriers were insufficient milk supply and lack of knowledge (82%). A statistically significant correlation was found between breastfeeding knowledge and maternal age ( $r=0.22$ ), also there was a good significant correlation between women's knowledge and their attitude ( $r=0.60$ ) toward breastfeeding. Although Saudi women have good knowledge regarding breastfeeding importance, they have a neutral attitude toward it and several barriers might prevent them from its practice.*

**Keywords:** Attitudes, Breastfeeding knowledge, Perceived barriers

### Introduction

Breastfeeding is the normal way of giving infants the needed nutrients for proper growth. A wide range of breastfeeding's benefits for mother, child and family are well known and documented in many perspectives as socio-economic and psychological. Furthermore, it is well known that, these benefits can be either immediate or long-term. To promote breastfeeding and ensure that adequate counselling and support are provided to initiate and maintain optimal breastfeeding practices, UNICEF and WHO started the Baby Friendly Initiative (BFI) in 1991 and required 10 steps for hospital accreditation as baby friendly, and now there are 152 baby friendly hospitals<sup>1</sup>.

Exclusive breastfeeding during the first six months of life and then continuation while adding complementary feeding up to two years was and still is recommended by WHO<sup>2</sup>, UNICEF<sup>1</sup> and the American Academy of Paediatrics

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<sup>1</sup> UNICEF. *The Baby Friendly Hospital Initiative*. Retrieved from <http://www.unicef.org>. [Accessed: 31 October 2015]

<sup>2</sup> WHO. *10 Facts on Breastfeeding*. Retrieved from <http://www.who.int>. [Accessed: 31 May 2015]

(AAP 2012), and supported in many recent systematic reviews for healthy growth and development and proper digestion of the infant (Kramer and Kukuma 2012) in addition to protection from respiratory infections and diarrhoeal disease. Also it is used to treat obesity and certain non-communicable diseases including asthma, diabetes and heart diseases later in life (Horta and Victoram 2013). Moreover it helps with the improvement of academic achievement (Oddy et al. 2011) and reduces the risk of childhood leukaemia (Amitay and Boker 2015). Also, it fosters the process of attachment between mother and baby leading to a sense of wellbeing and security<sup>2</sup>. Longer breastfeeding duration improves bone strength (Chapman 2012), and decreases risk of breast and ovarian cancer (Nagata et al. 2012, Collaborative Group on Hormonal Factors in Breast Cancer 2002), postpartum haemorrhage (Sobhy 2004) and some cardiovascular diseases for the mother (Labbok 2001). Initiating breastfeeding in the first hour of life decreases the risk of neonatal death by 20%. Society also benefits by decreasing medical costs as sick care visits, prescriptions and hospitalizations (Debes et al. 2013).

In spite of having all these benefits only 38% of infants globally are exclusively breastfed. At the same context, recent analyses indicate that, suboptimal breastfeeding practices in terms of initiation, exclusivity and duration contribute to over 800,000 deaths (11.6%) in children under five years of age. Accordingly, following the international organizations' recommendations would decrease children morbidity and mortality (Black et al. 2013). Actually, breastfeeding is feasible if women are well informed and supported. Additionally, breastfeeding is a natural practice and a learned behavior<sup>3</sup>.

Regionally, percentages of infants who are breastfed within one hour and had exclusive breastfeeding in the first six months were 42% and 49% respectively in South Asia<sup>4</sup>. Because of these suboptimal breastfeeding practices, increasing the percent of exclusive breastfeeding reaching 50% is the fifth global nutrition target for 2025 set by the World Health Assembly Resolution 65.6 in 2012<sup>5</sup>. In consequence, WHO and UNICEF recommended some actions at the health system, community and policy maker's level that will help to achieve this goal<sup>6</sup>.

Concerning the compliance with WHO recommendation in Saudi Arabia, a nationwide survey reported that, bottle feeding was introduced by one month of age to 51.4% of the participants' infants and to 90% by six months of age (El Mouzan et al. 2009). Recently, the Saudi Arabian Ministry of Health announced

<sup>1</sup> UNICEF. *Nutrition, Braestfeeding*. Retrieved from <http://www.unicef.org>. [Accessed: 20 April 2015]

<sup>2</sup> UNICEF. *The Baby Friendly Hospital Initiative*. Retrieved from <http://www.unicef.org>. [Accessed: 31 October 2015]

<sup>3</sup> WHO. *Breastfeeding*. Retrieved from [www.who.int/topics/breastfeeding](http://www.who.int/topics/breastfeeding). [Accessed: 20 July 2015], UNICEF. *Nutrition/Breastfeeding*. Retrieved from [www.unicef.org](http://www.unicef.org). [Accessed: 21 July 2015]

<sup>4</sup> UNICEF. *A Post-2015 World Fit for Children Issue Brief: Breastfeeding*. Retrieved from [goo.gl/nhla1i](http://goo.gl/nhla1i). [Accessed: 1 November 2015]

<sup>5</sup> Resolution WHA 65.6.2012. *Comprehensive Implementation on Maternal, Infant and Young Child Nutrition*. In: Sixty-fifth World Health Assembly Geneva. Resolutions and decisions, Annexes: WHO. Retrieved from [goo.gl/CvCjaA](http://goo.gl/CvCjaA).

<sup>6</sup> WHO Global Nutrition Targets 2025. *Breastfeeding Policy Brief*. Retrieved from <http://www.who.int>. [Accessed: 1 July 2015]

after conducting nutritional survey in five regions that, the rate of breastfeeding in the first six months of child's age reached 35.1%, while, 99% of pregnant women are educated on the benefits of breastfeeding<sup>1</sup>. Additionally, the mean duration of breastfeeding has decreased from 13.4 months in 1987 to 8.5 months in 2010 (Al-Juaid et al. 2014). For initiation of breastfeeding within one hour after birth, a study conducted in the Al-Hassa Province reported that about 11.4% of the participants given timely initiation (El-Gilany et al. 2012).

Referring to the perceived barriers of breastfeeding, it was reported that, working, low income, pushing formula into hospital and heavy formula advertisements can limit the breastfeeding practices (Rani 2014) in addition to, lack of information, fear of pain, misconceptions, worries about breastfeeding in public, negative postpartum hospital experiences and lack of support after going home (Furman et al. 2013). At the national level, previous studies added insufficient milk supply, being too busy to breastfeed, change in breast shape and availability of housekeepers acted as barriers among Saudian women (Mosalli et al. 2012, Hala et al. 2013). So, it can be concluded that, the breastfeeding practices may be far from WHO's recommendations.

Although breastfeeding is a natural practice, still there are many factors negatively affecting women's attitudes toward it and a lot of barriers halting its conduction. Some mothers find it difficult to adhere to exclusive breastfeeding for six months despite the increased rate of initiation (Whalen and Cramton 2012). Further, some studies conducted in Saudi Arabia revealed that, the percent of exclusive breastfeeding was low In spite of having a high level of education. Also, mixed feeding was the common way of feeding. Additionally, reasons for discontinuing breastfeeding were individualized as sickness of mother or baby, use of contraception or taking drugs (Alwelaie et al. 2010). At the same time, some factors remain inconclusive and not well clarified in detail so, additional examination is of concern. Furthermore, updated assessment and clear description of breastfeeding indicators are important to plan and carryout tailored enhancement programs that suit the nature of the population in relation to common and unique culture and environment.

Additionally, it was observed in a clinical training setting that many delivered women refuse to breastfeed their babies or ask nurses to put them in the nursery. In addition to, the complaints of the health care providers regarding mother's refusal to breastfeed their babies. So, all the above mentioned factors encouraged the researchers to conduct the current study to examine some modifiable variables and explore their relationship with breastfeeding attitudes. In addition to identifying why some women may be aware of the benefits of breastfeeding but have a negative attitude toward it.

Finally, it is expected that, understanding reasons limiting breastfeeding practice can help nurse to develop effective strategies helping to promote and encourage breastfeeding practice and reach the Fifth Global Nutrition Target. Especially because, the leading health organizations emphasize that countries at or

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<sup>1</sup> Ministry of Health Portal. Kingdom of Saudi Arabia. 2014. *Dr. Al-Qsami Calls for Developing a Strategy for the Breastfeeding Promoting Program*. Retrieved from [goo.gl/aj5GsV](http://goo.gl/aj5GsV).

near 50% exclusive breastfeeding should continue to strive for improvement<sup>1</sup>. Accordingly, the aim of the current study is to assess breastfeeding knowledge, attitudes, practices and perceived barriers to breastfeeding among Saudi Arabian women in a military hospital in Jeddah.

## Materials and Methods

### *Aim*

Investigating breastfeeding knowledge, attitudes, practices and perceived barriers among Saudi women in the National Guard Hospital in Jeddah.

### *Specific Objectives*

- To investigate the knowledge level of women about benefits of breastfeeding.
- To explore the woman's perceived barriers to breastfeeding.
- To examine the woman's attitudes toward breastfeeding.
- To assess the practice of breastfeeding in previous and present delivery.
- To correlate women's breastfeeding knowledge, attitudes and perceived barriers to their socio-demographic background.

### *Questions*

- What is the women's knowledge level about the benefits of breastfeeding?
- What are the women's perceived breastfeeding barriers?
- What are the women's attitudes toward breastfeeding?
- How did the women practice breastfeeding?
- Is there a correlation between breastfeeding knowledge, attitudes, perceived barriers and socio-demographic back ground?

### *Study Design*

A descriptive correlational cross-sectional design was adapted for the current study as it fits its nature.

### *Study Area/Setting*

Data was collected at King Khalid Hospital in National Guard, Ward<sub>2</sub>. Ward<sub>2</sub> is a postnatal ward where about 3,000 women are admitted annually after their vaginal or caesarean births<sup>2</sup>.

### *Study Subjects/Sample Size/Sampling Technique*

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<sup>1</sup> WHO Global Nutrition Targets 2025. *Breastfeeding Policy Brief*. Retrieved from <http://www.who.int>. [Accessed: 1 July 2015]

<sup>2</sup> *King Khalid Hospital Statistics, Labor and Delivery Unit*. 2014. Retrieved from Labor and Delivery Unit, electronic filing system.

One hundred women were recruited in convenience and interviewed face to face after their deliveries using structured questionnaire. Women who were most readily accessible and willing to participate, primiparous and multiparous Saudian women were included in the study. While, women who had multiple pregnancies, any postpartum complication, stillbirth or infants with congenital anomalies or their babies admitted to NICU were excluded.

### *Data Collection Methods, Instruments Used, Measurements*

An English questionnaire encompasses five sections and is composed of 75 items was translated into Arabic and reviewed by a panel of experts in the nursing field as paediatric, community health, management and medical surgical nursing and necessary changes were done. Then the questionnaire was completed by the researchers while interviewing the participants. Four sections were designed by the researchers after an extensive literature review (Hala et al. 2013, El-Gilany et al. 2012, Alfaleh 2014, Cara et al. 2014) to elicit information on: socio-demographic background as age, education, residence, income, employment, etc.; breastfeeding knowledge; perceived barriers and practice. The fifth section is the Iowa Infant Feeding Attitude Scale (IIFAS) (De La Mora et al. 1999). The IIFAS was developed to assess maternal attitude toward infant feeding as a predictor for feeding method choice (Scott et al. 2006, Dungy et al. 1994). Studies using the IIFAS reported adequate prediction validity and internal consistency with the Cronbach's alpha 0.89 (Dungy et al. 2008).

Some items are reversely scored due to being scientifically wrong. Women were interviewed after at least 24 hours from their delivery to be able to respond and to be accessed before discharge (the average stay in Ward<sub>2</sub> is 3-4 days). Validity of the questionnaire is confirmed by a panel of nursing experts in paediatrics, community health and research who assessed its relevancy and appropriateness to the current study aims. Necessary changes were done by the consulting Jury as adding negative family attitude as a barrier for breast feeding, and questions about digestion and constipation in the part of breast feeding benefits. In addition to using no education instead of illiterate regarding the educational level and IIFAS as a valid and reliable tool to assess attitudes toward breastfeeding. A pilot study was conducted by interviewing 10 women (10% of the participants) who met the inclusion criteria to assess the clarity of the questionnaire items and feasibility of the study, no modifications were done. Respondents who were interviewed for piloting were part of the whole study participants.

### *Data Management and Analysis Plan*

Data was coded, entered and analysed using the Statistical Package for Social Sciences (SPSS) version 22 for Windows. The data was presented using descriptive statistics that include frequencies, percent, means and standard deviations. Also, inferential statistics were used to examine the significance of comparison and correlation between the study variables. A  $p < 0.05$  is used as a significance level.

### *Ethical Considerations*

The study was conducted after being reviewed and approved by the College of Nursing Research Committee, the Institutional Review Board (IRB) at King Khalid Hospital and King Abdullah International Medical Research Centre (KAIMRC), Jeddah, KSA. Then the researchers explained the aim and nature of the study for each woman that met the criteria for inclusion to gain her oral and written consent to participate in the current study. Written consent was obtained from non-educated

women through their husbands. Also, the researchers emphasized that participation in the study is voluntary and confidentiality was maintained.

#### Limitations

A small sample size and number of settings were from the major study limitations that may restrict the generalisation of the study findings.

#### Findings/Results

One hundred women participated in the current study, their age ranged between 17 and 52 years with a mean of (28.2±6.6) and (83%) of them were highly educated. Majority of the participants were housewives (78%) and (34%) of them had a house keeper (Table 1).

**Table 1.** Distribution of the Socio-demographic Characteristics of the Participants

Item	Percent (n=100)
<b>Age (years)</b>	
• ≤20	6
• 21-30	64
• 31-40	26
• 41-50	3
• ≥51	1
Mean±SD	28.2±6.6
<b>Education</b>	
• Low education (Primary and preparatory education)	14
• High education (Secondary and university education)	83
• No education	3
<b>Marital status</b>	
• Married	100
<b>Residence</b>	
• In Jeddah	100
<b>Income</b>	
• <5000 SR	26
• 5000-10000 SR	51
• >10000 SR	23
<b>Employment</b>	
• Housewife	78
• Employed	22
<b>Type of employment</b>	
• Health related	8
• Not health related	14
<b>Housekeeper availability</b>	
• Yes	34
• No	66

In reference to these findings, it was expected that participants had enough knowledge and time for breastfeeding their babies. Regarding to the medical and

obstetrical history of the participants, (69%) of them was medically free, and (72%) multiparous (Table 2). It can be understood that, most of the participants were physically able to breastfeed in addition to having previous experience.

**Table 2.** Distribution of the Participants by their Medical and Obstetrical History

Item	Percent (n=100)
<b>Medical disorder</b>	
• No	69
• Cardiac	2
• Diabetes	11
• Renal	2
• Asthma	5
• Hypertension	1
• Others	10
<b>Parity</b>	
• Primiparous	28
• Multiparous	72
<b>Number of children</b>	
• 1-5	95
• 6-10	5
<b>Status of current pregnancy</b>	
• Planned	35
• Unplanned	65
<b>Antenatal care during present pregnancy</b>	
• Yes	79
• No	21
<b>Complications during present pregnancy</b>	
• No	60
• Pregnancy induced hypertension	3
• Gestational diabetes	22
• Premature rupture of membranes	2
• Antepartum hemorrhage	7
• Others	6
<b>Mode of present delivery</b>	
• Normal vaginal delivery	29
• Assisted vaginal delivery	31
• Cesarean section	40
<b>Use of epidural during present delivery</b>	
• Yes	53
• No	47
<b>Gestational age at present pregnancy</b>	
• <37 weeks	46
• ≥37 weeks	54
<b>Occurrence of complications during present delivery</b>	
• No	68
• Prolonged labor	16
• Tears or lacerations	6
• Others	11

Almost half of the participants (56%) had breastfeeding education during current pregnancy and half of the educated participants (28%) had their education by nurses during antenatal or postnatal period (Table 3). All of them

should be educated regarding breastfeeding with the nurse playing a more crucial role as a health educator. Two thirds of the participants (62%) had a good knowledge regarding breastfeeding's health benefits for mother and baby (Figure 1) with a mean total score of 12.2 points out of 16. In addition, they were aware that breastfeeding gives the baby all the needed nutrients during the first 6 months, needs no preparation and protects the mother against breast cancer (represented as 92%, 75% & 53% respectively) (Table 4). Thus, participants were aware with the major breastfeeding benefits that may encourage them to practice it.

Regarding the participants' breastfeeding perceived barriers, the most commonly reported barriers were lack of knowledge (71%), returning to work or school and using contraception (69%) (Table 5). These barriers can be minimised by increasing a mothers' knowledge and adapting work policies.

**Table 3.** Distribution of the Participants by their Breastfeeding Education during the Current Pregnancy

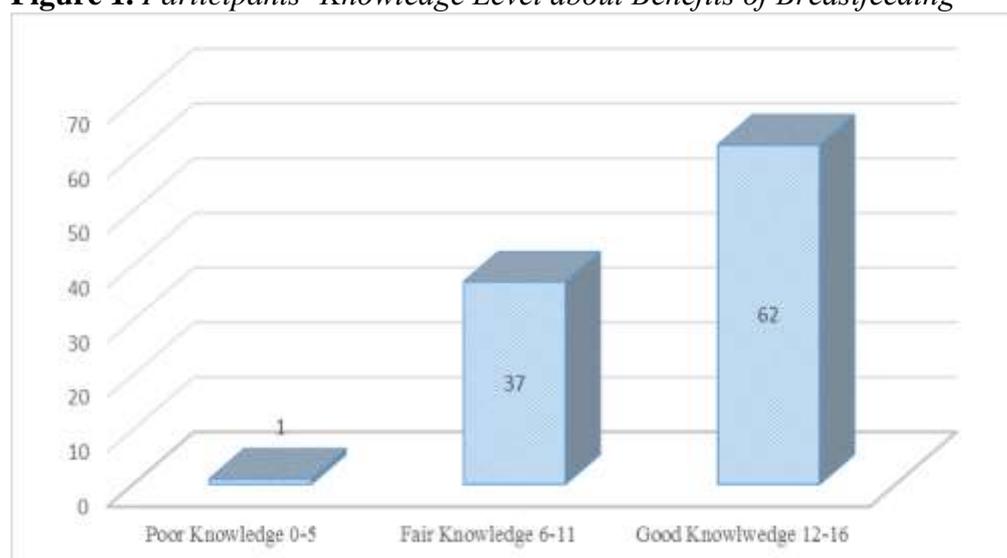
Item	Percent (n=100)
<b>Had breastfeeding education</b>	
• Yes	56
• No	44
<b>When</b>	
• During antenatal follow up	33
• Postnatal	23
<b>By whom</b>	
• Nurse	28
• Doctor	18
• Locational specialist	10

**Table 4.** Distribution of the Participants by their Knowledge about Benefits of Breastfeeding

Item	Yes	Uncertain	No
Breastfeeding gives the baby all the needed nutrients during the first 6 months (True).	92	8	0
Breastfed babies have less diarrhoea than formula fed babies (True).	75	20	5
Breastfed babies develop fewer diseases during childhood than formula fed babies (True).	74	20	6
Bottle fed babies are more intelligent than breastfed babies (False).	31	23	46
Breastfeeding does not protect the mother against breast cancer (False).	24	23	53
Breastfeeding does not protect the mother against postpartum haemorrhage (False).	25	37	38
Breastfeeding helps mothers to loose weight (True).	65	12	23
Breast milk needs no preparation (True).	75	9	16

**Table 5.** Distribution of the Participants by their Breastfeeding Perceived Barriers

Item	Agree	Uncertain	Disagree
Returning to work or school	69	4	27
Fear of losing breasts shape and size	51	12	37
Tiredness and fatigue after delivery	64	6	30
Insufficient milk supply	68	14	18
Difficulty with baby feeding	62	13	25
Advertisement about newly developed formulas	45	15	40
Availability of formula milk	46	12	42
Negative family attitude (e.g. conflict over the gender of baby)	26	22	52
Fear of pain	53	13	34
Embracement from nursing in public	58	21	21
Housekeeper availability	46	12	42
Lack of knowledge	71	11	18
Lack of support from husband/family/doctor/nurse	58	14	28
Being too busy	65	11	24
Using contraception	69	10	21

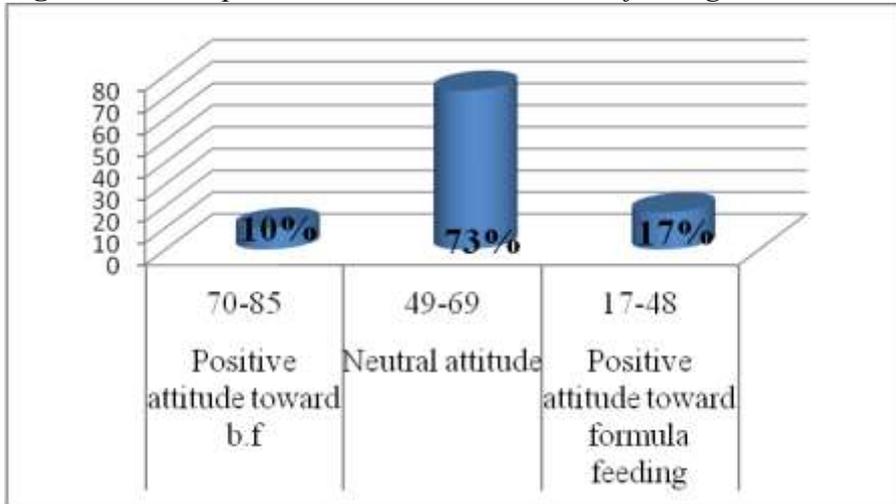
**Figure 1.** Participants' Knowledge Level about Benefits of Breastfeeding

In relation to the participants' attitudes toward the breastfeeding, minority of them (10%) had a positive attitude toward breastfeeding (Figure 2) with a mean total score of 58.2 points out of 85.

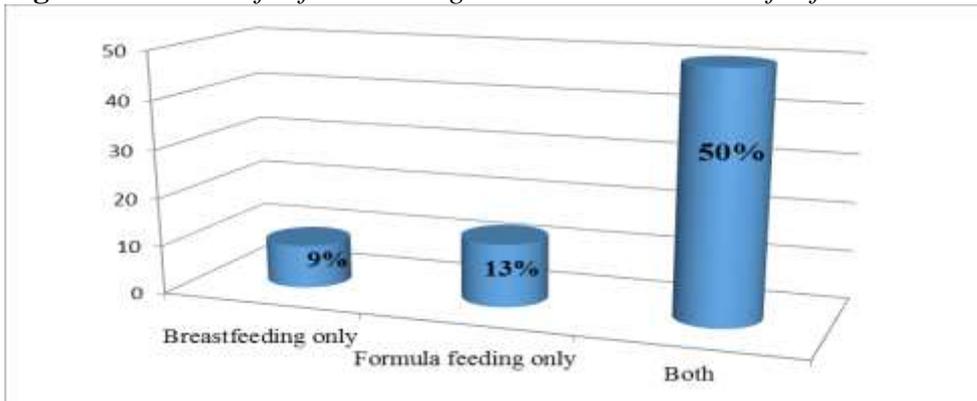
Concerning breastfeeding practice in previous delivery, only (9%) of the participants exclusively breastfed their babies during the first six months of life (Figure 3). The mean duration of each breastfeeding episode in minutes was ( $8.5 \pm 8.9$ ). Additionally, the mean duration of breastfeeding in months was ( $3.1 \pm 4.4$ ). In relation to breastfeeding practice in present delivery, half of the participants (53%) had skin to skin contact after delivery. However, the minority of them (18%) initiated breastfeeding within one hour after delivery

(Figure 4). Causes for delayed breastfeeding initiation were maternal pain or fatigue and neonatal sleeping (represented as 30%, 12% & 2% respectively). Nearly all the participants (95%) gave supplemental feeding in the hospital (Figure 5) and only (18%) decided to breastfeed their babies exclusively after discharge (Figure 6).

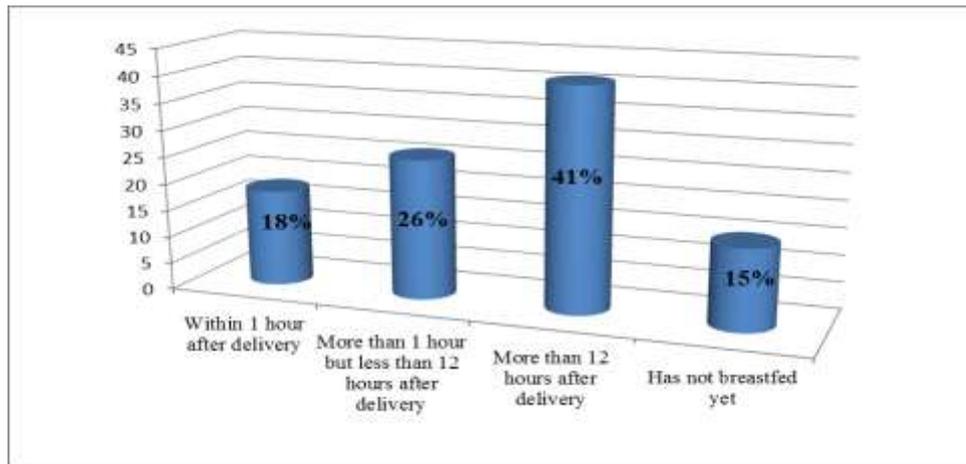
**Figure 2. Participants' Attitudes Toward Breastfeeding**

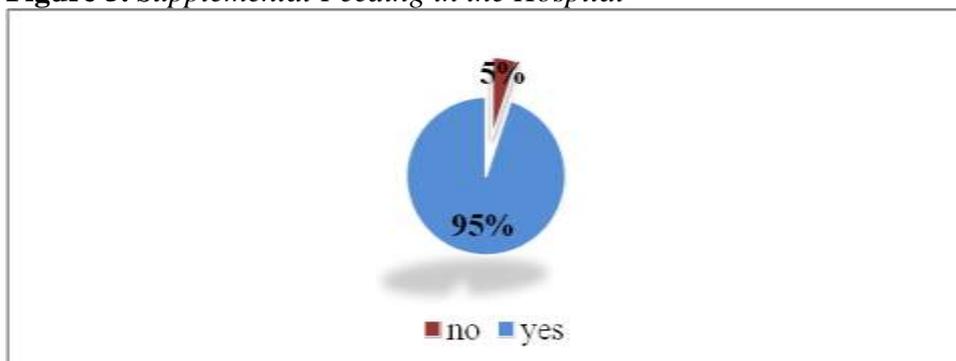
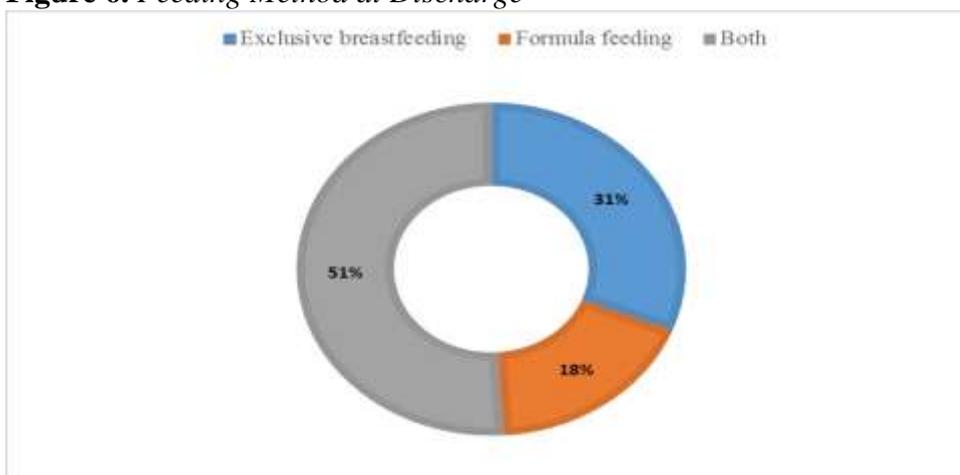


**Figure 3. Method of Infant Feeding in the First 6 Months of Life**



**Figure 4. Initiation of Feeding after Delivery in the Present Delivery**



**Figure 5.** Supplemental Feeding in the Hospital**Figure 6.** Feeding Method at Discharge

Considering the relationship between breastfeeding knowledge, breastfeeding attitudes and the socio-demographic background of the participants, statistically significant correlations were found between breastfeeding knowledge and maternal age and breastfeeding duration ( $r=0.22$ ), also there was a good significant correlation between women's knowledge level and their attitude toward breastfeeding ( $r=0.50$ ) (Table 6). This indicates that older participants have better knowledge and longer breastfeeding duration. Additionally, participants who have better knowledge have more positive attitude toward breastfeeding. Regarding the relationship between breastfeeding perceived barriers and the socio-demographic background of the participants, statistical significant relationships were found between returning to work or school, insufficient milk supply negative family attitude and housekeeper availability and participants' educational level ( $p=0.01$ ,  $p=0.007$ ,  $p=0.007$  &  $p=0.03$  respectively). Also, a statistical significant relationship was found between employment and returning to work ( $p=0.04$ ) (Table 7).

**Table 6.** Relationship Between Breastfeeding Knowledge, Attitudes and Socio-Demographic Back Ground of the Participants

Item	Knowledge		Attitudes	
	<i>r</i>	<i>p-value</i>	<i>r</i>	<i>p-value</i>
Age	0.22*	0.03	0.04	0.67

Number of children	0.05	0.61	0.01	0.89
Knowledge	1		0.50*	0.0001
Breastfeeding duration	0.22*	0.03	0.05	0.62

**Table 7.** Relationship Between Breastfeeding Perceived Barriers and Socio-Demographic Background of the Participants

Item	Educational	Employment
Returning to work	p=0.01*	p=0.04*
Insufficient milk supply	p=0.007*	
Negative family attitude	p=0.007*	
House keeper availability	p=0.03*	

Regarding the description of the participants who had a good knowledge score, (68%) of them were multiparous, (82%) of them were highly educated, (94%) of them had less than 5 children, (89%) of them had antenatal follow up during current pregnancy and (57%) of them had an unplanned pregnancy. Similarly, (90%) of the participants who had positive attitude score were highly educated, (80%) of them had less than 5 children, (100%) of them had an antenatal follow up during current pregnancy and (60%) of them had an unplanned pregnancy. In contrast, the majority of them (70%) were primiparous.

## Discussion

The current study aimed at investigating the knowledge, attitudes, practices and perceived barriers of breastfeeding among Saudi women in the National Guard Hospital Jeddah. Findings of the current study revealed that, however two thirds of the mothers have good knowledge about some of the breastfeeding benefits. A high percent of them have neutral attitudes toward it. The reason for being aware that breastfeeding benefits might be related to the high educational level of the majority of them as well as breastfeeding education of more than half of them.

The breastfeeding barrier can impede mothers from its practice. In the current study, lack of knowledge, returning to work or school, using contraception and insufficient milk supply were the most commonly identified among study participants. In the same context, Hala et al. (2013) conducted a study in Riyadh and found the same findings regarding breastfeeding knowledge and attitude toward it. But, embarrassment from lactation in public places and working were the common identified barriers by the women (represented as 83.2% & 73.5%) (Hala et al. 2013). The same conclusion had been reached by Alfaleh who found that, (41%) of the participants attended breastfeeding awareness programs but, diffusing artificial milk, duration of vacation after delivery and deficient knowledge were the barriers for breastfeeding (Alfaleh 2014).

Regarding breastfeeding practice in previous delivery, less than one tenth of the participants exclusively breastfed their babies in the first six months with a mean duration of three months. Concerning breastfeeding practice in present delivery, less than one quarter of them had initiated breastfeeding within the first hour after delivery although, more than half of them had erected nipple. Reasons for delaying breastfeeding initiation were fatigue or pain of most of the participants. An explanation of these findings may be the neutral attitude of

majority of the participants toward breastfeeding, as favorable attitudes are necessary to initiate and maintain breastfeeding practice. These results are highlighted on a previous national research which revealed a lowered percent of breastfeeding practice in spite of being highly educated as well as non-exclusive feeding was the common way of feeding (Alwelaie et al. 2010). In contrast, a study conducted in Al-Hassa revealed that, breastfeeding was started by (77.8%) of women within the first 24 hours after delivery. Additionally 76.1% of women breastfed their babies exclusively but this percent decreased to 32.9% and 12.2% at the second and sixth month, respectively (El-Gilany et al. 2012).

Findings of the current study revealed a positive correlation between mother's age and breastfeeding knowledge and breastfeeding duration, also a good significant correlation between the level of knowledge and the attitude toward breastfeeding. These results are comparable to results of Hala et al. (2013). Unsurprisingly, employment was significantly related to returning to work as a barrier of breastfeeding practice.

Surprisingly, the majority of the participants who had a positive attitude toward breastfeeding were primiparous. Thus, previous experience had a reverse impact on the attitudes toward breastfeeding. This contradiction may be clarified as multiparous women may face some breastfeeding problems during previous delivery that made them less enthusiastic to breastfeed their babies. At the same context, having an unplanned pregnancy was not from the main factors affecting breastfeeding knowledge and attitude as it was accompanied with positive breastfeeding attitude and a good knowledge level. As expected, being highly educated and having antenatal care are accompanied with positive breastfeeding attitude and good knowledge level, which highlight the importance of antenatal follow up and health education during every pregnancy either at a low or high risk.

## Conclusion

Based on study findings, it can be concluded that:

- Study participants have a good knowledge regarding breastfeeding's health benefits for mother and baby.
- Participants have a neutral attitude toward breastfeeding.
- Participant's knowledge level is positively correlated with their age and attitude toward breastfeeding.
- Several barriers might prevent participants from breast feeding their babies although they have good knowledge regarding its importance.
- A statistically significant relation was found between the most common identified breastfeeding barriers and educational level.
- Not all participants had been educated regarding breastfeeding.

## Recommendations

The followings strategies are recommended to promote and encourage breastfeeding as well as improve the rates of exclusive breastfeeding:

- Mothers need to be supported from family to practice breastfeeding.
- Importance of antenatal follow up should be emphasized.
- Health education about importance of breastfeeding should be part of antenatal care and nursing management to increase its perceived value.
- Postnatal follow up of mothers to assure their breastfeeding practice and trying to solve any faced problem or overcome barriers.

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