



KNOWLEDGE ATTITUDE AND PRACTICE AMONG THE NURSING MOTHERS REGARDING THE EARLY INITIATION OF BREASTFEEDING IN THE POSTNATAL CARE OF MCH, HOSPITAL, AL-AHSA, SAUDI ARABIA

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ABSTRACT

Background: Early initiation of breastfeeding has proven significant health benefits to the infant. Evidences suggest that early skin to skin contact with mother and early initiation of breastfeeding increases the likelihood of exclusive breastfeeding for 1 to 4 months. The correct knowledge, a positive attitude and suitable practice regarding the initiation of breastfeeding is required among the nursing mothers in the postnatal period. The objective of this study was to assess and analyze knowledge, attitude and practice of the nursing mothers towards early initiation of breastfeeding among the women within 48 hours in post natal care after delivery.

Material and Methods: It was a cross sectional descriptive study. The study population was mothers of 15-49 years of age with newborns 0-48 hours of age and who had delivered at MCH Al Ahsa, Saudi Arabia but had not been discharged from the hospital after delivery. A predesigned, pretested, self-administered multiple response questionnaires with a mixture of closed, open ended and questions with 5 point likert scale graded response was prepared to assess the knowledge, attitude and practice on early initiation of breast feeding. The data were entered and analyzed by using the SPSS software, version 21. The inferential statistics like chi-square was used to determine the association of knowledge and attitude of breast feeding initiation with selected demographic variables. A p-value cut off point of 0.05 at 95% CI will be used to determine statistical significance.

Results: A total of 317 out of 352 participants participated in this study making a response rate of 90%. The mean age of the participants was 29.83 ± 6.32 Std. Dev. (Range; 16-47 years). The mean parity of the participants was 3.43 ± 1.81 Std. Dev. (Range 1-12 in number). Almost thirty nine percent of the participants (N=123) had poor knowledge about the initiation of breast feeding. The participants of the age group of 31-45 years, participants who received the information from family and friends (P=0.008) were having significantly higher knowledge (P=0.011). More than thirty three percent (N=106) of the participants had negative attitude towards initiation of breast feeding. The participant mothers who received the information on early initiation of breastfeeding (P=0.004), source of information from family and friends had significantly more positive attitude towards initiation of breastfeeding. Twenty seven percent of the participant mothers (N=86) did not have good practice towards the initiation of breastfeeding. Practice was significantly better among those mothers who had male child (p=0.024) and participants mothers who received the information (p=0.000) regarding initiation of breast feeding. The participant mothers who received information from the family and friends were having significantly better (p=0.022) practice towards the initiation of breastfeeding. Seventy eight percent of the participants in our study agreed that baby should be breastfed within an hour after delivery.

Conclusion: The present study has found that early initiation of breastfeeding among the participants was adequate and attitude towards early initiation of breastfeeding were positive in general. However the good knowledge and positive attitude could not translate to expected practice towards early initiation of breastfeeding.

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INTRODUCTION

The correct knowledge, a positive attitude and suitable practice regarding the initiation of breastfeeding is required among the nursing mothers in the postnatal period. Various studies done throughout the world has found deficient knowledge inappropriate practice and negative attitude among the nursing mothers resulting in unacceptable prevalence of early initiation of breast feeding among them.

In an Irish study breast-feeding initiation rates of the Irish-national and non-Irish-nationals were 47 % and 79.6 %,

respectively. The maternal negative perception that breastfeeding is an embarrassing way to feed an infant was demonstrated as a major barrier to initiation.^[9] A Lebanon study which was done to identify the determinants of breast feeding initiation and duration among postnatal women showed that only 18.3% of the mothers initiated breastfeeding within half an hour after birth. Mother's occupational status and whether she was breastfed were significantly associated with breastfeeding duration.^[10] Similar study done in Ethiopia showed that the prevalence of timely initiation of breastfeeding was 52.4%. In this study half of mothers did not start

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breastfeeding within one hour after delivery and suggested that breast feeding behavior change communication especially during the post natal period is critical in promoting optimal practice in the initiation of breast feeding. ^[11] A study in Gambia has found that delayed initiation of breastfeeding, no prelactal feeding and failure to practice exclusive breastfeeding were widespread. Qualitative data further indicated that current beliefs and practices were strongly influenced by traditional beliefs and practices. ^[12] The present study was conducted in Maternity and Child Hospital of Al Ahsa district of Saudi Arabia. This is the only specialist hospital in Obstetrics and Gynecology belonging to Ministry Of Health and serving a population of one million of Al Ahsa district.

MATERIAL AND METHODS

It was a cross sectional descriptive study. The study population was mothers of 15-49 years of age with newborns 0-48 hours of age and who had delivered at MCH Al Ahsa, Saudi Arabia but had not been discharged from the hospital after delivery. Mothers who are too weak to respond to questions were excluded from the study. Mothers who declined to give informed consent were also excluded from the study. It was a prospective study in which purposive sampling technique was used to collect the study sample. With an estimated proportion of the target population who initiated breastfeeding within one hour during the 3 months' time was based on recent Saudi study in other part of Saudi Arabia (41.6%). All the women in the age group of (15-49 Years) after delivery in the hospital during the last three months were the study population which was 6000 deliveries. With a 42% prevalence rate of early initiation of breastfeeding and with the range of 47% the sample size was calculated using the Epi info software (version 3.5.1, 2008) with 95% of CI which was 352. Random sampling was used when selecting the mothers to be interviewed. Mothers in the postnatal wards were randomly selected for interview until the sample size was achieved. A predesigned, pretested, self-administered multiple response questionnaires with a mixture of closed, open ended and questions with 5 point likert scale graded response was prepared to assess the knowledge and attitude and practice on early initiation of breast feeding. The questionnaire consisted of 4 sections. Section 1 recorded the demographic characteristics of mother (Age, Parity, level of education and occupation), infant (age, sex) and source of information for initiation of breastfeeding to the mothers. Section 2 contained the questions on the knowledge on the initiation of breastfeeding such as importance of breastfeeding, breast feeding as the first feed to the baby, time of initiation of breastfeeding, frequency of breast feeding and recommendation of exclusive breastfeeding. Section 3 included questions on maternal attitude towards early initiation of breastfeeding using a five point likert scale. These consisted attitude questions towards the use of timely initiation, colostrum feeding and the importance of breastfeeding knowledge. A five point likert scale with the range of 1-5 (1= strongly agree, 2= Agree, 3= neutral, 4= Disagree and 5= strongly disagree) was used to assess the attitude. Section 4 of the questionnaire consisted of questions to elicit information on early breastfeeding practice (timely initiation, giving colostrum, perfect feed, skin to skin contact and rooming in).

The answers of knowledge question was closed ended mostly and correct answer was awarded with 1 score while incorrect

with zero mark. Total score ranged from 0 to 50 (mean: 3.47; SD: 1.27). By using the mean as a cutoff point to determine the level of knowledge, the participants were classified as having poor knowledge and good knowledge on the score range of 0 to 5 points. A good knowledge score range was between 4-5 while poor knowledge score ranged 0-3. The attitude section consists of questions on the attitude of participants towards initiation of breast feeding. There were 5 questions in this section. The answers were graded in likert 5 point scale. The correct answer for each question was coded as 1 while the incorrect answer was coded as 0. The total attitude score was to be calculated by summing up the 5 questions, the higher the score the higher the attitude toward the early initiation of breastfeeding. The total attitude score had a range from 0 – 5 points (mean: 3.47; SD: 1.27) and mean was used as cutoff point to determine the level of attitude. The participants were classified as having negative attitude by the score range of 0 – 3 points, while positive attitude was classified by the score range of 4 – 5 points. The practice section was aimed to measure participants' practice on early initiation of breast feeding and its technique which consisted of 5 questions. The correct answer for each question was coded as 1 while the incorrect answer was coded as 0. The total practice score was to be computed by adding up the 5 questions and a total score range from 0 – 5 (mean: 3.47; SD: 1.27) had been generated. Participants' were classified as having low practice by the score range of 0 to 3 points whereas good practice was classified by the score range of 4 to 5 points. For the convenience agree and strongly agree was group in as agreed while neutral, disagree and strongly disagree were grouped in as disagree.

A previously validated questionnaire ^[13] on the similar type of study was modified accordingly and was used in this study. Content validity in this study was also verified by supervisor and other public health research professionals of the research section of the Hospital. Data was collected twice at an interval of two days from the same participants in the pilot study. A comparison was then made between the responses obtained from both interviews and necessary changes were made to the research tools. A test-retest method was used to ensure that the instruments were reliable. If the questionnaires yielded a correlation coefficient of 0.90 (0.80-0.99; 95% CI), which was considered adequate as it was above 0.70 recommended by Murphy and Davidshofer (2005). ^[13]

The data were entered and analyzed by using the statistical package for social sciences, version 21 (SPSS, Chicago, IL, USA). Data analysis was done by using inferential and descriptive statistics. The descriptive statistics like mean, standard deviation, frequency distribution and percentage was used to assess the demographic variables. The inferential statistics like chi-square was used to determine the association of knowledge and attitude of breast feeding initiation with selected demographic variables. A p-value cut off point of 0.05 at 95% CI was used to determine statistical significance.

RESULTS

A total of 317 out of 352 participants returned the questionnaires after properly replying them making a response rate of 90%. The mean age of the participants was 29.83 ± 6.32 Std.Dev. (Range; 16-47 years). The mean parity of the participants was 3.43 ± 1.81 Std. Dev. (Range 1-12 in number). Only 3.5% (N=11) of the participants were uneducated while twenty nine percent (N=92) were secondary educated. Forty

five percent of the participants (N=143) were graduate and more than twenty two percent (N=71) were post graduate. Majority of them (62.1 %) were unemployed. The mean of the infant age of the participants' mother at the time of interview was 16.39 hours ± 14.30 Std. Dev. (Range 1-48 hours). More than fifty percent (50.8%) were male infants. Two third of the participants (N=237) accepted that they received the information about the benefits of early initiation of breastfeeding. Fifty percent of the participants (49.8%) asserted that they received the information about the benefit of initiation of breastfeeding through family and friends followed by health workers and media which constituted the source of information for 29% (N=92) and 29.9 % (N=67) respectively. The details of the demographic characteristics of mother and infants are shown in table 1.

Table 1 Showing Mother and infant Demographic information

Variables	No.	%
Age: Mean age: 29.83 ± 6.32 Std. Dev. (Range ;16-47 years).		
Age group:		
15-30 yrs.	180	56.8
31-45 yrs.	135	42.6
46-60 yrs.	2	0.6
Parity :3.43 ± 1.81 Std. Dev.(Range 1-12 in number).		
Number of children:		
1-5 children	273	86.1
6-10 children	42	13.2
>10 children	2	0.6
Education:		
Uneducated	11	3.5
Primary	19	6.0
Secondary	74	23.3
Graduate	141	45.1
Post graduate	70	23.1
Occupation:		
Unemployed	197	62.1
Employed	120	37.9
Infant age:		
Mean age: 16.39 hours ± 14.30		
Age group		
1-5 hours	71	22.4
6-10 hours	64	20.2
11-15 hours	57	18.0
16-20 hours	16	5.0
21-25 hours	54	17.0
16-30 hours	12	3.8
31-35hours	2	0.6
>36 hours	41	12.9
Sex of infant:		
Male	161	50.8
Female	156	49.2
Information on initial breastfeeding:		
Received	217	
Not received	80	
Source of early breastfeeding information:		
Health workers	92	29.0
Family and friends	158	49.8
Media	67	21.1

Response on the knowledge questionnaires

Majority of the participants (64%, N=203) correctly agreed that breastfeeding is not only nutritious and protects the infants from infection but also prevents pregnancy while nineteen percent (N=61) only agreed with the statement that breastfeeding is nutritious to the infant and twelve percent agreed that it protects from infection and 3.5% (N=11) agreed with only the statement that breastfeeding prevents the pregnancy. Only twelve percent of the participant (N=40) did not agree with the statement that breast milk should be the first feed to the new born infant. More than forty six percent of the participant (N=148) agreed that initiation of breastfeeding should start within 30 minutes of the delivery of the new born

baby. Thirty six percent (N=114) and seventeen percent (N=54) were of the view that initiation of breastfeeding should start within one hour and after one hour respectively. More than seventy one percent (71.6%, N=227) of the participants agree that frequency of breast feeding to the new born baby should be on demand while twenty eight percent (N=89) answered that new born baby should be fed at specific time. Ninety percent of the participants agreed that exclusive breastfeeding for 6 months is the recommended schedule for baby feeding while 10% (N=33) disagreed. The details of the response on knowledge questions are shown in table 2.

Table 2 Showing the response of knowledge questions on initiation of breastfeeding

Questions on knowledge	Number	percentage
Importance of breastfeeding		
Breast milk is nutritious	61	19.2
Breast milk protects against infections	39	12.3
it prevents pregnancy	11	3.5
All of the above	203	64.0
None of the above	3	0.9
Breast milk only is the first feed		
Yes	277	87.4
No	40	12.6
Time of initiation of breastfeeding		
Within 30 minutes	148	46.7
Within 1hour	114	36.0
More than 1 hour	55	17.3
How often baby should be breastfed		
On demand	227	71.6
At specific times	90	28.4
Exclusive breastfeeding must be recommended		
Yes	284	89.6
No	33	10.4

Response on the attitude of breastfeeding initiation

Seventy eight percent (N=248) of the participants agreed that baby should be breastfed within an hour after delivery. Similarly seventy eight percent (N=222) of the participants disagreed that feeding colostrum is not important, On the statement that baby should be fed on breast milk only for 4 months at least: more sixty four present of the participants disagreed. Eighty one percent of the participants disagreed that early breastfeeding knowledge is not necessary. As far as skill on positioning and attaching the baby to the new born baby to the breast is concerned ninety percent (N=288) of the mothers were found to be with perfect skill of positioning and angling the baby to breast while breastfeeding. The details of the response on attitude questions are shown in table 3.

Table 3 Showing the details of the responses on attitude questions

Questions on attitude	Response				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Baby should be breastfed within an hour after delivery	204(64.4)	44(13.9)	44(13.9)	21(6.6)	4(1.2)
Colostrum is not important	42(13.2)	27(8.5)	25(7.9)	160(50.5)	63(19.9)
Baby should be fed on breast milk only for 4 months at least	38(12.0)	42(13.2)	31(9.8)	162(51.1)	44(13.9)
Early breastfeeding knowledge is not necessary	23(7.3)	13(4.1)	23(7.3)	190(59.9)	68(21.4)
Mother skill on positioning and attaching the baby to the breast is important for correct feeding	200(63.09)	88(27.76)	3(0.95)	20(6.31)	6(1.89)

Response of participants on Practice of initiation of breastfeeding

More than forty one percent (41.6%, N=132) of the participants initiated breast feeding within half hour of delivery while eighteen percent (N=58) and forty percent (N=126) after half an hour and after one hour respectively. Ninety three percent of the participants (N=295) agreed with the statement that first feed to the new born baby should be breastmilk. Thirty six percent (N=115) of the participant mothers stated that they did not feed their new born baby the colostrum. Two third of the participant mothers (N=238) had skin to skin contact with their new born baby at the start. More than sixty seven percent (N=213) of the participant mothers did the rooming in with their newborn babies within 1 hour while thirty three percent (N=104) after one hour. The detail of the response of the practice questions is shown in table 4.

Table 4 showing the responses on the questions of practice of early initiation of breastfeeding

Questions on practice	No.	%
Time of breastfeeding initiation after delivery:		
0-30 minutes	132	41.6
31-60 minutes	58	18.4
After one hour	127	40.1
First feed should be:		
Breast milk	295	93.1
Non-breast milk (pre-lacteal)	22	6.9
Did your baby fed colostrum:		
Yes	202	63.7
No	115	36.3
Was there Skin-to-skin contact:		
Yes	228	75.3
No	79	24.9
Rooming-in was done :		
Within one hour	213	67.2
After one hour	104	32.8

Knowledge, Attitude and Practice Score and their relations with other variables

The mean knowledge score was 3.74 ± 0.99 Std.Dev. (Range: 1 -5). Almost thirty nine percent of the participants (N=123) had poor knowledge about the initiation of breast feeding. There was no significant relation between parity(P=0.096), education (P=0.234), Marital status(P=0.119 and occupation (P=0.134) and the knowledge but the participants of the age group of 31-45 years, participants who received the information from family and friends (P=0.008) were having significantly higher knowledge (P=0.011) than the participants of other age groups and those who received information on initiation of breastfeeding from other sources. Women with the babies in the age group of 16-20 hours were having significantly better knowledge (P=0.014) than those with other age group infants. The mean attitude score was 3.77 ± Std. Dev. 1.13 (Range 1-5). More than thirty three percent (N=106) of the participants had negative attitude towards initiation of breast feeding. There was no statistically significant relationship between attitude and education(P=0.092), employment (P=0.586), sex of the infant (P=0.191). However the participant mothers who received the information on early initiation of breastfeeding (P=0.004) than those who did not receive, those who received the information from health care workers (P=0.022) than other source of information, mothers with new born baby of 21-25 hours old (0.005) compared to other age group had significantly more positive attitude towards initiation of breastfeeding. The mean of the practice score was 4.29 ± SD 1.34 (Min 0- Max. 6). Twenty seven percent of the participant mothers (N=86) did

not have good practice towards the initiation of breastfeeding. There was no statistically significant association between the practices and the age (p=.741), Parity(p=0.125), education (p=0.32), employment status (p=0.68) and infant age (p=0.156) but the practice was better in those mothers who had male child (p=0.024) and also among the participants mothers who received the information (p=0.000) regarding initiation of breast feeding than those who did not receive. The participant mothers who received information from the family and friends were having significantly better (p=0.022) practice towards the initiation of breastfeeding. The details of the knowledge, attitude and practice scores and their significance with different variables are shown in table 5.

Table 5 Showing knowledge, attitude and practice scores and their relationship with other variables:

Variables	Good N(%)	Poor N (%)	P-Value
Knowledge:			
Mean Score: 3.74 ± Std.Dev. 0.99 (Range 1 -5).	194(61.20)	123(38.80)	
Age group			
15-30	44 (13.89)	136(42.90)	
31-45	107(33.75)	28(8.83)	
46-60	1(0.32)	1(0.32)	0.011
Education:			
Uneducated	5(1.58)	8(2.52)	
Primary	7(2.21)	12(3.79)	
Secondary	51(16.09)	23(7.26)	
Graduate	90(28.39)	51(16.09)	
Post graduate	40(12.62)	30(9.46)	0.234
Occupation:			
Unemployed	129(40.69)	68(21.45)	
Employed	64(20.19)	56(17.67)	0.155
Parity :			
1-5 children	168(53.00)	105(33.12)	
6-10 children	24(7.57)	18(5.68)	
>10 children	1(0.32)	1(0.32)	0.825
Information about early initiation of breastfeeding:			
Yes	131(41.32)	83(26.18)	0.008
No	42(13.25)	37(11.67)	
Source of information:			
Health workers	45(14.19)	45(14.19)	0.023
Family and friends	107(33.75)	51(16.09)	
Media	41(12.93)	24(7.57)	
Attitude:			
Mean score: 3.77 ± Std.Dev. 1.13 (Range 1-5)	211(66.56)	106(33.44)	
Age group:			
15-30	100 (31.55)	80(25.24)	0.096
31-45	102(32.18)	33(10.41)	
46-60	1(0.32)	1(0.32)	
Parity :			
1-5 children	197(62.14)	76(23.97)	0.005
6-10 children	34(10.72)	8(2.52)	
>10 children	34(10.72)	1(0.32)	
Education:			
Uneducated	0(0.0)	2(0.63)	
Primary	9(2.84)	9(2.84)	
Secondary	10(3.15)	26(8.20)	
Graduate	47(11.83)	39(12.30)	
Postgraduate	103(32.49)	30(9.46)	
Practice;			
Mean Score 4.29 ± SD 1.34 (Min 0- Max. 6)	40(12.62)	86(27.13)	
Age group:			
15-30	120(37.85)	60(18.92)	0.02
31-45	114(35.96)	21(6.62)	
46-60	1(0.32)	1(0.32)	
Education:			
Uneducated	8 (2.52)	3(0.95)	0.032
Primary	16(5.05)	3 (0.95)	
Secondary	53(16.72)	20(6.31)	
Graduate	109(34.38)	34(10.73)	
Post graduate	45(14.20)	25(7.89)	

Occupation:	143(45.11)	54(17.03)	0.680
Unemployed	88 (27.76)	31 (9.78)	
Employed			
Parity :	170(53.63)	103(32.49)	
1-5 children	24(7.57)	18(5.68)	
6-10 children	1(0.32)	1(0.32)	
>10 children			
Infant sex:	126	105	0.004
Male	50	35	
Female			
Information about early initiation of breastfeeding:	189(59.62)	42(13.25)	0.000
Yes	48(15.14)	38(11.99)	
No			
Source of information:	58(18.30)	34(10.73)	
Health workers	119(37.54)	39(12.30)	
Family and friends	54(17.03)	12(3.79)	0.022
Media			

DISCUSSION

The present study was conducted to assess the knowledge attitude and practice of the nursing mother towards initiation of breast feeding. This study also estimated the prevalence of initiation of breastfeeding among the mothers within 48 hours of the baby delivery. The knowledge about initiation of breastfeeding in our study was found to be good in 61% of the participants which is lower than that of another Saudi study in different region (86.7%)^[7], Ethiopian (66.66%)^[11], Indian (68.3%)^[15], Indonesian (62.5%)^[16], Nigerian (71.3%)^[17], Kenyan (73.9%)^[14] and Saudi (78.9%)^[18] but similar to one Yemen study (61.2%)^[19] and higher than that of Iraqi study (38.3%)^[20].

Patient education is important for enhancing their knowledge. There was significant relation between participants who received the information about the early initiation of breastfeeding than those who did not receive the information (41.32% Vs.13.25%, P=0.008). Those who received the information on early initiation of breastfeeding from family friends had better knowledge than those from health workers and media (33.74% Vs.4.19 Vs.12.93, P=0.011). The same result was observed in Nigerian study^[17] where the knowledge about the early initiation of breastfeeding was higher (X² = 6.104; p = 0.013) among the women who were influenced by family and friends rather than the health workers and media. An Indian study has also found that by and large mothers (17%) depend on their families for the knowledge of breast feeding.^[21]

More than 46% of the participant (N=148) in our study agreed that initiation of breastfeeding should start within 30 minutes of the delivery of the new born baby which is lower than that of an Indian (68.3%)^[22], Kenyan (71.2%)^[14] and Nigerian (80.6%)^[17] study but higher than that of Egypt (15%)^[29], Iraqi (57.5%)^[20] and Bangladesh studies (only 39.3%)^[2].

Clinical research suggests that babies were designed to feed on demand which comes with important benefits of keeping milk production in sync with a baby's needs, helping newborn to get enough milk and ensuring emotional and cognitive development.^[25] A high percentage of the participants mothers (71.6%) in our study agreed that the frequency of breast feeding to the new born baby should be on demand. Fifty eight percent of the participant in Kenyan^[14] and 54% nursing mother in an India study agreed that breast feeding should be on demand and not at fixed interval.^[15]

Seventy eight percent of the participants in our study agreed that baby should be breastfed within an hour after delivery.

The same type of results were published in Indian, Nigerian, Iranian and Bangladesh study^[24] where majority of participants had positive attitude towards breastfeeding within an hour of delivery. Similarly 78% of the women in our study had positive attitude towards colostrum feeding. More than ninety percent (91.9%), 74% and 95% of the nursing mothers had positive attitude towards colostrum feeding in Nigeria^[17], Ethiopia^[11] and Yemini study^[19] respectively.

On the exclusive breast feeding statement, 89.6% of the participants knew as what is it and more than sixty four percent of them had positive attitude towards exclusive breastfeeding (Breastfeeding for at least six months). However a low level of knowledge about the duration of exclusive breastfeeding was found in East Africa⁽²⁶⁾ where 84.4% were aware of exclusive breast feeding and only 49.2% of the participants knew that the duration of exclusive breast feeding was the first six months only. However in a Malaysian study almost seventy eight percent (77.8%) nursing mothers had correct knowledge about the duration of exclusive breastfeeding.^[27]

The positioning of the baby's body during breastfeeding is important for good attachment and successful breastfeeding. By a good skill on attachment and positioning of baby at the initiation of breastfeeding can avoid the difficulties of breastfeeding. As far as skill on positioning and attaching the new born baby to the breast is concerned 90% of the mothers in our study were found to be with perfect skill of positioning and angling the baby to breast while feeding which is better than that of a Nigerian study^[17] (71.3%), Ghana^[28] (71.3%) and Ethiopian study (47.1%)^[30].

More than sixty six percent of the participants in the present study had positive attitude towards the early initiation of breast feeding which is better than that of UAE (20.9%)^[31], Nigerian^[17] (54.0%) and Indian^[32] (55%) study.

Almost sixty percent of the participants initiated breast feeding within one hour after birth while rest 40% did after one hour in our study which is better than the Ethiopian (53.3%, 95% CI-49.8-56.7), Pakistani^[24] (35.1%) and Bangladesh^[23] (48.3%, 95% CI 43.4-53.3). However in one other Saudi study^[33] breastfeeding initiation rate was 97.3%.

A strong attitude of participants (78%) in which they agreed with the statement that Initiation of breastfeeding should be started within one hour of birth did not translate into comparable good practice since only 59.6% of the participants in the present study. Conversely Kenyan study^[14] has shown a better practice (96.5%) of initiation of breastfeeding than the attitude (80%). Yemini study^[19] has also shown a poor practice among nursing women towards early initiation of breast feeding where only 36% of the mothers had the practice of breastfeeding within one hour of the birth. A very low practice (15.8%) of early initiation of breastfeeding has also been documented in Indian and one Pakistani study^[24] (35.9%). Inspire of comparatively poor knowledge where only 15% of Egyptian nursing mothers knew correct information about initiation of breastfeeding to their new born babies, 9.9% of them had good practice of feeding their babies immediately after birth.^[29]

A good practice about feeding the babies was found among 64% percent of the participants in our study which was consistent with the result of Egyptian^[28], Kenyan^[14] and UAE study^[31].

Babies placed in early skin-to-skin contact with their nursing mothers appear to interact more with their mothers and cry less. Two third of the participant mothers had skin to skin contact with their new born baby at the start in the present study. The same result was published in a systematic review on knowledge attitude and practice on the initiation of breast feeding in which more than 50% of the study population practiced skin-to-skin contact with the initiation of breast feeding.^[26] Rooming-in which means that the mother and baby will be cared for in the same room from admission to discharge home is an evidence-based practice that promotes keeping healthy newborn babies and their mothers together in post-labor recovery rooms. This step is recommended by World Health Organization's in its ten steps to successful breastfeeding.^[34]

More than sixty seven percent of the participant mothers did the rooming in with their newborn babies within 1 hour in our study. A high rate of rooming in has been seen in the Kenyan study^[14] where 92% of the participants' mother practiced rooming in.

Educational level of the mothers was not significantly associated with early initiation of breastfeeding in our study ($P=0.234$). The different level of education was not significantly associated with the early initiation of breastfeeding in Ghana^[28], WHO global survey^[35], and Jordan study as well. However in Indian study higher education among the nursing mothers was significantly associated with higher prevalence of early initiation of breastfeeding among them (Adjusted Odds ratio: 1.40, 95% CI: 1.24–1.59; $P < 0.001$). In Jordan study^[36] also the graduate women were having significantly more knowledge than the illiterate and less educated women ($p = .001$).

The knowledge about the early initiation of breast feeding was significantly higher among the participants in the age group of 31–45 years in the present study. In one WHO global survey^[35] the researchers have found a significantly increased knowledge about the early initiation of breastfeeding among the women with age group of 20–34 years than those with more than 35 years. However in Jordan^[36], Indian^[14], Saudi^[7] and Ethiopian study^[28] age did not play any significant role in the knowledge towards early initiation of breast feeding.

Participants who received the information from family and friends ($P=0.008$) were having significantly higher knowledge ($P=0.011$) than those who received information on initiation of breastfeeding from other sources. Significant association is seen with antenatal counseling from family and friends was associated with the knowledge of early initiation of breastfeeding among the nursing mothers in an Indian^[22] ($P < .003$), Ghana^[29] ($P=0.001$), and Turkey^[37] ($P=0.012$) study.

CONCLUSION

The present study has found that early initiation of breastfeeding among the participants was adequate and attitude towards early initiation of breastfeeding were positive in general. However the good knowledge and positive attitude could not translate to expected practice towards early initiation of breastfeeding. This study provided important information regarding the nursing mothers' knowledge, attitude and practice which will help the health care professionals and policy makers for effective planning of early initiation of breastfeeding programmes.

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