

Knowledge, Intention, Practice, and Perceived Barriers of Breastfeeding among Married Working Women in Kuwait

Fajer Al-Darweesh, Rayan Al-Hendyani, Kawthar Al-Shatti, Aliaa Abdullah, Mohammad Taqi, Ali Abbas, and Amal K. Mitra*

Department of Community Medicine and Behavioural Sciences, Faculty of Medicine, Kuwait University, Kuwait

Abstract

Background: The objectives of this study were: 1) to demonstrate the knowledge of married working women regarding benefits of breastfeeding; 2) to document their intention and practice of breastfeeding; and 3) to identify the barriers of breastfeeding among these women.

Methods: This cross-sectional study was conducted during March-April 2014 among married working class women of childbearing age (21-40 years). The participants were recruited from seven faculties of Kuwait University and four private universities which represented the working class women in Kuwait. Data were collected by using a self-administered questionnaire.

Results: Sixty-nine percent of the women strongly agreed that breastfeeding should begin within the first hour of birth. About 70% planned to breastfeed their children, and 28% strongly agreed to continue it for 6 months. The actual practice of breastfeeding longer than 6 months was significantly higher among non-Kuwaitis than Kuwaitis (61.5% vs. 29.7%, $p < 0.001$). Embarrassment and time and social constraints were considered two major barriers of breastfeeding. The scores for the perceived barriers were significantly lower among women with higher education and women of non-Kuwaiti nationals.

Conclusion: The study demonstrated possible barriers against breastfeeding which should help health planners in promoting breastfeeding in a society with low rates of breastfeeding.

Publication History:

Received: January 24, 2016

Accepted: May 02, 2016

Published: May 05, 2016

Keywords:

Barriers, Breastfeeding, Intention, Knowledge, Practice

Introduction

Breastfeeding is viewed as the most complete form of nutrition for infants, with known benefits for the infants' health, nutrition, immunity, growth, and chances of survival [1-9]. Studies indicated that breastfeeding helps infants maintain physical and emotional well-being as well [3-5, 9]. In addition to benefits of breastfeeding to the infant, it also protects mothers against several diseases, improves their senses of self-esteem, and increases mother-to-infant bonding [4-7, 9]. The American academic of pediatrics recommends that mothers breastfeed for at least the first year of child's life and continue it for two years [2-10]. values will be much higher, since that diseases act like precipitating factor for cardiac decompensation. If there is no coexisting cardiac disease, values barely reach cut-off values.

In spite of the large amount of evidence on benefits of breastfeeding, little is known about breastfeeding rates, intention, and barriers in the Middle East region [2]. In Kuwait, efforts of promoting breastfeeding have been limited and inadequate [6]. A large cross-sectional survey conducted in 1989 among women in Kuwait reported a breastfeeding initiation rate of 86% and exclusive breastfeeding of about 60%. The proportion of children breastfeeding at six months in Kuwait ranges from 35% to 44%, which is well below the international targets [6]. The reasons of such a poor rate of breastfeeding in Kuwait have not been investigated.

Factors influencing breastfeeding have been investigated worldwide [2,3,5,8,10]. The literature suggests that successful breastfeeding depends on multiple factors related to the mother, infant, and the supportive environment [1]. Breastfeeding duration has been attributable to maternal age, level of maternal education, maternal smoking and obesity, early return to work, and the introduction of pacifiers, all have been shown to be negatively associated with breastfeeding [2,3,7,10]. Furthermore, a study published in 2002 showed the success of a motivational video in promoting breastfeeding and reducing some of the perceived barriers of breastfeeding among low income women in Mississippi [11].

In order to identify some of the contributing factors to poor breastfeeding rates in Kuwait, this study aimed to evaluate the prevalence of knowledge of benefits of breastfeeding, the intention, practice, and perceived barriers of breastfeeding among married women of childbearing age.

Methods

Study setting and the population

This was a cross-sectional study conducted among married women of childbearing age who were staff members working at seven faculties of Kuwait University and four private universities in Kuwait. The faculty units were selected randomly, and then the participants were enrolled on a first-come first-serve basis after taking written informed consent. The study was approved by the Human Subject Ethics Committee of the Kuwait University, and the Dean of the respective faculties.

Survey instrument

A self-administered questionnaire comprising of 60 closed-ended pre-coded questions was used. The content validity of the questionnaire was evaluated by information gathered from published reports. The questionnaire consisted of data on demographics, knowledge about the importance of breastfeeding, attitudes and

*Corresponding Author: Prof. Amal K. Mitra, Department of Community Medicine and Behavioural Sciences, Faculty of Medicine, Kuwait University, Kuwait, Tel: +965 2463 6539; E-mail: amalmitra16@yahoo.com

Citation: Al-Darweesh F, RaAl-Hendyani R, Al-Shatti K, Abdullah A, Taqi M, (2016) Knowledge, Intention, Practice, and Perceived Barriers of Breastfeeding among Married Working Women in Kuwait. Int J Community Fam Med 1: 108. doi: <http://dx.doi.org/10.15344/ijcfm/2016/108>

Copyright: © 2016 Al-Darweesh et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

practice towards breastfeeding, and three known barriers of breastfeeding such as embarrassment, time and social constraints, and lack of social support. The attitude and practice questions were adopted from the Iowa Infant Feeding Attitude Scale (IIFAS) and the Infant Feeding Intention Scale (IFIS) [12], and the barrier questions were obtained from a study done in Mississippi by one of the investigators(AM) [11]. Information about breastfeeding knowledge and intention were collected using Likert scales. For each of the three indices of barriers, there were four statements, with a total of 12, all recorded in Likert scales. The questionnaire was written in English and in Arabic. The questionnaire was pretested among 12 subjects to know about the time required to complete the questionnaire, the clarity of the questions, and for easy reading of the questions. On an average, it took about 10 minutes to complete the questionnaire.

Sample size estimation

Baseline data were used from published reports [11, 2], and the sample size was calculated using the formula $n = z^2 pq/d^2$, where p is the proportion, q is $1-p$, and d is the expected precision. With a 95% confidence interval, 5% precision and an estimated 10% dropout, the required sample size for the study was 362.

Statistical methods

All surveys were preceded, and data were entered and analyzed using SPSS version 22 for windows (SPSS Inc., Chicago, IL). A descriptive analysis was performed for demographic variables, and breastfeeding knowledge and intention. Proportion of women who practiced breastfeeding were compared by the nationality using Chi-Square test. For the barrier questions, a numerical score was computed for each index by assigning 1 point if the woman responded to the survey item in a way suggesting a barrier, and 0 points if she responded to the survey item otherwise. For example, one of the survey items to identify embarrassment barrier was as follows: "I would feel embarrassed if I pump my breast at work". For this item, if the woman answers either "Very much agree" or "Some what agree", she gets 1 point, meaning that she experiences embarrassment as a barrier. If she answers either "Somewhat disagree" or "Very much disagree" she gets 0 point. Thus, for each index someone with a lower score means less perceived barrier and *vice versa*. The barrier scores were compared among women of differing levels of education and by nationality by using Mann Whitney U test because of the non-normal distribution of the scores. A p-value of ≤ 0.05 was considered statistically significant.

Results

The number of samples was increased to 376 to have more power of the study. Although the anticipated dropout rate was 10%, only 5 (1.3%) were actually dropped out from the analysis because of lack of information for the major variables. This yielded a response rate of 98.7% (371/376).

Demographics

Table 1 shows that the mean \pm SD age of the participants was 32.7 \pm 4.8 years, and 61.7% were Kuwaitis. Eighty percent had a monthly income of more than 1,000 Kuwaiti Dinar (KD) (more than US \$3,300). About 21% had an education level of diploma or less, 52% had a bachelor degree, and 31.5% had a postgraduate degree. About 91% were not pregnant at the time of interview. About 54% of the participants had 1-2 children. The mean \pm SD age of the last child was 4.5 \pm 3.7 years.

Characteristics	No.	%
Age (y), mean (SD)	32.7 (4.8)	
Nationality		
Kuwaiti	229	61.7
Non-Kuwaitis	142	38.3
Family's monthly income in K.D.*		
Less than 500	10	2.7
500 – less than 1000	63	17.1
1001 – less than 1500	96	26.1
1501 – less than 2000	58	15.8
2000 or more	141	38.3
Level of education of the participant		
High school or less	2	5.0
Diploma	59	15.9
Bachelor	193	52.0
Post graduate	117	31.5
Level of education of the participant's husband		
High school or less	12	3.2
Diploma	71	19.1
Bachelor	197	53.1
Post graduate	89	24.0
Are you pregnant?		
Yes	30	8.2
No	336	90.8
Number of children		
1-2	200	53.9
3-6	121	32.7
Age of the last child, mean (SD)	4.5 (3.7)	

*1 (Kuwaiti dinar) K.D. = US \$ 3.3
SD = standard deviation

Table 1: Demographic characteristics of 671 participants.

Knowledge about breastfeeding and formula feeding

About 69% of the participants strongly agreed that breastfeeding should begin within the first hour of birth. Of the benefits, 70% or more strongly agreed that breastfeeding protects infants from common childhood illnesses, increases mother-infant bonding, and that breastfeeding is more easily digested and convenient than using formula (Table 2). More than 65% women agreed that breastfeeding is a natural contraceptive within the first six months of birth, and almost a similar proportion of respondents opined that a breastfed child would have a higher level of intelligence quotient (IQ).

Intention of breastfeeding

Table 3 shows that 69.5% of the women intended to try breastfeeding. However, the proportion of women willing to breastfeed declined with the increasing duration of breastfeeding. For example, 83% wanted to breastfeed for one month, 76% intended it for three months, and only 59% mentioned it for 6 months.

Characteristics	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree
Breastfeeding should begin within the first hour of birth	257 (69.3)	83 (22.4)	25 (6.7)	4 (1.1)
The benefits of breastfeeding last only as long as the baby is breastfed	44 (11.9)	65 (17.5)	90 (24.3)	171 (46.1)
Breastfeeding increases the risk of breast and ovarian cancers	31 (8.4)	19 (5.1)	39 (10.5)	282 (76.0)
Breastfeeding protects infants from common childhood illnesses	277 (74.7)	70 (18.9)	13 (3.5)	9 (2.4)
Breastfeeding increases the risk of childhood obesity	37 (10.0)	31 (8.4)	57 (15.4)	242 (65.2)
Formula is as healthy for an infant as breastmilk	11 (3.0)	52 (14.0)	119 (32.1)	187 (50.4)
Breastfeeding is a natural contraceptive within the first six months of birth	113 (30.5)	132 (35.6)	81 (21.8)	43 (11.6)
Breastmilk is lacking iron	17 (4.6)	40 (10.8)	90 (24.3)	218 (58.8)
A breastfed child would have a higher IQ	140 (37.7)	133 (35.8)	75 (20.2)	21 (5.7)
The baby should be exclusively breastfed for only the first three months	60 (16.2)	56 (15.1)	108 (29.1)	146 (39.4)
Mashed solid foods can be introduced after six months	249 (67.1)	102 (27.5)	12 (3.2)	7 (1.9)
Breastfeeding increases mother/infant bonding	321 (86.5)	31 (8.4)	13 (3.5)	5 (1.3)
Breastmilk is more easily digested than formula	324 (87.3)	39 (10.5)	4 (1.1)	4 (1.1)
Formula-feeding is a better choice if the mother plans to go back to work	108 (29.1)	175 (47.2)	54 (14.6)	34 (9.2)
Women should not breastfeed in public places such as restaurant	168 (45.3)	83 (22.4)	70 (18.9)	50 (13.5)
Mothers who formula feed miss one of the great joys of motherhood	167 (45.0)	112 (30.2)	60 (16.2)	31 (8.4)
Breastfeeding is more convenient than formula	226 (60.9)	103 (27.8)	34 (9.2)	7 (1.9)

Table 2: Participants' knowledge about breastfeeding (Number and percentage).

Breastfeeding practice: Relationship with nationality and education

When actual practice of breastfeeding was assessed, there was no statistical difference in breastfeeding between Kuwaitis and non-Kuwaitis. However, when duration of breastfeeding was considered, significantly more non-Kuwaitis than Kuwaitis breastfed their babies for longer than 6 months (61.5% vs. 29.7%, respectively, $p < 0.001$) (Table 4). When education was considered, more educated women (with postgraduate degrees) breastfed their babies longer than 6 months compared to those with less education (bachelor or less) (61.0% vs. 32.5%, respectively, $p < 0.001$) (data not shown).

Table 4 shows that a significantly higher proportion of non-Kuwaitis than Kuwaitis breastfed their babies (73% vs. 63%, respectively; $p = 0.034$), and breastfed for longer than 9 months (54% vs. 19%, respectively, $p < 0.001$). As expected, more non-Kuwaitis than Kuwaitis introduced formula or other milk at a later time ($p = 0.009$).

Barriers of breastfeeding: Relationship with nationality and education

Of the embarrassment indices, the most common barriers included

1) feeling of embarrassment if breasts are pumped at work (85.5%); 2) feeling of shyness in breastfeeding outside the home (74.9%); and 3) the fear that people would see the breasts (60.7%) (Table 5). Among the members of social support, the more frequently mentioned persons were the husband (84.7%) and friends (79.2%).

Scores of the barriers were further compared between nationality and educational levels. Fig. 1 shows that scores of time and social constraints ($p < 0.001$) and of lack of social support ($p = 0.003$) were significantly lower among non-Kuwaitis than Kuwaitis, meaning that Kuwaitis perceived more barriers than non-Kuwaitis. The score due to embarrassment barrier was also lower among non-Kuwaitis but it was not statistically significant when compared with the score of Kuwaitis for the same barrier.

Similarly, women with a higher educational level (postgraduate degrees) showed a lower score of barriers in all the three indicators of embarrassment ($p = 0.007$), time and social constraints ($p = 0.006$), and lack of social support ($p = 0.001$) compared to those for the women with a bachelor degree or less education (Figure 2).

Characteristics	No.	%
Planning to only use formula milk		
Strongly agree	9	2.4
Somewhat agree	51	13.7
Somewhat disagree	105	28.3
Strongly disagree	204	55.0
Plans to at least give breastfeeding a try		
Strongly agree	258	69.5
Somewhat agree	64	17.3
Somewhat disagree	22	5.9
Strongly disagree	22	5.9
Only breastfeeding until the baby is one month old		
Strongly agree	217	58.5
Somewhat agree	89	24.0
Somewhat disagree	44	11.9
Strongly disagree	18	4.9
Only breastfeeding until the baby is 3 months old		
Strongly agree	161	43.4
Somewhat agree	120	32.3
Somewhat disagree	64	17.3
Strongly disagree	21	5.7
Only breastfeeding until the baby is 6 months old		
Strongly agree	104	28.0
Somewhat agree	113	30.5
Somewhat disagree	103	27.8
Strongly disagree	44	11.9
What contributed to the breastfeeding decision		
Healthier for the baby	284	76.5
Cheaper	31	8.4
Knowledge about the benefits	180	48.5
Heard about the benefits from family	112	30.2
Others	34	9.2

Table 3: Participants' intention toward breastfeeding.

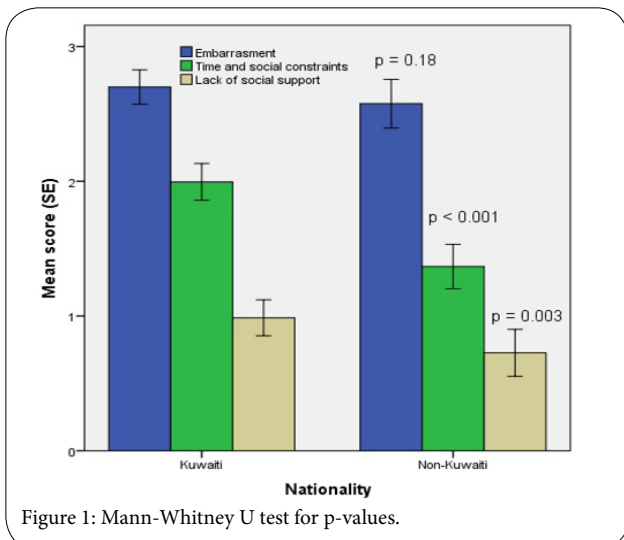


Figure 1: Mann-Whitney U test for p-values.

	Nationality		P value*
	Kuwaiti (n=229)	Non-Kuwaiti (n=142)	
Ever breastfeeding a child	191 (83.4)	117 (82.4)	0.801
How many of your children did you breastfeed?			0.034
The first child only	38 (19.7)	25 (21.2)	
Some of them	28 (14.5)	5 (4.2)	
All of them	122 (63.2)	86 (72.9)	
The last child only	5 (2.6)	2 (1.7)	
How old was your baby when you stopped breastfeeding?	33 (17.2)	5 (4.3)	<0.001
<1 month			
1-3 months	62 (32.3)	18 (15.4)	
4-6 months	40 (20.8)	22 (18.8)	
7-9 months	21 (10.9)	9 (7.7)	
10-12 months	17 (8.9)	23 (19.7)	
>12 months	19 (9.9)	40 (34.2)	
Used formula or other milk while breastfeeding	175 (76.8)	97 (68.8)	0.091
What was your baby's age when you introduced the formula or other milk?	59 (33.0)		
<1 month	59 (33.0)	19 (19.6)	0.009
1-3 months	67 (37.4)	30 (30.9)	
4-6 months	27 (15.1)	25 (25.8)	
>6 months	26 (14.5)	23 (23.7)	

Table 4: Comparison of practice of breastfeeding according to nationality *Chi-Square Test

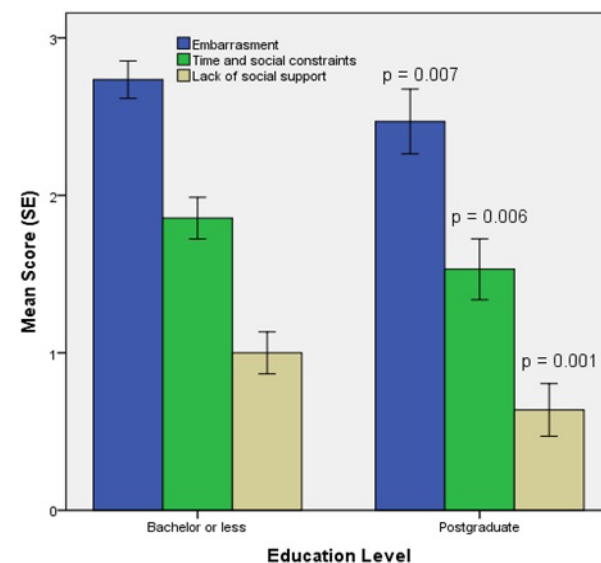


Figure 2: Mann-Whitney U test for p-values.

	Strongly agree No. (%)	Somewhat agree No. (%)	Somewhat disagree No. (%)	Strongly disagree No. (%)
Embarrassment I'd feel embarrassed if I pumped my breasts at work	234(63.1)	83(22.4)	21(5.7)	30(8.1)
If I breastfeed, people will see my breasts	142(38.3)	83(22.4)	57(15.4)	87(23.5)
I'd feel shy breastfeeding outside my home	166(44.7)	112(30.2)	54(14.6)	37(10.0)
I'd feel comfortable breastfeeding in front of my family members	86(23.2)	126(34.0)	85(22.9)	71(19.1)
Time and social constraints It would take too much time for me to breastfeed my baby	98(26.4)	127(34.2)	89(24.0)	55(14.8)
I'd be able to breastfeed my baby and go to work	93(25.1)	132(35.6)	95(25.6)	48(12.9)
If I breastfeed, I'll feel tied down	85(22.9)	134(36.1)	77(20.8)	72(19.4)
A busy mom can breastfeed sometimes and use formula other times	153(41.2)	157(42.3)	38(10.2)	20(5.4)
Lack of social support I feel that my baby's father encourages Breastfeeding	195(52.6)	119(32.1)	38(10.2)	16(4.3)
I feel that my friends will support me if I breastfeed	153(41.2)	141(38.0)	46(12.4)	27(7.3)
I feel that my mother wants me to feed my baby formula	30(8.1)	50(13.5)	117(31.5)	171(46.1)
The women in my family think that I should bottle-feed	34(9.2)	89(24.0)	136(36.7)	107(28.8)

Table 5: Perceived barriers of breastfeeding among the participants.

Methods

In this study, education was found as a key factor in the decision making of breastfeeding among women of childbearing age in Kuwait. Higher education was also associated with a longer duration of breastfeeding. For example, women with postgraduate degree practiced breastfeeding longer than the other groups. A significantly more proportion of non-Kuwaiti women practiced breastfeeding longer than 6 months than Kuwaitis. Among the barriers, embarrassment and time and social constraints were considered two major barriers irrespective of education and nationality.

Education has been emphasized in the literature many often as an important factor for breastfeeding. In 2006, a study conducted in Netherlands reported that 95.5% of highest-educated mothers initiated breastfeeding, whereas 73.1% in the lowest-educated mothers initiated breastfeeding [10]. Other studies reported a linear association between women's level of education and the rate of breastfeeding [3, 13]. A study conducted in the Phillipines reported that mothers with secondary level or less education stopped breastfeeding at an earlier age [14]. Similar findings were also reported from Middle East countries. In Iran, education of pregnant mothers was significantly associated with their knowledge about breastfeeding [15]. The most frequent source of obtaining information among this population was health centers' personnel, followed by family and friends. In the United Arab Emirates, the initiation rate of breastfeeding was very high (98%), and the mean duration was 8.6 months [16]. Among the determinants of breastfeeding, multiparity and mother's education were significantly related to the breastfeeding duration ($p < 0.001$). On the contrary, women with higher education and higher income were less likely to breastfeed in a study in the north of Jordan [17]. This could be explained by the western influence of formula feeding among the higher educated and economically rich people.

The present study demonstrated that significantly more non-Kuwaiti women breastfed all of their children compared to their Kuwaiti

counterparts. A study done in Ireland showed that breastfeeding initiation rates of the non-Irish nationals were significantly higher than the Irish nationals (80% vs. 47%, respectively) [18]. Both Kuwaitis and non-Kuwaitis have introduced formula feeding in the first three months in this study. This finding is consistent with several others which showed that, in practice, women would introduce formula or other milk within the first 3 months of breastfeeding [19,20].

Women in our study, regardless of their nationality and educational level, identified embarrassment as the major barrier to breastfeeding. Similarly, social stigma and embarrassment were described as barriers of breastfeeding in a study conducted among adolescent mothers and pregnant adolescents in an urban community in of United States [21]. This study revealed that women, regardless of their educational level, opined against public breastfeeding. Most respondents in this study were not comfortable in practicing breastfeeding in front of their female friends. This may be partly attributable to the local culture. However, a study carried out in New York City also had similar findings that women do not prefer to breastfeed in public places [22]. In an earlier study in Kuwait, paternal support for breastfeeding was positively associated with breastfeeding initiation [6]. In a study carried out in Mississippi showed similar results of a sense of embarrassment, specifically about pumping women's breast at school or work, breastfeeding outside their homes, and breastfeeding in front of family members [11]. In the Mississippi study, time and social constraints presented barriers to fewer women than the embarrassment issues. In the present study, embarrassment barrier was the most common and lack of social support was perceived the least common barrier.

There were some limitations of this study. Because it was a cross-sectional study, no causal relationship could be established between breastfeeding and the associated factors. The study was carried out only among married working-class women; so the results cannot be generalized to the whole population. However, this study was unique because, to our knowledge, there were no such studies done among married women in Kuwait.

Conclusion

In this study, about 70% of the married working class women in Kuwait intended to breastfeed their babies. However, the actual practice of breastfeeding for longer than 6 months was only 30% among Kuwaitis and 62% among the non-Kuwaiti women. This study demonstrated that embarrassment and time and social constraints were significantly more common barriers of breastfeeding. In addition, the perceived barriers were less noticeable among women with higher educational levels.

Based on these findings, it is suggested to increase public awareness of exclusive breastfeeding through organized mass media and outreach health campaigns, especially targeting less educated women.

Acknowledgements

We thank Ajita Suresh, Abrar Husain for technical assistance. We also thank Deans of different faculties of Kuwait University and the private universities for their cooperation and participating in this research.

Competing Interests

The authors declare that they have no competing interests.

Author Contributions

All the authors contributed toward the project development, data acquisition, data analysis and in initial write up of the manuscript. AM monitored the overall activities of the project, helped in data interpretation, and was accountable to all aspects of the work. All the co-authors reviewed and approved this manuscript.

References

1. Mitra AK, Khoury AJ, Hinton AW, Carothers C (2004) Predictors of breastfeeding intention among low-income women. *Matern Child Health J* 8: 65-70.
2. Al-Ali N, Hatamleh R., Khader Y (2013) Female public Jordanian university undergraduate students' intentions and attitudes toward breastfeeding: Application of self-objectification theory. *Breastfeed Rev* 21: 31-42.
3. Al-Binali AM (2012) Breastfeeding knowledge, attitude and practice among school teachers in Abha female educational district, southwestern Saudi Arabia. *Int Breastfeed J* 7:10.
4. American Academy of Pediatrics (1997) Work Group on Breastfeeding. Breastfeeding and the use of human milk. *Pediatrics* 100:1035-1039.
5. Daly A, Pollard CM, Phillips M, Binns CW (2014) Benefits, barriers and enablers of breastfeeding: factor analysis of population perceptions in Western Australia. *PLoS One* 9: e88204.
6. Dashti M, Scott JA, Edwards CA, Al-Sughayer M (2010) Determinants of breastfeeding initiation among mothers in Kuwait. *Int Breastfeed J* 5: 7.
7. Johnston ML, Esposito N (2007) Barriers and facilitators for breastfeeding among working women in the United States. *J Obstet Gynecol Neonatal Nurs* 36: 9-20.
8. Sheehan A, Schmied V, Barclay L (2009) Women's experiences of infant feeding support in the first 6 weeks post-birth. *Matern Child Nutr* 5: 138-150.
9. Singh J, Vishakantamurthy D, Charan P (2012) Breastfeeding practices among lactating mothers: Problems and prospects in a cross-sectional study. *Int J Health Allied Sci* 1: 54-58.
10. Scott JA, Binns CW, Oddy WH, Graham KI (2006) Predictors of breastfeeding duration: evidence from a cohort study. *Pediatrics* 117: e646-655.
11. Khoury AJ, Mitra AK, Hinton A, Carothers C, Sheil H (2002) An innovative video succeeds in addressing barriers to breastfeeding among low-income women. *J Hum Lact* 18: 125-131.
12. Mora A, Russell D, Dungy C, Losch M, Dusdieker L (1999) The Iowa Infant Feeding Attitude Scale: Analysis of reliability and validity. *J Applied Social Psychol* 29: 2362-2380.
13. Battersby S (2010) Understanding the social and cultural influences on breast-feeding today. *J Fam Health Care* 20: 128-131.
14. Abada TS, Trovato F, Lalu N (2001) Determinants of breastfeeding in the Philippines: a survival analysis. *Soc Sci Med* 52: 71-81.
15. Karimi B, Sani MZ, Ghorbani R, Danai N (2014) The pregnant mothers' knowledge about breastfeeding in Semnan, Iran. *Middle East J Rehab Health* 1:e20833.
16. Radwan H (2013) Patterns and determinants of breastfeeding and complementary feeding practices of Emirati Mothers in the United Arab Emirates. *BMC Public Health* 13: 171.
17. Khassawneh M, Khader Y, Amarin Z, Alkafajei A (2006) Knowledge, attitude and practice of breastfeeding in the north of Jordan: a cross-sectional study. *Int Breastfeed J* 1: 17.
18. Tarrant RC, Sheridan-Pereira M, Mccarthy RA, Younger RM, Kearney JM (2013) Mothers who formula feed: Their practices, support needs and factors influencing their infant feeding decision. *Child Care in Practice* 19:78-94.
19. Parry K, Taylor E, Hall-Dardess P, Walker M, Labbok M (2013) Understanding women's interpretations of infant formula advertising. *Birth* 40: 115-124.
20. Motee A, Ramasawmy D, Pugo-Gunsam P, Jeewon R (2013) An Assessment of the Breastfeeding Practices and Infant Feeding Pattern among Mothers in Mauritius. *J Nutr Metab* 2013: 243852.
21. Woods NK, Chesser AK, Wipperman J (2013) Describing adolescent breastfeeding environments through focus groups in an urban community. *J Prim Care Community Health* 4: 307-310.
22. Mulready-Ward C, Hackett M (2014) Perception and attitudes: breastfeeding in public in New York City. *J Hum Lact* 30: 195-200.