

Breastfeeding knowledge and attitude among Saudi women in Central Saudi Arabia

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ABSTRACT

الأهداف: دراسة سلوك، ووعي المرأة السعودية عن الرضاعة الطبيعية في مدينة الرياض.

الطريقة: أجريت دراسة مقطعية في 3 مستشفيات رئيسية في الرياض خلال الفترة من 7 يوليو حتى 22 يوليو 2009م. اشتملت الدراسة على 848 من النساء اللاتي في جناح ما بعد الولادة و جناح ما بعد العمليات القيصرية، بالإضافة إلى المراجعات في عيادة النساء والولادة. تم عمل استبيان باللغة العربية تمت تعبئته من قبلهن.

النتائج: من بين 848 امرأة مشاركة تراوحت أعمارهن ما بين 21-30 عام بنسبة (61.5%). كانت أغلبية النساء (49.8%) ذات مؤهل جامعي أو أعلى. سبق وأن تلقى 55.8% من النساء تثقيف بأهمية الرضاعة الطبيعية، وحوالي 54.2% منهن تلقوا التثقيف عن الرضاعة عندما كنّ في المستشفى للولادة. يفضل 48.5% من النساء الجمع بين الرضاعة الطبيعية والصناعية، بينما 36.8% فقط يفضلن الرضاعة الطبيعية بشكل حصري. أهم الأسباب التي تؤثر على ممارسة الرضاعة الطبيعية كانت الطفل كان مريض (38.2%)، الطبيب طلب من الأم عدم إرضاع طفلها لأسباب طبية (61.1%)، الأم كانت مريضة أو بحاجة لأخذ دواء (71.8%)، وأخيرا استخدام الأم لموانع الحمل التي تؤثر على إنتاج الحليب بنسبة (32.8%).

خاتمة: وجدت الدراسة أن الرضاعة الطبيعية في الأشهر الأولى لم تكن الأمثل. نسبة الرضاعة الطبيعية الحصرية كانت منخفضة على الرغم من المستوى التعليمي العالي للأمهات. الجمع بين الرضاعة الطبيعية والصناعية كانت هي الأكثر شيوعاً مما يستدعي زيادة التثقيف بأهمية الرضاعة الطبيعية. كما يجب تشجيع العاملين في القطاع الصحي لتثقيف الأمهات عن أهمية الرضاعة الطبيعية.

Objectives: To study the knowledge and attitude of Saudi women towards breastfeeding.

Methods: A cross-sectional study conducted in 3 major hospitals in Riyadh, Saudi Arabia during the period 7 July - 22 July 2009. Eight hundred

and forty-eight women in the post-natal and post-caesarean section wards were included in the study along with women attending antenatal clinics. An Arabic questionnaire was generated and completed by women.

Results: Of the 848 participating women, 61.5% fell within the age groups between 21-30 years. Most women (49.8%) have a college or higher education. Only 55.8% of women have previously received breastfeeding education, and approximately 54.2% of women received breastfeeding education when they were in the hospital for delivery. Approximately 48.5% preferred mixed feeding, followed by exclusive breastfeeding (36.8%). The most important reasons for discontinuing breastfeeding were: baby was ill (38.2%), a health professional asked mother not to breastfeed for medical reasons (61.1%), mother was sick or needed to take medicine (71.8%), and finally the use of contraception that interferes with milk supply (32.8%).

Conclusion: We found that breastfeeding during the first few months of life was not optimal. The percentage of exclusive breastfeeding was low despite high level of their education. Mixed feeding was the predominant mode of feeding, which raised the need for targeted breastfeeding education. Health care providers should be encouraged to continuously educate women on the benefits of breastfeeding.

Saudi Med J 2010; Vol. 31 (2): 193-198

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Received 15th November 2009. Accepted 19th January 2010.

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Breastfeeding is the ideal way of providing young infants with nutrients they need for healthy growth and development. Most women can successfully breastfeed provided they have accurate information, and support.¹ However, for some women breastfeeding may not be possible or milk supplies not sufficient despite their best efforts. Benefits for maternal and infant health are well recognized, and extensive efforts to promote breastfeeding have been implemented in many countries. Breastfed babies gain nutritional, and growth benefits, and enhanced immune system.² Breastfeeding is also one strategy that has a possible protective effect on the risk of obesity later in life.³ Breastfed infants receive anti-bodies from breast milk, which protects against infection in the early postpartum period.⁴ It was reported in the United States that infants who were ever breastfed increased from 60% among infants born during 1993-1994 to 77% among infants born during the period between 2005-2006.⁵ The Holy Quran says "the mothers shall give suck to their offspring for 2 whole years" (Surah Al-Baqarah:233) Many mothers start breastfeeding their infants, which is favorable and then they turn to formula feeding as they assume that breastfeeding is not sufficient. Therefore, they tend to practice mixed feeding.⁶ This was also the most common reason for discontinuation of breastfeeding in the western countries. In our study, we aimed to study the knowledge and attitude of Saudi women towards breastfeeding.

Methods. A cross-sectional study was carried out in 3 major hospitals in Riyadh, Kingdom of Saudi Arabia (KSA) namely: King Fahd Medical City, Riyadh Military Hospital, and King Abdulaziz Medical City during the period 7 July - 22 July 2009. The study population was all Saudi women admitted to the hospital for delivery (immediately postpartum), and women attending antenatal clinics. All women in the postnatal and post-caesarean section wards were included in the study. The study was reviewed and approved by the Institutional Review Board (IRB) at King Fahd Medical City, Riyadh, KSA. It was also approved by Riyadh Military Hospital and King Abdulaziz Medical City, Riyadh, KSA. All non-Saudi women were excluded as well as non-pregnant women attending clinics for other health problems. The research tool that was used to collect the data was a pre-coded questionnaire. The questionnaire was tested on 12 women, and some items were reviewed and modified as a result. A face-to-face interview was conducted with some women. An Arabic version was created and given to women attending antenatal clinics to be completed. Informed consent was taken from all participants. A similar study that was carried out in Turkey has created a questionnaire based

on information from the World Health Organization (WHO), and experts' opinions.² Considering the cultural variation, this questionnaire was modified to fit the Saudi Arabian culture. The questionnaire includes 7 sections: demographic information, women's fertility characteristics, health and health care, current breastfeeding status, infant feeding attitude (section A and B), breastfeeding knowledge, and factors influencing breastfeeding practices. Sections 1, 6, and 7 were based on the Turkish questionnaire.² Section 2 - 5 was based on the Infant Feeding Practices Study II.⁷ Some items were adopted from the same Turkish study, but modified accordingly.

As for data analysis, descriptive statistics, Chi-square, and t-test were used appropriately in the study. A $p < 0.05$ was used as a significance level. The Statistical Package for Social Sciences (SPSS, Chicago, IL, US) version 15 was applied.

Results. The total number of women included in the study was 848 women. We invited 1001 women to participate, but 153 refused to fill out the questionnaire. The common reason for refusal was being unwell. Most participants came from King Fahd Medical City, followed by Riyadh Military Hospital.

Women's characteristics are presented in Table 1. Most women (61.5%) fell within the age group between 21-30 years. Most women (49.8%) have a college or higher education. As for the working status, most women (73.7%) were unemployed or were housewives. Moreover, 68.7% of women were multiparous, and normal spontaneous birth was the most common mode of delivery (71.6%). As for pregnancy status, 60.4% of pregnancies were planned. As for the medical care, 54.7% of women were followed up by an obstetrician and thus receiving antenatal care, while only 11% of women were not receiving antenatal care from any health professional. Furthermore, 46% of women started their first antenatal visit at 4 weeks or less of gestation.

The current breastfeeding status for women is presented in Table 2. The percentage of women who have received breastfeeding education was 55.8%, and 78.6% of women have previously tried to find information on breastfeeding. Only 54.2% of women received breastfeeding education while in the hospital for delivery.

The attitude of women toward breastfeeding was assessed (Table 3). Most women (48.5%) planned to feed their babies both breast and formula milk. Moreover, 36.8% of women had a plan to exclusively breastfeed during the first few weeks, while only 2.4% of women planned to feed their babies formula milk only. Furthermore, 46.4% of women do not plan to return to work after baby's birth or they do not work at all. Only 87.7% of women have tried breastfeeding.

Table 1 - Characteristics of participants.*

Characteristics	Number of patients	
	(%)	
<i>Age (years)</i>		
≤20 years	51	(6.1)
21-30	514	(61.5)
≥31	271	(32.4)
<i>Education</i>		
Elementary	50	(5.9)
Intermediate	87	(10.3)
High School	286	(33.9)
College or higher	420	(49.8)
<i>Occupation</i>		
Employed	220	(26.3)
Unemployed or housewife	616	(73.7)
<i>Parity</i>		
Primiparous	260	(31.3)
Multiparous	572	(68.8)
<i>Number of pregnancies</i>		
1	220	(26.1)
2	180	(21.3)
3	162	(19.0)
≥4	281	(33.3)
<i>Number of births</i>		
1	264	(34.6)
2	162	(21.3)
3	123	(16.1)
>4	214	(27.9)
<i>Type of birth</i>		
Normal spontaneous birth	514	(71.6)
Caesarean section	204	(28.4)
<i>Current pregnancy status</i>		
Planned	436	(60.3)
Unplanned	287	(39.7)

*There was a discrepancy in the total number of participants as some of the questionnaires were not filled-up completely

Table 2 - Current breastfeeding status of women.

Breastfeeding status	Number of patients (%)	
<i>Women who have received breastfeeding education (n=833)</i>		
Yes	465	(55.8)
No	368	(44.2)
<i>Women who have tried to access information about breastfeeding (n=831)</i>		
Yes		
No	653	(78.6)
	178	(21.4)
<i>Women who were taught about breastfeeding while in hospital (n=769)</i>		
Yes	417	(54.2)
No	352	(45.8)
<i>Person who helped in breastfeeding (n=761)</i>		
Doctor	38	(5.0)
Midwife	41	(5.4)
Nurse	198	(26.0)
Lactation consultant	39	(5.1)
Family member	399	(52.4)
Someone else	46	(6.0)

Table 3 - Women's attitude toward breastfeeding.

Women's attitude	Number of patients (%)	
<i>A. Breastfeeding attitude</i>		
<i>Planned method of breastfeeding during first few weeks (n=827)</i>		
Breastfeed only	304	(36.8)
Formula feed only	20	(2.4)
Both Breast and formula feed	401	(48.5)
Don't know yet	102	(12.3)
<i>Women who plan to continue breastfeeding after returning to work (n=767)</i>		
Yes	267	(34.8)
No	144	(18.8)
Do not plan to work after the baby's birth or I don't work	356	(46.4)
<i>Women who have tried breastfeeding (n=709)</i>		
Yes	622	(87.7)
No	87	(12.3)
<i>B) Statements by women best describing the attitude of health professionals taking care of them and their babies</i>		
<i>Woman's doctor (n=716)</i>		
Favored breastfeeding only	517	(72.2)
Favored formula feeding only	8	(1.1)
Favored mixed breast and formula feeding	119	(16.6)
Had no preference for either method of feeding	29	(4.0)
Don't know	43	(6.0)
<i>Baby's doctor (n=670)</i>		
Favored breastfeeding only	522	(77.9)
Favored formula feeding only	7	(1.0)
Favored mixed breast and formula feeding	100	(14.9)
Had no preference for either method of feeding	13	(1.9)
Don't know	28	(4.2)
<i>Staff of hospital or birth center (n=626)</i>		
Favored breastfeeding only	344	(55.0)
Favored formula feeding only	9	(1.5)
Favored mixed breast and formula feeding	91	(14.5)
Had no preference for either method of feeding	62	(9.9)
Don't know	120	(19.2)
<i>Time of weaning and introduction of formula milk (n=794)</i>		
<1 month	164	(20.6)
1 - 2 months	139	(17.5)
3 - 4 months	161	(20.3)
5 - 6 months	200	(25.2)
7 - 9 months	50	(6.3)
>9 months	80	(10.1)
<i>Women's best choice for feeding their babies (n=818)</i>		
Breast-feeding	291	(35.6)
A mix of both breast and formula feeding	349	(42.7)
Formula feeding	9	(1.1)
Breastfeeding and formula feeding are equally good ways to feed a baby	169	(20.6)

Women were asked to assess the attitude of health professionals toward breastfeeding. Most women also stated that the baby's doctor favors only breastfeeding, while women thought that other hospital staff also favor only breastfeeding (Table 3).

Most women reported (25.2%) that they would introduce the formula or any other food besides breast milk at 5-6 month of age. Most women (42.7%) stated that a mix of both breast and formula feeding is the best choice for feeding their babies.

In Table 4, we assessed women's attitude toward important scientific facts. Majority of women (51.0%) believe that infant formula is not as good as the breast milk. Moreover, 55.2% of women agree that breastfeeding reduces incidence of ear infections, and approximately 50% of women agree that breastfeeding reduces the possibility of getting respiratory illness and diarrhea. Furthermore, 22.0% of women agree that babies should be exclusively breastfed for the first 6 months. Interestingly, 58.8% of women believe that

Table 4 - Women's attitude toward some scientific facts about breastfeeding.

Women's attitude	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Infant formula is as good as breast milk (n=808)	412 (51.0)	288 (35.6)	53 (6.6)	40 (4.9)	15 (1.9)
If a baby is breastfed, he or she will be less likely to get ear infections (n=794)	42 (5.3)	47 (5.9)	95 (12.0)	438 (55.2)	171 (21.6)
If a baby is breastfed, he or she will be less likely to get a respiratory illness (n=792)	42 (5.3)	64 (8.1)	115 (14.5)	420 (53.0)	151 (19.1)
If a baby is breastfed he or she will be less likely to get diarrhea (n=797)	36 (4.5)	58 (7.3)	103 (12.9)	411 (51.6)	189 (23.7)
Babies should be exclusively breastfed (fed only breast milk) for the first 6 months (n=676)	56 (7.1)	130 (16.5)	124 (15.8)	303 (38.5)	173 (22.0)
If a child was breastfed, he or she will be less likely to become obese (n=778)	44 (5.6)	125 (16.1)	173 (22.2)	321 (41.3)	115 (14.8)
Breastfeeding strengthens the social bond between mother and her baby (n=794)	56 (7.0)	11 (1.4)	22 (2.8)	237 (29.8)	468 (58.9)
Breastfeeding dramatically reduces the incidence of postpartum depression (n=798)	55 (6.9)	53 (6.6)	160 (20.0)	316 (39.6)	214 (26.8)

Data are expressed as number and percentage (%)

Table 5 - Factors influencing breast-feeding practice.

Influencing factors	Not at all important	Not very important	Somewhat important	Very important
My baby was ill and could not breastfeed (n=500)	94 (18.8)	48 (9.6)	167 (33.4)	191 (38.2)
I thought I would not have enough milk (n=502)	93 (18.5)	79 (15.7)	161 (32.1)	169 (33.7)
A health professional said I should not breastfeed for medical reasons (n=498)	62 (12.4)	26 (5.2)	106 (21.3)	304 (61.1)
I was sick or had to take medicine (n=490)	35 (7.1)	27 (5.5)	76 (15.5)	352 (71.8)
I believe that formula is as good as breastfeeding or that formula is better (n=483)	250 (51.8)	105 (21.7)	78 (16.1)	50 (10.3)
I thought that breastfeeding would be too inconvenient (n=489)	218 (44.6)	100 (20.4)	105 (21.5)	66 (13.5)
I tried breastfeeding before and didn't like it or it didn't work out (n=465)	153 (32.9)	90 (19.3)	130 (28.0)	92 (19.8)
I wanted to go on a weight loss diet (n=493)	210 (42.6)	81 (16.4)	92 (18.7)	110 (22.3)
I wanted to go back to my usual diet (n=485)	200 (41.2)	116 (23.9)	95 (19.6)	74 (15.3)
I had too many household duties (n=509)	210 (41.3)	106 (20.8)	109 (21.4)	84 (16.5)
I planned to go back to work or school (n=504)	181 (35.9)	90 (17.9)	139 (27.6)	94 (18.6)
I wanted or needed someone else to feed my baby (n=518)	287 (55.4)	106 (20.5)	66 (12.7)	59 (11.4)
Someone else wanted to feed the baby (n=524)	298 (56.9)	104 (19.8)	66 (12.6)	56 (10.7)
I wanted my body back to myself (n=531)	219 (41.2)	88 (16.6)	95 (17.9)	129 (24.3)
The baby's father didn't want me to breastfeed (n=534)	255 (47.7)	103 (19.3)	86 (16.1)	90 (16.8)
The baby's grandmother didn't want me to breastfeed (n=527)	377 (71.5)	81 (15.4)	26 (4.9)	43 (8.2)
I wanted to use contraception that can't be used while breastfeeding (n=531)	158 (29.7)	81 (15.2)	118 (22.2)	174 (32.8)

Data are expressed as number and percentage (%)

Table 6 - Selected characteristics and woman's planned method of feeding the new baby during first few weeks.

Characteristics	Breastfeed only	Formula feed only	Both breast and formula feed	Do not know yet
Age (years)				
≤20	12	5	19	13
21 - 30	192	10	240	58
≥31	96	5	137	29
Chi-square test	$\chi^2 = 26.698$			
P-value	0.003			
Education				
Elementary	25	1	19	3
Intermediate	26	7	42	8
High school	102	5	135	37
College or higher	149	7	204	52
Chi-square test	$\chi^2 = 40.623$			
P-value	0.00			
Occupation				
Employed	76	4	108	24
Unemployed or housewife	224	16	285	75
Chi-square test	$\chi^2 = 1.401$			
P-value	0.000			
Parity				
Primiparous	94	7	99	44
Multiparous	203	12	294	53
Chi-square test	$\chi^2 = 22.539$			
P-value	0.094			

breastfeeding strengthen the social bonds between mother and her baby.

Factors influencing breastfeeding practice are presented in Table 5. The most important reasons for discontinuing breastfeeding are: baby was ill (38.2%), a health professional asked mother not to breastfeed for medical reasons (61.6%) (Examples were not obtained from women), mother was sick or needed to take medicine (71.8%), and finally the use of contraception that interferes with milk production (32.8%) (meaning estrogen containing oral contraceptives. However, this statement assesses women's belief or attitude towards this fact).

The association of selected characteristics and women's planned method of infant feeding are summarized in Table 6. A significant relationship was observed between women's planned method of infant feeding during first few weeks and maternal age, education, and occupation.

Discussion. The literature review of medical research on breastfeeding practices has informed us that approximately four fifths of mothers received breastfeeding education.⁸ Similarly, another study conducted in Jeddah showed that only 56% of mothers have received breastfeeding education, mostly by

relatives.⁹ In our study, we found that 44.2% have not received breastfeeding education before, while 54.2% of women have received education when they were in the hospital for delivery. Approximately, 52.4% of women were helped by a family member, which seems to correlate with other studies in the literature. A study mentioned that 73.1% of women initiated breastfeeding early after delivery, while 64.6% breastfed on demand.¹⁰ Another study that was carried out in India showed that 30% and 10% of exclusively breastfed their babies until 4 and 6 months of age.¹¹ In Turkey, a study reported that 43.7% of women commenced breastfeeding within the first 30 minutes of giving birth.² Most mothers supplemented milk formula (83.4%) during the first 6 months.¹² A recent Jordanian study showed a high early initiation of breastfeeding. In addition, most mothers gave supplements other than breastfeeding, including water without knowing that this supplementation could affect exclusive breastfeeding or the continuation of breastfeeding.¹³ We found that the attitude of women towards breastfeeding is variable. Most women (48.5%) planned to feed their babies both breast and formula milk, while only 36.8% of women planned to exclusively breastfeed during the first few weeks, and 2.4% of women planned to feed their babies formula milk only. As for the weaning time, Li et al¹⁴ showed that weaning foods were added from the third month with the most common reason being baby's lost of interest in breast milk. In our study, we found that the majority of women (25.2%) would start weaning their babies at 5-6 months of age while others would wean their babies at a period close to the latter one. It was reported in the western countries that the most common reason for discontinuation of breastfeeding is insufficient milk.¹⁵ Shawky et al,¹⁶ mentioned that women who delivered by cesarean section and those who used oral contraceptives were at higher risk of stopping breastfeeding. In this study, it was found that the health condition of the baby, health professionals attitude, health status of the mother, and the use of contraception are the most important factors influencing breastfeeding practices.

One limitation of the study is the short period of time (only during summer time). Second, it did not involve women in the pediatrics wards or clinics, which could give a wider range of relevant information to breastfeeding.

Mixed feeding was the most frequent method of feeding reported, which highlights the need for breastfeeding education. Health care providers should be encouraged to educate pregnant women and mothers of young infants on the benefits of breastfeeding. Most importantly, mothers should be given the necessary support and motivate them to continue with breastfeeding for at least 6 months.

Acknowledgment. The authors gratefully acknowledge the support and encouragement of Professor Omar Kasule of the Faculty of Medicine, King Fahd Medical City, Riyadh, Kingdom of Saudi Arabia.

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