Breastfeeding knowledge, attitude and practice among mothers attending Maternity Hospital at King Faisal Medical complex, Taif city, Saudi Arabia 2018

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Abstract

Background: Breastfeeding has countless benefits for the mother and infant as well as society.

Objectives: The aim of this study was to assess the level of knowledge, attitude and practices of breastfeeding with its determinants among mothers in Taif city.

Methods: A cross sectional study was done on Saudi mothers who attended the obstetrics and gynaecology clinics in Taif city. An electronic questionnaire was used for data collection. It included 4 parts seeking demographic information, knowledge, attitude and practice toward breastfeeding.

Results: The study included 384 women; their mean age was 34.7 ±8.1 years, and their children aged between 1- 6 years with a mean age of 2.6 ±1.2 years. About 26% of the participants had a very good level of knowledge regarding breast feeding whereas 15.6% had a poor level of knowledge. Most of the participants (77.1%) had health education about breast feeding. Slightly more than half of the participants (52.3%) had a positive attitude towards breastfeeding and almost two-thirds (64.1%) of the participants had breast fed their infants up to 6 months of age. The majority of them (76%) started breastfeeding in the first day after birth.

Conclusion: The level of knowledge about breastfeeding in this sample was moderate and slightly more than half of them had a positive attitude towards breastfeeding. The main source of health education about breastfeeding in our sample was from the doctors.

Key Words: knowledge; attitude; practice; breastfeeding; exclusive; Saudi

Introduction

Breast feeding is the feeding of an infant from the mothers' breasts directly rather than using infant formula from a baby bottle (1). There are two types of breast feeding ; the first is known as exclusive breastfeeding where the mother gives the infant milk from the breast during the first hour after childbirth due to the milk in first hours containing colostrum which is very rich in antibodies and nutrients to protect the infant and for the first 6 months of life without the addition of any water or food (1,2). The second type is nonexclusive breastfeeding and is defined as providing the fluids or food other than vitamins, drugs and minerals to infants before six months of age (3).

The non-exclusive breastfeeding may increase the risk of the death due to pneumonia and diarrhea between 0–5 months of age by more than two fold (4). In addition it increases the frequency of disease occurrence such as obesity, diabetes, cardiovascular diseases and autoimmune disorders later in life (5,6).

Breastfeeding has countless benefits for the mother and infant as well as society (7). These include reducing the risk of type 1 and 2 diabetes, infant diarrhea, sudden infant death syndrome, childhood leukemia and infections (8,9). It also, has many benefits for the mother such as prolongation of the period of amenorrhea postpartum that increases pregnancy spacing. Moreover, it reduces the risk of type 2 diabetes, and ovarian and breast cancer (10,11). Psychologically, breastfeeding is very important for initiation of strong rapport between infant and mother (12,13,14,15).

Initiation and continuation of breastfeeding is considered a global problem. The United Nation's Children Fund in 2012 showed that 32.6% out of 136.7 million babies born worldwide were exclusively breastfed up to 6 months of age (16). In the United Arab Emirates (U.A.E) a recent study showed that all the Mothers who participated in the study had initiated breastfeeding (98%); only 25% of the infants had been exclusively breastfed up to 6 months of age (17).

The knowledge, beliefs and practices among mothers regarding breastfeeding vary in different countries. In Saudi Arabia, a recent study on school teachers in Asser region showed that out of 384 women, only 8.3% reported exclusive breastfeeding for 6 months, while 31% starting breastfeeding their children within 1 hour of delivery. Regarding their practice, the most common reason given by the participants for beginning breastfeeding was their Islamic religious background (18).

Another study done in Hail district (Northwestern Saudi Arabia) showed that out of 60 women, fifteen (31.2%) reported that breast milk components are good for immunity protection against diseases, thirteen (27.1%) reported it has sufficient nutrients, whereas 8(16.8%) did not know of any advantage. As for practice 70 % of the mothers had started breastfeeding after birth while 30 % did not. The most common reasons for stopping breastfeeding were mother's work 22(38.6%), mother's disease 9 (15.8%) whereas the least reason was the child rejection, given by 2(3.5%) (19).

With the advancement of urbanization and the exit of Saudi women to work in different sectors, we think that plays an important role in affecting the baby's breastfeeding and also there is limited research on the knowledge and practices of breastfeeding among mothers in Taif (in Makkah region west of Saudi Arabia). So, the aim in our study was to assess the level of knowledge, attitude and practices of breastfeeding with its determinants among the mothers attending Obstetrics and Gynecology Clinics in the Maternity hospital at King Faisal Medical Complex.

Materials and Methods

Study Design: The design of this study was cross-sectional and it was carried out in Taif, a city located in western Saudi Arabia. The data collection period was September 2018 to September 2019 from Maternity hospital at King Faisal Medical Complex and was to assess the level of knowledge, attitude and practices of breastfeeding with its determinants among the mothers attending Obstetrics and Gynecology Clinics.

Study Population: 384 mothers were included in this study. The mothers varied in age group and were from different educational levels. Mothers studied were Saudi in nationality, were attending obstetrics and gynecology clinics, and who resided in Taif and agreed to participate in this study. Mothers who were Non-Saudi, not attending obstetrics and gynecology clinics, not residing in Taif and who refused to participate were excluded from the study.

Study instrument: A pre-designed electronic questionnaire was performed in Google form was published and completed by mothers in Obstetrics and Gynecology Clinics at Maternity Hospital in King Faisal Medical Complex by data collectors over a one-month period. The items of the questionnaire were taken from a previous study (20).

The questionnaire included four sections. The first was demographic information about age, nationality, educational level, job of mother and educational level, job of husband. It also included information about the age of baby, number of children, type of last delivery and if the mother received health education about breastfeeding and who presented it to her. The second section was about the breastfeeding knowledge including all questions measuring the knowledge of mother about breastfeeding.

To clarify more there were six questions about advantages of breastfeeding to baby, six questions about Advantages of breastfeeding to mother, four questions about colostrum, three questions about effective feeding, four questions about duration of feeding, two questions about complementary feeding, five questions about problems with breastfeeding, two questions about breast

engorgement and six questions about practical aspects of breastfeeding. The third section was to assess the attitude and it included nine questions. The fourth section was about breastfeeding practice and included two questions. Regarding knowledge questions, the right answers were assigned a score of "1" whereas wrong or don`t know answers were assigned a score of "0". The overall score was computed by summing up all the given scores, and these were converted to percentages. Participants who had a knowledge score percentage less than 50% were considered as having "poor knowledge, those who had a knowledge score percentage ranged between 50 and 74% were considered as having "Fair knowledge" whereas those with a knowledge score percentage of 75% or more were considered as having "good knowledge" (21).

Attitude statements were scored in the way that the higher the score, the more positive the attitude towards breast feeding and the lower the score, the more negative the attitude. The total score was computed for each participant by adding the score of the 9 statements. Thus the total score ranged between 9 and 45. The median score was then computed (it was 33). Participants who scored below the median value were considered as having a "negative attitude" whereas those who scored at or above the median value were considered as having a "positive attitude".

Ethical considerations: The authors obtained ethical approval from the Scientific Research and Medical Ethics Committee of Medical College at Taif university. Approval from the Maternity hospital at King Faisal Medical Complex was also obtained. Verbal and written consent was taken from mothers before completing the questionnaire.

Data Analysis: Data analysis was done by using the Statistical Package for the Social Sciences (SPSS) program version 25. Qualitative data was presented as number and percentage and Chi Squared test was performed to assess the relationship between variables. Quantitative data were expressed as mean ± SD and Student`s t-test was used to compare means of a continuous variable between two groups, whereas one-way analysis of variance (ANOVA) test was utilized to compare means of one continuous variable between more than two groups. A p-value of less than 0.05 was considered statistically significant.

Results

The study included 384 women. Their age ranged between 20 and 66 years with a mean of 34.7 years and standard deviation (SD) of (±8.1 years). Their children were aged between one and 6 years with a mean of 2.6 years and standard deviation (SD) of (±1.2 years). University graduated women represent 41.2% of the participants. Slightly less than half (47.4%) of their husbands were university graduated. Most of them (78.9%) were house wives while 47.6% of their husbands were governmental employees. Almost half of them (45.1%) had more than three children. Cesarean section was reported as a mode of delivery among 33.1% of the participants as in Table 1.

Having health education about breast feeding was mentioned by most of the participants (77.1%) as demonstrated in Figure 1. The main sources for breast feeding knowledge were doctors (42.5%), nurses (29.1%) and family/relatives (22%) as demonstrated in Figure 2.
Breast feeding knowledge

Table 2 presents the responses of the participants to knowledge statements about breast feeding. Regarding advantages to baby, most of the participants correctly recognized that breast feeding causes good development of baby teeth and gum (87.2%), increases the baby's intelligence (79.4%), reduces the risk of respiratory infection (76.6%) and helps to reduce the incidence of child abuse (74%). Concerning advantages to mothers, the majority of the participants knew that frequent breastfeeding may prevent breast engorgement (83.1%), mothers who practiced breastfeeding have a low risk of getting breast cancer (82%), and breastfeeding helps to stimulate uterine contraction (80.2%). Regarding colostrum, most of the participants (80.2%) knew that Colostrum is the mother's early milk, which is thick, sticky, and yellowish in color. The majority of the women could recognize that babies sleep well after they receive adequate breastfeeding (90.1%) and correct positioning helps to achieve effective breastfeeding (88.8%). Most of the participants (78.4%) knew that breastfeeding should be continued up to 2 years even though the baby has received complementary food and complementary feeding should be introduced at 6 months of age (82.6%). Less than half of them (45.1%) could recognize that breast engorgement may be reduced with cold packs. Most of the women knew that belching after feeding shows that the baby is full (74.5%).

Overall, about one quarter of the participants (26.6%) had a good level of knowledge regarding breast feeding whereas 15.6% had a poor level of knowledge. As in Figure 3.

Table 3 presents factors significantly associated with breast feeding knowledge level were maternal educational level, as the highest rate of poor knowledge (34%) was observed among the lowest educated women whereas the lowest rate of poor knowledge (8.8%) was observed among secondary school educated women, $p<0.001$. Also, husband`s educational level was associated significantly with breastfeeding knowledge as the highest rate of poor knowledge was observed among women whose husbands were primary school educated (44%) whereas the lowest level of poor knowledge was recorded among women whose husbands were university graduated (8.8%), $p<0.001$. Also, the number of children was significantly associated with breastfeeding knowledge as the lowest rate of good knowledge was observed among women with only one child (11.1%), 0.043.

Attitude towards breastfeeding
As demonstrated in Table 4, the majority of the participants either strongly agreed or agreed that doctors and nurses encourage breastfeeding (90.6%), breastfeeding being easier than feeding infant formula (87%), and breastfeeding is a good way to decrease family expenses (83%) whereas

almost two-thirds of them either strongly agreed or agreed that community encourages breastfeeding over feeding infant formula (69%) and breastfeeding has no negative effect on marital relationship (64.6%).

Overall, slightly more than half of the participants (52.3%) had a positive attitude towards breastfeeding as in figure 4. As obvious from Table 5, none of the study factors was significantly associated with attitude of the participants towards breast feeding.

Practice of breast feeding

It is realized from Figure 5 that almost two-thirds (64.1%) of the participants had given breast milk to their infants up to 6 months of age. The majority of them (76%) were breastfed in the first day after birth as demonstrated in Figure 6. Regarding supplementary feeding with breast milk in the first 6 months,as in figure 7, 25.8% gave artificial feeding whereas 17.2% and 2.1% gave water and oral medications, respectively. Almost one-fifth of the participants (19%) gave nothing but breast milk in the first 6 months of life.

Table 6 shows older women were significantly more likely to breastfeed in the first 6 months after birth compared to younger women (35.9±7.8 versus 32.6±8.1), p<0.001). Lowest educated women were significantly more likely to breast feed their babies compared to university graduated women (76.6% versus 56.3%), p=0.007. Similarly, women whose husbands were lowest educated were significantly more likely to breast feed their babies compared to those whose husbands were university graduated (87.5% versus 60.4%), p=0.047. The highest level of practicing breastfeeding till the age of 6 months was reported among women whose husbands were retired (83.3%) while the lowest rate was reported among those whose husbands were working in fields other than governmental, military, retired and private (50%). The difference was statistically significant, p=0.023. Number of children was significantly associated with breast feeding in the first 6 months as women with three children or more reported the highest rate (77.5%) and women with one child reported the lowest rate (48.9%), p<0.001. Women delivered by normal vaginal delivery were significantly more likely to breastfeed their children compared to those delivered by cesarean section (68.1% versus 55.9%), p=0.019. Having health education about breast feeding was significantly associated with its practice, p=0.034.

Figure 1: History of having health education about breast feeding among the participants

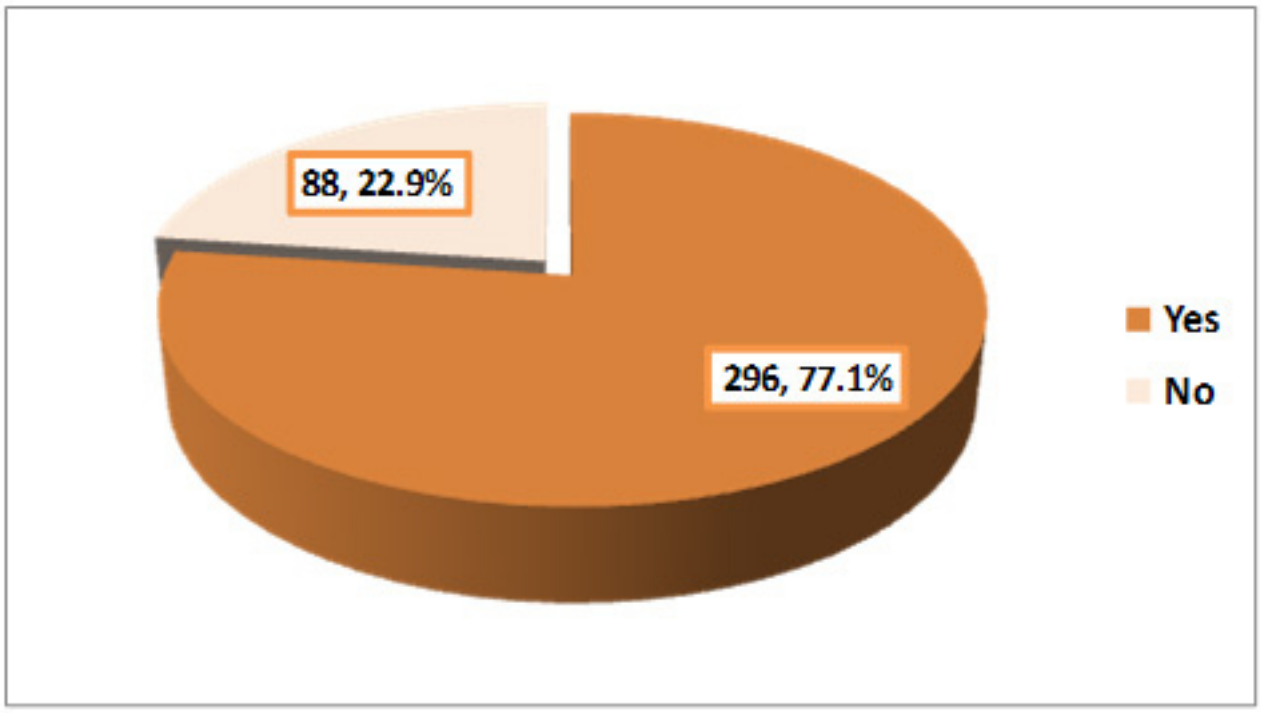

Table 1: Personal characteristics of the participants

Variable	Categories	Frequency	Percentage
Mother`s age (years) Range Mean±SD	20-66 34.7±8.1		
Child`s age (years) Range Mean±SD	1-6 2.6±1.2		
Mother`s education	No read/write Primary school Intermediate school Secondary school University	47 43 45 91 158	12.2 11.2 11.7 23.7 41.2
Husband`s education	No read/write Primary school Intermediate school Secondary school University	24 25 38 115 182	6.3 6.5 9.9 29.9 47.4
Mother`s occupation	House wife Working	303 81	78.9 21.1
Husband`s occupation	Governmental employee Private sector employee Military Retired Others	183 24 115 36 26	47.6 6.3 29.9 9.4 6.8
Number of children	One Two Three More than three	45 100 66 173	11.7 26.0 17.2 45.1
Mode of delivery of the last baby	Normal vaginal Caesarean section	257 127	66.9 33.1

Figure 2: Main source of health education about breastfeeding among the participants (n=296)

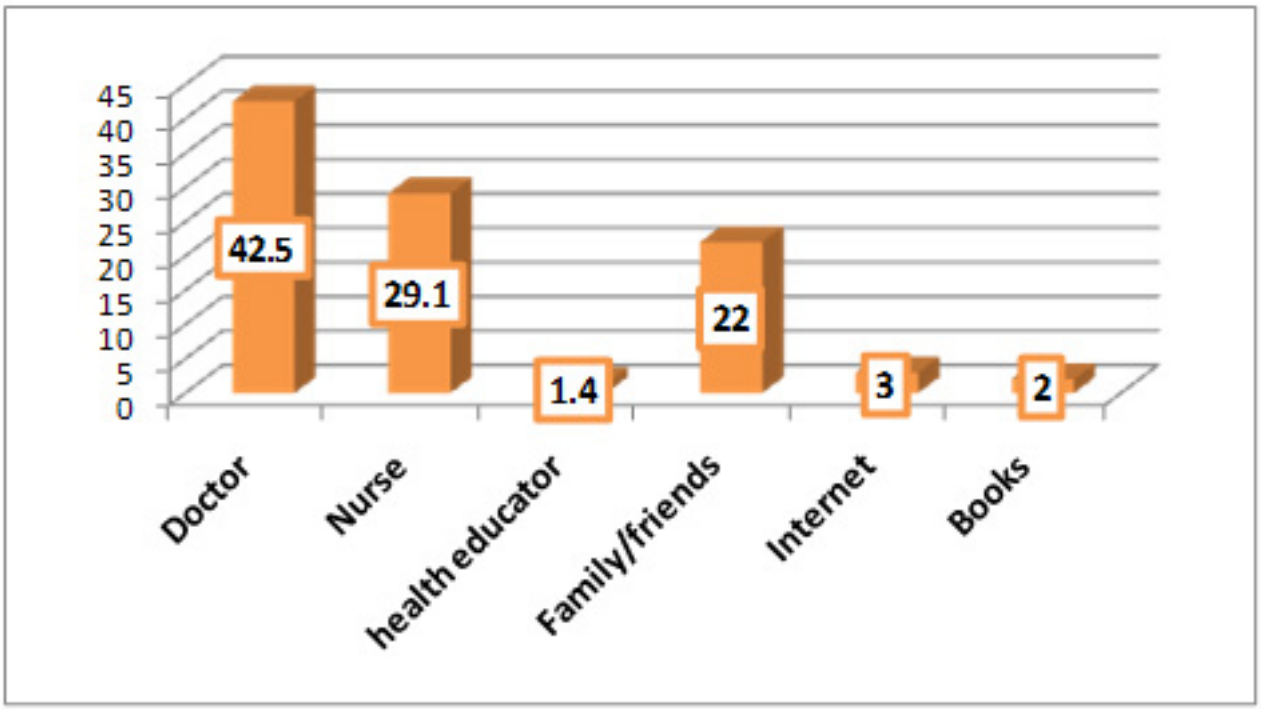

Figure 3: Overall breast-feeding knowledge level among the participants

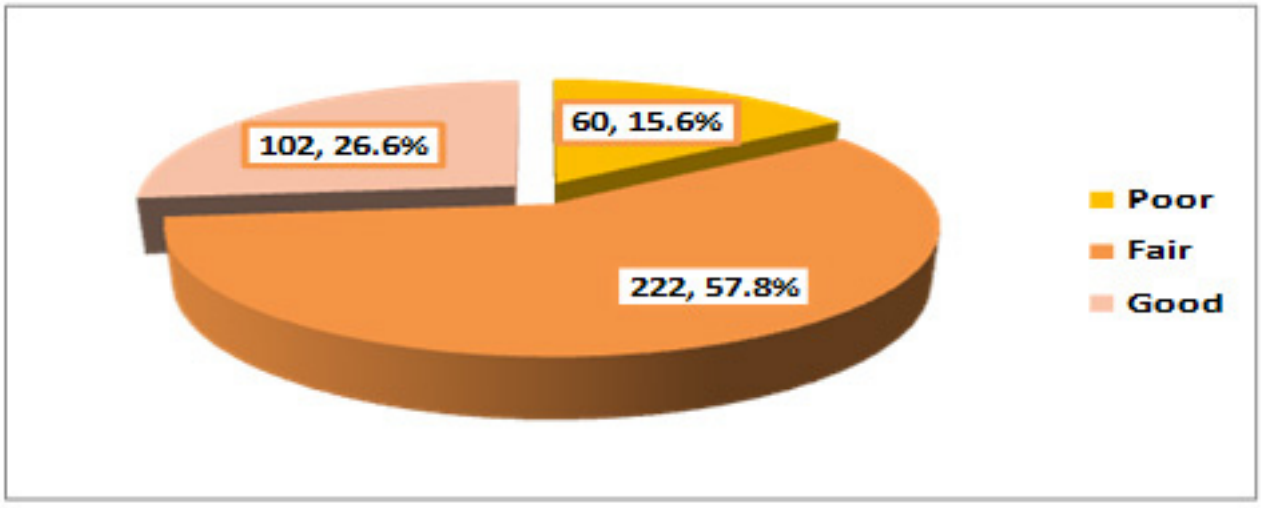

Table 2: Responses of the participants to breastfeeding knowledge statements

Variable	Right answer	
	No.	%
Advantages to baby		
Breast feeding reduces the risk of respiratory infection (√)	294	76.6
Breastfeeding increases the baby's intelligence (√)	305	79.4
Breast feeding helps to reduce the incidence of child abuse (√)	284	74.0
Baby who received breast feeding is less prone to get diarrhea (√)	276	71.9
Breast milk provides baby with more protection from allergy (√)	254	66.1
Breast feeding causes good development of baby teeth and gum (√)	335	87.2
Advantages to mother		
Exclusive breastfeeding is beneficial in spacing birth (√)	275	71.6
Breastfeeding helps to stimulate uterine contraction (√)	308	80.2
Mothers who practiced breastfeeding may achieve pre-pregnancy weight faster (√)	280	72.9
Frequent breastfeeding may prevent breast engorgement (√)	319	83.1
Mother who practiced breastfeeding has a low risk of getting breast cancer (√)	315	82.0
Breastfeeding may protect against osteoporosis (√)	151	39.3
Colostrum		
Colostrum is the mother's early milk, which is thick, sticky, and yellowish in color (√)	308	80.2
Colostrum is difficult to digest and needs to be discarded (X)	246	64.1
Colostrum causes constipation among babies(X)	238	62.0
Colostrum is not able to protect babies from jaundice(X)	150	39.1
Effective feeding		
Babies will gain weight if they receive effective feeding (√)	285	74.2
Correct positioning helps to achieve effective breastfeeding (√)	341	88.8
Babies sleep well after they receive adequate breastfeeding (√)	346	90.1
Duration of feeding		
Breastfeeding should be initiated within 30 minutes after delivery (√)	184	47.9
Breastfeeding should be given on demand (√)	258	67.2
Baby should be allowed to breastfeed for at least 10–20 minutes for each feeding (√)	231	60.2
Breastfeeding should be continued up to 2 years even though the baby has received complementary food(√)	301	78.4
Complementary feeding		
Complementary feeding should be introduced at 6 months of age (√)	317	82.6
Mothers may mix breastfeeding and formula feeding once baby starts taking complementary food (√)	280	72.9
Problem with breastfeeding		
Breast milk production is influenced by breast size(X)	213	55.5
Mothers with inverted nipples cannot breastfeed their babies(X)	86	22.4
Breastfeeding must be discontinued if mother has cracked nipple(X)	122	31.8
Breastfeeding must be discontinued if baby has jaundice(X)	198	51.6
Breastfeeding must be discontinued if mother has breast engorgement(X)	150	39.1
Breast engorgement		
Breast engorgement may be reduced with cold packs (√)	173	45.1
The use of cabbage may help to reduce breast engorgement (√)	81	21.1
Practical aspect of breastfeeding		
Exclusive breastfeeding must be practiced until the infant is 6 months old (√)	243	63.3
Massage may reduce breast engorgement (√)	278	72.4
Giving water to baby is encouraged after every breastfeeding(X)	192	50.0
Belching after feeding shows that the baby is full (√)	286	74.5
Babies who get enough feeding will pass urine more frequently (√)	221	57.6
Oral thrush frequently happens to babies who breastfeed (√)	119	31.0

Table 3: Factors associated with breastfeeding knowledge

Variable	Breast feeding knowledge level			p-value
	Poor N=60 N (%)	Fair N=222 N (%)	Good N=102 N (%)	
Mother`s age (years)				
Mean±SD	36.6±10.9	34.0±7.5	35.3±7.2	0.071*
Child`s age (years)				
Mean±SD	2.8±1.2	2.6±1.2	2.5±1.2	0.344*
Mother`s education				
No read/write (n=47)	16 (34.0)	21 (44.7)	10 (21.3)	
Primary school (n=43)	11 (25.6)	26 (60.5)	6 (14.0)	
Intermediate school (n=45)	10 (22.2)	20 (44.4)	15 (33.3)	
Secondary school (n=91)	8 (8.8)	53 (58.2)	30 (33.0)	
University (n=158)	15 (9.5)	102 (64.6)	41 (25.9)	<0.001**
Husband`s education				
No read/write (n=24)	8 (33.3)	8 (33.3)	8 (33.3)	
Primary school (n=25)	11 (44.0)	12 (48.0)	2 (8.0)	
Intermediate school (n=38)	9 (23.7)	19 (50.0)	10 (26.3)	
Secondary school (n=115)	16 (13.9)	74 (64.3)	25 (21.7)	
University (n=182)	16 (8.8)	109 (59.9)	57 (31.3)	<0.001**
Mother`s occupation				
House wife (n=303)	49 (16.2)	173 (57.1)	81 (26.7)	
Working (n=81)	11 (13.6)	49 (60.5)	21 (25.9)	0.811**
Husband`s occupation				
Governmental employee (n=183)	20 (10.9)	112 (61.2)	51 (27.9)	
Private sector employee (n=24)	4 (16.7)	12 (50.0)	8 (33.3)	
Military (n=115)	21 (18.3)	67 (58.3)	27 (23.5)	
Retired (n=36)	8 (22.2)	19 (52.8)	9 (25.0)	
Others (n=26)	7 (26.9)	12 (46.2)	7 (26.9)	0.377**
Number of children				
One (n=45)	11 (24.4)	29 (64.4)	5 (11.1)	
Two (n=100)	13 (13.0)	54 (54.0)	33 (33.0)	
Three (n=66)	5 (7.6)	43 (65.2)	18 (27.3)	
More than three (n=173)	31 (17.9)	96 (55.5)	46 (26.6)	0.043**
Mode of delivery of the last baby				
Normal vaginal (n=257)	35 (13.6)	158 (61.5)	64 (24.9)	
Caesarean section (n=127)	25 (19.7)	64 (50.4)	38 (29.9)	0.100**
Having health education about breast feeding				
Yes (n=296)	45 (15.2)	170 (57.4)	81 (27.4)	
No (n=88)	15 (17.0)	52 (59.1)	21 (23.9)	0.782**
Main source of health education about breastfeeding (n=296)				
Doctor (n=126)	17 (13.5)	74 (58.7)	35 (27.8)	
Nurse (n=86)	18 (20.9)	43 (50.0)	25 (29.1)	
Health educator (n=4)	0 (0.0)	2 (50.0)	2 (50.0)	
Family/friends (n=65)	7 (10.8)	44 (67.7)	14 (21.5)	
Internet (n=9)	1 (11.1)	5 (55.6)	3 (33.3)	
Books (n=6)	2 (33.3)	2 (33.3)	2 (33.3)	0.485**

* ANOVA test
**Chi-square test

Table 4: Attitude of the participants towards breastfeeding

Variable	Strongly agree N (%)	Agree N (%)	Not sure N (%)	Disagree N (%)	Strongly disagree N (%)
Breastfeeding being easier than feeding infant formula	210 (54.7)	124 (32.3)	8 (2.1)	36 (9.3)	6 (1.6)
It is difficult for breastfeeding mother to care for family	38 (9.9)	78 (20.3)	40 (10.4)	177 (46.1)	51 (13.3)
Breastfeeding has no negative effect on marital relationship	112 (29.2)	136 (35.4)	51 (13.3)	73 (19.0)	12 (3.1)
Breastfeeding is a good way to decrease family expenses	140 (36.5)	179 (46.5)	29 (7.6)	31 (8.1)	5 (1.3)
Feeding infant formula keeps the body well shaped and prevents over-weight	78 (20.3)	74 (19.3)	55 (14.3)	135 (35.2)	42 (10.9)
Community encourages breastfeeding over feeding infant formula	139 (36.2)	126 (32.8)	46 (12.0)	67 (17.4)	6 (1.6)
Doctors and nurses encourage breastfeeding	235 (61.2)	113 (29.4)	23 (6.0)	10 (2.6)	3 (0.8)
Maternity leave of 3 months is enough for successful breastfeeding	91 (23.7)	112 (29.2)	68 (17.7)	83 (21.6)	30 (7.8)
Work places provide designated areas for breastfeeding	71 (18.5)	61 (15.9)	103 (26.8)	84 (21.9)	65 (16.9)

Figure 4: Overall attitude of the participants towards breastfeeding

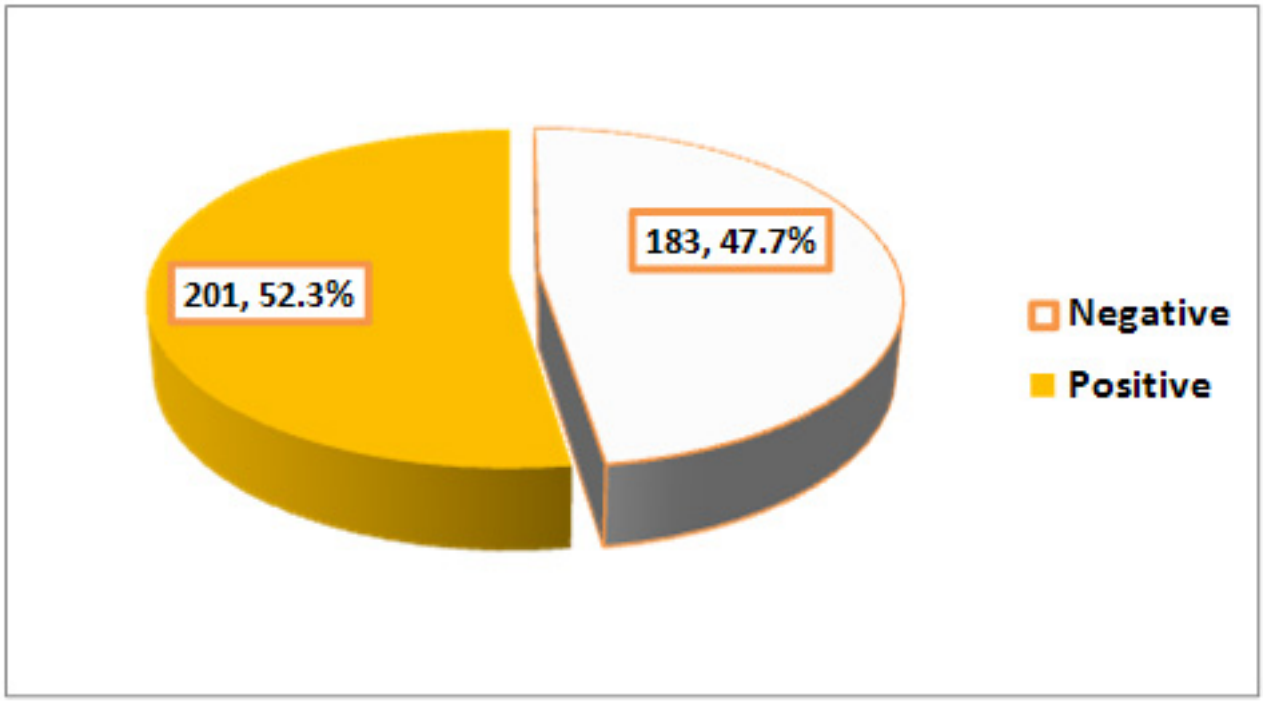

Table 5: Factors associated with attitude towards breastfeeding

Variable	Attitude towards breast feeding		p-value
	Negative N=183 N (%)	Positive N=201 N (%)	
Mother`s age (years)			
Mean±SD	34.5±8.5	34.9±7.7	0.623*
Child`s age (years)			
Mean±SD	2.6±1.1	2.6±1.3	0.754*
Mother`s education			
No read/write (n=47)	24 (51.1)	23 (48.9)	
Primary school (n=43)	20 (46.5)	23 (53.5)	
Intermediate school (n=45)	22 (48.9)	23 (51.1)	
Secondary school (n=91)	45 (49.5)	46 (50.5)	
University (n=158)	72 (45.6)	86 (54.4)	0.956**
Husband`s education			
No read/write (n=24)	8 (33.3)	16 (66.7)	
Primary school (n=25)	11 (44.0)	14 (56.0)	
Intermediate school (n=38)	21 (55.3)	17 (44.7)	
Secondary school (n=115)	55 (47.8)	60 (52.2)	
University (n=182)	88 (48.4)	94 (51.6)	0.554**
Mother`s occupation			
House wife (n=303)	141 (46.5)	162 (53.5)	
Working (n=81)	42 (51.9)	39 (48.1)	0.395**
Husband`s occupation			
Governmental employee (n=183)	82 (44.8)	101 (55.2)	
Private sector employee (n=24)	11 (45.8)	13 (54.2)	
Military (n=115)	64 (55.7)	51 (44.3)	
Retired (n=36)	15 (41.7)	21 (58.3)	
Others (n=26)	11 (42.3)	15 (57.7)	0.356**
Number of children			
One (n=45)	26 (57.8)	19 (42.2)	
Two (n=100)	47 (47.0)	53 (53.0)	
Three (n=66)	35 (53.0)	31 (47.0)	
More than three (n=173)	75 (43.4)	98 (56.6)	0.271**
Mode of delivery of the last baby			
Normal vaginal (n=257)	119 (46.3)	138 (53.7)	
Caesarean section (n=127)	64 (50.4)	63 (49.6)	0.450**
Having health education about breast feeding			
Yes (n=296)	139 (47.0)	157 (53.0)	
No (n=88)	44 (50.0)	44 (50.0)	0.616**
Main source of health education about breastfeeding (n=296)			
Doctor (n=126)	60 (47.6)	66 (52.4)	
Nurse (n=86)	36 (41.9)	50 (58.1)	
Health educator (n=4)	3 (75.0)	1 (25.0)	
Family/friends (n=65)	31 (47.7)	34 (52.3)	
Internet (n=9)	6 (66.7)	3 (33.3)	
Books (n=6)	3 (50.0)	3 (50.0)	0.605**

* Student's t- test
**Chi-square test

Figure 5: History of breast feeding of baby until he or she is six months old among the participants

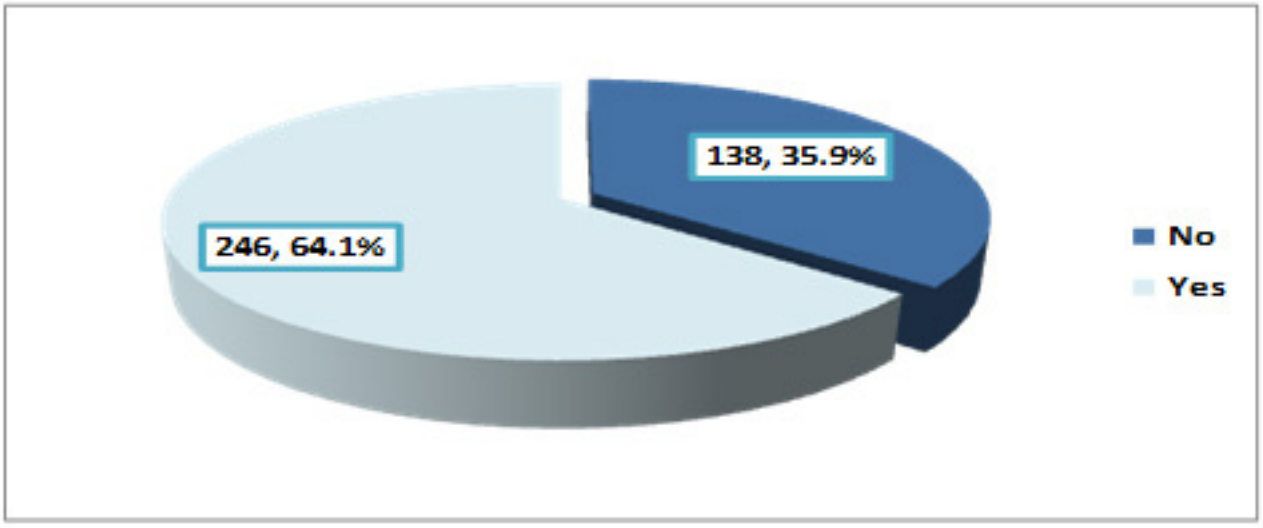

Figure 6: Time of starting breast feeding among the participants (n=246)

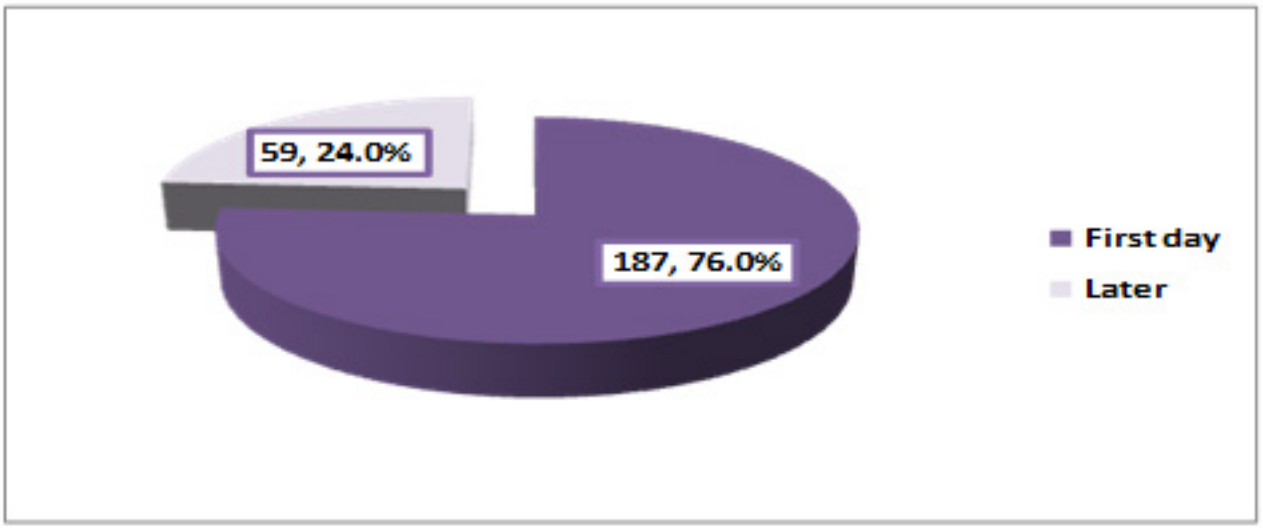

Figure 7: Supplementation with breast feeding in the first 3 months among the participants

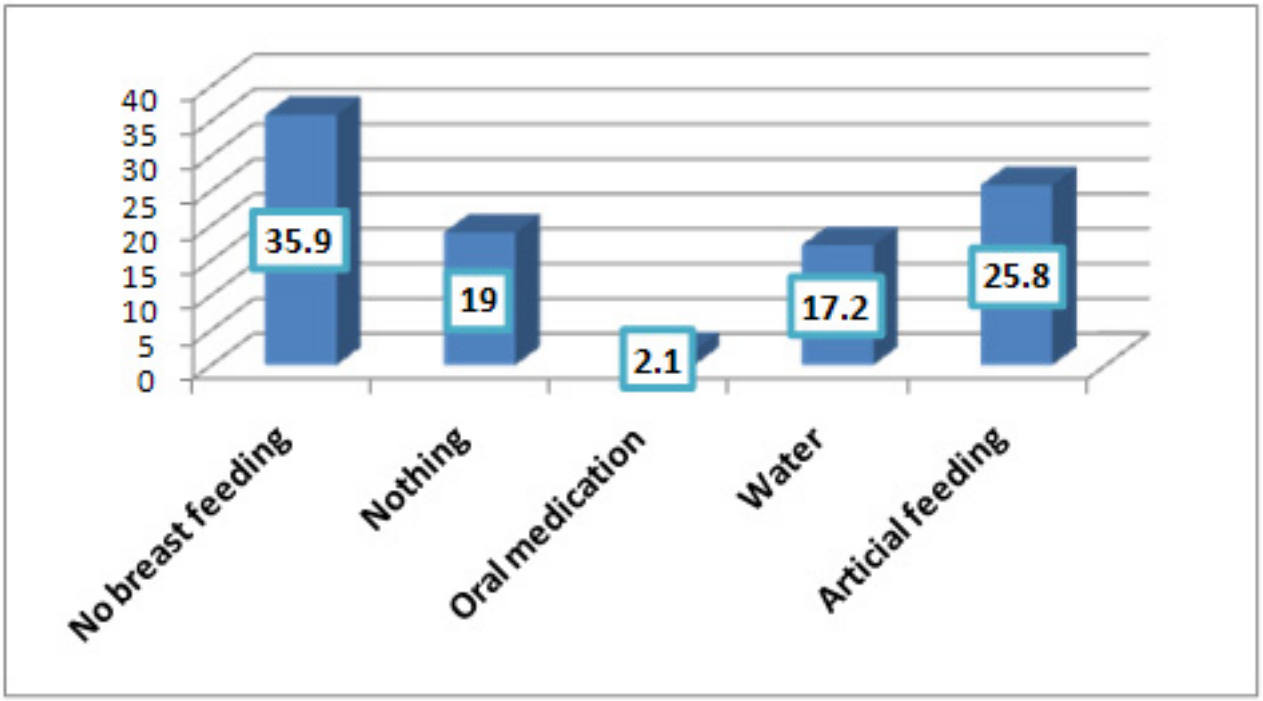

Table 6: Factors associated with breastfeeding in the first 6 months after birth

Variable	Breast feeding up to age of 6 months		p-value
	No N=138 N (%)	Yes N=246 N (%)	
Mother`s age (years)			
Mean±SD	32.6±8.1	35.9±7.8	<0.001*
Child`s age (years)			
Mean±SD	2.5±1.1	2.7±1.3	0.179*
Mother`s education			
No read/write (n=47)	11 (23.4)	36 (76.6)	
Primary school (n=43)	13 (30.2)	30 (69.8)	
Intermediate school (n=45)	15 (33.3)	30 (66.7)	
Secondary school (n=91)	30 (33.0)	61 (67.0)	
University (n=158)	69 (43.7)	89 (56.3)	0.007˚
Husband`s education			
No read/write (n=24)	3 (12.5)	21 (87.5)	
Primary school (n=25)	11 (44.0)	14 (56.0)	
Intermediate school (n=38)	11 (28.9)	27 (71.1)	
Secondary school (n=115)	41 (35.7)	74 (64.3)	
University (n=182)	72 (39.6)	110 (60.4)	0.047˚
Mother`s occupation			
House wife (n=303)	112 (37.0)	191 (63.0)	
Working (n=81)	26 (32.1)	55 (67.9)	0.418**
Husband`s occupation			
Governmental employee (n=183)	72 (39.3)	11 (60.7)	
Private sector employee (n=24)	5 (20.8)	19 (79.2)	
Military (n=115)	42 (36.5)	73 (63.5)	
Retired (n=36)	6 (16.7)	30 (83.3)	
Others (n=26)	13 (50.0)	13 (50.0)	0.023**
Number of children			
One (n=45)	23 (51.1)	22 (48.9)	
Two (n=100)	50 (50.0)	50 (50.0)	
Three (n=66)	26 (39.4)	40 (60.6)	
More than three (n=173)	39 (22.5)	134 (77.5)	<0.001˚
Mode of delivery of the last baby			
Normal vaginal (n=257)	82 (31.9)	175 (68.1)	
Caesarean section (n=127)	56 (44.1)	71 (55.9)	0.019**
Having health education about breast feeding			
Yes (n=296)	98 (33.1)	198 (66.9)	
No (n=88)	40 (45.5)	48 (54.5)	0.034**
Main source of health education about breastfeeding (n=296)			
Doctor (n=126)	37 (29.4)	89 (70.6)	
Nurse (n=86)	31 (36.0)	55 (64.0)	
Health educator (n=4)	3 (75.0)	1 (25.0)	
Family/friends (n=65)	22 (33.8)	43 (66.2)	
Internet (n=9)	3 (33.3)	6 (66.7)	
Books (n=6)	2 (33.3)	4 (66.7)	0.505**
Breast feeding knowledge			
Poor (n=60)	27 (45.0)	33 (55.0)	
Fair (n=222)	82 (36.9)	140 (63.1)	
Good (n=102)	29 (28.4)	73 (71.6)	0.094**
Attitude towards breast feeding			
Negative (n=183)	71 (38.8)	112 (61.2)	
Positive (n=201)	67 (33.3)	134 (66.7)	0.265**

* Student's t- test **Chi-square test ˚Chi-square for trend

Discussion

Recently, there has been a growing concern regarding the changing patterns of breastfeeding, particularly in rapid transition communities like Saudi Arabia (19). Although the World Health Organization (WHO) recommended exclusive breastfeeding up to the age of 6 months of infants, it was noticed that not many women in Saudi Arabia are following that (19,20,22,23). As there is limited data in the literature regarding knowledge, attitudes and practice of women toward breastfeeding in Taif, Saudi Arabia, the present study was done to explore this subject, which could help policy makers to set up strategies to improve the rate of breastfeeding.

Having health education about breast feeding was mentioned by most of the participants in this study and the main source for breast feeding knowledge was healthcare staff. In addition, having health education about breast feeding was significantly associated with its practice. This finding emphasizes the important role of educating women by healthcare staff regarding breast feeding.

In the current study, most of the mothers correctly recognized that breast feeding causes good development of baby's teeth and gum, increases the baby's intelligence, reduces the risk of respiratory infection and helps to reduce the incidence of child abuse, may prevent breast engorgement, lowers the risk of getting breast cancer, helps to stimulate uterine contraction, Colostrum is the mother's early milk, babies sleep well after they receive adequate breastfeeding, correct positioning helps to achieve effective breastfeeding, breastfeeding should be continued up to 2 years even though the baby has received complementary food and complementary feeding should be introduced at 6 months of age. However deficient knowledge was observed regarding problems with breastfeeding, breast engorgement and practical aspects of breastfeeding. This might be attributed to limited sources of education received by women on these topics.

Almost two-thirds of the women in the present study were aware of the benefits of colostrum to the child, with the exception of its ability to protect babies from jaundice. The same has been reported in UAE (24) and in another two Saudi studies (18,25). In another two Indian studies (26,27) the majority of women discard colostrum. The difference between findings of Saudi and UAE studies and Indian studies could be attributed to culture and belief differences.

In accordance with another Saudi study (19) the overall level of knowledge regarding breastfeeding in this study was not sufficient. Therefore, health education sessions organized by the healthcare staff in antenatal care clinics and immediately after birth are highly recommended.

Having more children was significantly linked to practice of breast feeding in this study which could be attributed to the role of experience from one side and the socio-economic status from the other side as women with more children may not be able to afford formula milk. The same has been observed in India (27).

Slightly more than half of the participants (52.3%) had a positive attitude towards breastfeeding in the present study. It has been documented that favorable attitude is one of the main indicators of starting and continuing breastfeeding (28).

In the present study, the majority of women (76%) gave breastfeeding in the first day after birth as recommended by WHO (29). This figure is comparable to what has been reported in a similar study carried out in Abu Dhabi where 72.6% of mothers started breastfeeding in the first day after delivery (24). However, a lower rate (31%) was reported in another Saudi study (18). The high rate reported in this study might reflect the efforts done to achieve WHO recommendations in these regards.

Almost one-fifth of the mothers (19%) gave nothing with breast feeding in the first 6 months of life in this study. This figure is close to those reported in another Saudi study (15.9%) (30), and UAE (16.9%) (24). However, it is higher than those reported in other studies. (18,31,32,33). In Uganda (34) a very high rate of exclusive breastfeeding was reported (49.8%). This rate was explained partly by feeding infant tradition and culture and partially by poverty and inability to afford formula milk (35).

Almost two-thirds (64.1%) of women had given breast milk to their infants up to 6 months of age in the current study; particularly older women. Unexpectedly, the lowest educated women and those with low educated husbands were more likely to breast feed their babies, despite having poorer knowledge regarding breastfeeding. The same has been reported by others (36,37). This could be attributed to the fact that educated women are usually workers and do not have sufficient maternity leave, in addition to absence of facilities at work places to breast feed their infants. However, maternity leave in KSA is two months with full salary and can be extended up to three years at 25% of the women's salary (38). Also, the low socio-economic status might prevent them from affording formula feeding and depending on breast feeding. This could explain also the finding that women with more children tended to breast feed their babies.

In this study, women delivered by normal vaginal delivery were significantly more likely to breastfeed their children compared to those delivered by cesarean section. The same has been reported by others elsewhere (39,40,41). This study has two important limitations that should be mentioned. Its cross-sectional design which lacks the temporal relationship between risk factor and the outcome, therefore we couldn't prove causality. Conduction of the study in one healthcare facility could impact the generalizability of results, despite those limitations, the study could be of great public health importance in exploring an important topic in Taif.

In conclusion, despite the attitude towards breastfeeding in Taif overall it is acceptable; its knowledge and practice need to be improved through health education organized programs and encouraging the role of healthcare workers.

Limitations

The limitations of the present study included the small sample size and conducting the research in one government hospital and didn't include the private sector.

Conclusion

The level of knowledge about breastfeeding in this sample was moderate and slightly more than half of the participants had a positive attitude towards breastfeeding. The main source of health education in our sample about breastfeeding was the doctors. The study calls for encouragement of early beginning of breastfeeding to babies in the hospital to ensure high-quality of breastfeeding. An educational program for both midwives and pediatric nurses about the importance and early initiation of breast feeding early after birth should be done. There is a need for further research during the antenatal period about breastfeeding self-efficacy within Saudi women.

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