Assessment of Knowledge and Attitude of Colostrum among Postnatal Mothers

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ABSTRACT

Background and aim: colostrum is the first milk produced by the mammary glands of mammals in late pregnancy just prior to giving birth and continuing through the early days of breastfeeding. The study aimed to assess knowledge and attitude of colostrum among postnatal mothers and to find out the association between knowledge and attitude of mothers with demographic characteristics.

Materials and method: cross sectional study, deals with 300 mothers who attending to Babylon maternal and child hospital and Alkather health centre. A questionnaire was used to collect the data from the period of 21 November 2012 to 15 March 2013. Data were analyzed by using descriptive and inferential statistical (percentage, frequency, and chi –square).

Results : the study shows that the majority of mothers age between (30-39) years was 59% ,also there are significant relationship between the attitude of mothers with some of demographic characteristics of mothers .

Conclusion: The study concludes that there is significant relationship between mothers knowledge with their demographic characters at $P \geq 0.5$ and there is significant relationship between mothers' attitude with their demographic characterize.

Keywords: Knowledge, Attitude, Colostrum, Postnatal Mothers.

INTRODUCTION

Colostrum is the first milk produced by the mammary glands of mammals in late pregnancy just prior to giving birth and continuing through the early days of breastfeeding (Ghai *et al.,* 2009). Colostrum is very rich in proteins, carbohydrates, vitamin A, and sodium chloride, but contains lower amounts of lipids and potassium than normal milk (Heather *et al.,* 2006; Andreoli and Carfenter, 2001; Behrman *et al.,* 2001). Newborns have premature digestive system which suits the low-volume concentrated form of nutrient supply system of colostrum. The laxative effect of colostrum encourages passage of baby's first stool, meconium. This helps to clear excess of bilirubin which is produced in large quantities at birth and helps prevent jaundice. It contains various immunoglobulin's like IgA (reactive to Escherichia coli virulence associated proteins), IgG and IgM^3 (Loureiro *et al*., 2008). Other immune components of colostrum are lactoferrin, lysozyme, lactoperoxidase, complemet and proline-rich peptide (PRP). It also contains various cytokines and growth factors. PRP helps fight against various viral infections like herpes viruses and HIV, bacterial and viral infections which are difficult to treat, various cancer, asthma, allergies and autoimmune diseases. It helps to reduce one of the leading causes of death like diarrhea and ARI (Ekambaram and Ahmad, 2010).

Though colostrum has been proved beneficial to the newborn babies, studies have revealed that breast feeding mothers and the other family members do not have adequate knowledge about it, thus, preventing the infants from acquiring this nutritional food. A study in India revealed that mothers were unaware about the time of initiation of breastfeeding and colostrum. The importance of colostrum is known to the limited population. There are still many people who believe that colostrum is a harmful substance which should be discarded. It is thought to be an unwanted substance related with ill health. There are certain barriers perverting the feeding of colostrum to the new born babies (Haider *et al*., 2010; Odent, 2011) . Maternal barriers – Many mothers lack knowledge about the importance of early initiation of breastfeeding and the benefits of colostrum feeding. Some mothers dislike the colour of colostrum.

Neonatal barriers- Neonatal illness is one of the major barriers to colostrum feeding. Several babies are not able to suck breast milk due to illness, deformities or other reasons about time of initiation of breastfeeding.

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Though 92% of the mothers known that breastfeeding should be initiated within one hour after delivery, only 36% of them had actually done so. It also showed that 52% of the mothers did not receive any advice on breastfeeding during antenatal period (Chaudhary *et al.*,2011). A similar study conducted in the eastern part of Nepal on knowledge, attitude and practice of mothers regarding breast feeding showed that though all mothers known that they had to breastfeed their babies, they did not have knowledge about the appropriate timing for breastfeeding and colostrum feeding[8]. None of the mothers got advice regarding breast feeding and colostrum feeding during antenatal care visits (Jethi and Shnwastava, 2010).This study was initiated to assess the knowledge, and attitude of colostrum feeding in postnatal women who have attending child maternal Babylon hospital and Alkather health centre. This study aims to assess mother's knowledge about colostrum and to assess mothers' attitude regarding colostrums. It also aims to find out association between's mother's knowledge with their demographic characteristics such as (age, educational level and residential area ,occupation of mother's, type of family and place of delivery. In addition, the present study aims to find out association between's mothers attitude with their demographic characteristic such as (age , educational level and residential area , occupation of mothers , type of family and place of delivery.

MATERIALS AND METHOD

The design of the present study was a descriptive cross-sectional study. The study was carried out at maternal and child Babylon hospital, and Alkathar health centre. The purposive non-probability sample was selected at maternal and child hospital Babylon ,Alkathar health centre , the sample consisted of 300 mother's, attending hospital and health centre , the criteria of the sample mothers should be postnatal. The questionnaire was used as a mean of data collection, the data collection was carried out through the period of 21 November 2012 to 15 March 2013, using a special questionnaire concerning mother's knowledge comprised of 6 items. The items were rated according to 2 points type rating scale as(I know and I do not known) and the scale were scored as (2 for I know, 1 for I do not know).While questionnaire regarding attitude of postnatal mothers about colostrum comprised 12 items were rated according to 2 points type rating scale as (yes and no) and level of scale were scored as (2 for yes and 1 for no). Data collection is done by researcher who kept the confidentiality and anonymity of the data. The form for data collection was applied without mentioning the name of mothers, their address, or any other information and taking a verbal agreement were obtained from participants in the study. Data were analyzed by using descriptive and inferential statistical the frequencies, percentage, and chi- Square, significant association of mother's knowledge and attitude with their demographic characteristics at $p<0.05$.

RESULTS

Table (1): Demographic characteristics of mother's

	No	%
1.Mothers age		
29 or Less	60	20
30-39 years	177	59
40 and more	63	21
2. Mothers Education Illiterate		
Read and Write	20	6.67
Primary school graduate	70	23.33
Intermediate and secondary	130	43.33
School graduate	69	23
Institution and college	11	3.67
3.Mothers occupation		
Employers	5	1.66
Employers	295	98.34
4. Residential area		
Rural	244	81.33
Urban	56	18.67
5. Type of family		
Extended	127	42.33
Nuclear family	173	57.67
6. Place of delivery		
Hospital	176	58.67
Home	124	41.33

Table(2): Assessment of mother's knowledge about colostrum

Item	I know		I do not know		M.S	Levels
	No	%	No	%		
1.It is the early mother's milk	130	43.33	170	56.67	1.56	S
2.It is best milk for the baby	78	26	222	73	1.73	S
3.It is first milk given to the baby	157	52.33	143	47.67	1.47	S
4.It contains antibodies and high protein	22	7.33	278	92.67	1.92	S
5.It is thick, sticky ,and yellowish in color	40	13.34	260	86.66	1.86	S
6.It is first milk given to the baby	87	29	213	71	1.71	S

Table (3): Assessment of mothers attitude about colostrum

Item	Yes		No		M.s	Levels
1.I had no white milk	220	73.33	80	26.67	1.26	S
2. First milk is dirty, look like pus	233	77.66	67	22.33	1.22	S
3.Causes obstruction in the intestines	278	92.67	22	7.33	1.07	L.S
4. Causes diarrhea	201	67	99	33	0.89	N.S
5. Cause constipation among babies	44	14.67	256	85.33	1.85	S
6. unable to protect babies from jaundice.	223	74.33	77	25.67	1.25	S
7. Baby did not like	280	93.33	20	6.66	1.06	L.S
8. Make baby sick	210	70	90	30	0.9	L.S
9. Baby unable to suck colostrum	201	67	99	33	1.33	S
10. It is deleterious to the child	210	70	90	30	1.27	S
11. It is difficult to digest and needs to be discarded	230	76.67	70	23.33	1.23	S
12. My family says it should not to be given	288	96	12	4	1.04	L.S

Table (4): Association between knowledge of mothers about colostrum and demographic characterize

Item	I know		I do not know		Total		X^2
	F	%	F	%	F	%	
Age:							X^2=1.304 d.f.=4 Significant P. value = 0.32
29 or less	20	18.34	40	20.94	60	20	
30-39 years	66	60.56	111	58.12	177	59	
More than 40 years	23	21.10	40	20.94	63	21	
Total	109	100%	191	100%	300	100%	
Level of education							X^2=7.122 d.f.=8 P.value=0.52 Significant
Unable to read and write	9	8.33	10	5.20	19	6.33	
Read and write	30	27.78	44	22.92	74	14.66	
Primary school graduate	40	37.03	90	46.88	130	43.34	
Intermedia and secondary school	22	20.38	44	22.92	66	22	
Institute and college	7	6.48	4	2.08	11	3.66	
Total	108	100%	192	100%	300	100%	
Occupation of mothers:							X^2=1.532 d.f.=2 P.value=0.46 Significant
Employment	3	2.95	2	1.0	5	1.66	
Unpolyment	99	97.05	196	98.99	295	98.34	
Total	102	100%	198	100%	300	100%	
Residential area:							X^2=0.864 d.f.=2 P.value=0.64 Significant
Rural	82	70.68	139	75.55	221	73.66	
Unban	34	29.32	45	24.45	79	26.34	
Total	116	100%	184	100%	300	100%	
Type of family:							X^2=42.79 d.f.=2 P.value=0.23 Significant
Extended	85	62.97	42	25.45	127	42.34	
Nuclear	50	37.03	123	74.55	173	57.66	
Total	135	100%	165	100%	300	100%	
Place of delivery:							X^2=4.038 d.f.=2 P.value=0.13 Significant
Hospital	77	65.82	99	54.09	176	58.66	
Home	40	34.18	84	45.91	124	41.34	
Total	117	100%	183	100%	300	100%	

Table (5): Association between attitude of mothers about colostrum and demographic characterize

Item	Yes		No		Total		X^2
	F	%	F	%	F	%	
Age:							X^2=9.73 d.f.=4 P.value0.04 Significant
29 or less	60	29.85	40	40.41	100	33.34	
30-39 years	99	49.26	30	30.30	129	43	
More than 40 years	42	20.89	29	29.29	71	23.66	
Total	201	100%	99	100%	300	100%	
Level of education							X^2=2.071 d.f.=8 P.value=0.97 Significant
Unable to read and write	12	6.70	10	8.26	22	7.33	
Read and write	30	16.75	24	19.84	54	18	
Primary school graduate	88	49.17	50	41.32	138	46	
Intermediate and secondary school	44	24.58	32	26.45	76	25.33	
Institute and college	5	2.70	5	4.13	10	3.34	
Total	179	100%	121	100%	300	100%	
Occupation of mothers:							X^2=2.011 d.f.=2 P.value=0.36 Significant
Employment	8	3.99	1	1.0	9	3	
Employment	193	96.01	98	98.100	291	97	
Total	201	100%	99	100%	300	100%	
Residential area:							X^2=1.133 d.f.=2 P.value=0.56 Significant
Rural	179	80.27	66	85.72	245	81.66	
Unban	44	19.73	11	14.28	55	18.34	
Total	223	100%	77	100%	300	100%	
Type of family:							X^2=7.759 d.f.=2 P.value=0.02 Significant
Extended	78	38.62	22	22.45	100	33.33	
Nuclear	124	61.38	76	77.55	200	66.67	
Total	202	100%	98	100%	300	100%	
Place of delivery:							X^2=0.301 d.f.=2 P. value= 0.86 Significant
Hospital	98	56	66	52.8	164		
Home	77	44	59	47.2	136		
Total	175	100%	125	100%	300	100%	

DISCUSSION

Part I: Demographic characteristics of the sample

The finding of the present study showed that in table (1) most of mothers age were (30-39) years which present 59%, this results agree with the study done by Ghai *et al.* (2009), who found that most of mother's in his study were between (29-39) years. But the results opposite with study done by Arifeen *et al.* (2001) who found that 70% of his study mother's age 40 years and older .The study results shows highest percentage were primary school graduate which is present 43.33%. This results disagree with the studies done by Arifeen *et al.* (2001) and Haider *et al.* (2010), who found that most of mother's with study were illiterate, regarding the mother's occupation the majority of mother's were unemployed which present 98.34%. This results agree with the study done by Arifeen *et al.* (2001 and Chaudhary *et al*. (2011), who stated that 65% of mother's were unemployed , also the results agree with the study done by Haider *et al*. (2010) who found that the majority of mother's were unemployed , but regarding the residential area most of mother's were from Rural areas which is present 81.33% this results agree with the study done by Haider *et al*. (2010), who emphasized that 85% of his study were from Rural area , according the type of family the results shows that 57.67% of the mothers of the mothers from Nuclear family . This results opposite with Odent (2011), who stated in his study most of mothers were from extended family ,with the regarding place of delivery the present study shows that 58.67% delivered at the hospital, this study agree with the studies done by Chaudhary *et al*., (2011); Haider *et al*. (2010) and Odent (2011) who found that the majority of mothers delivered at the hospital , but the results disagree with the study done by Arifeen *et* al. (2001) and Chaudhary *et al*. (2011), who found that the majority of mothers delivered at home.

Part II: Assessment of mother's knowledge about colostrum

With the respects of the mothers knowledge about colostrum the study shows that 52.33% of mothers knew about colostrum is the first milk given to the baby . This results agree with the study done by Haider *et al.* (2010), who found that 96.36% of mother's had correct knowledge about the first food of newborn , in

the present study 92.67% of mothers didn't knew that colostrum content antibodies and high protein , this results opposite with the study done by Rahime *et al*. (2009), who stated that 90.9 of mother's had knowledge about the content of colostrum. Also the results shows that 86.66% of the study didn't knew that colostrum is thick , sticky and yellowish in color , this results agree with the studies done by Odent (2011); Jethi and Shnwastava (2010); and Singh (2004), who found that in their study the majority of mother's they didn't knew the characteristics of colostrums.

Parts III: Assessment of mother's attitude about colostrum

Regarding mothers attitude about colostrum as shows in table (3) which present 92.67% of mother's said that cause obstruction of intestine, 67% of mothers told that colostrum diarrhea and 85.33% of them they did knew colostrum causes constipation these results opposite the study done by Singh (2004), who found that 80% of mothers in his study said that colostrum not cause diarrhea and 90% reply that colostrum cause constipation . Also the present study shows that 74.33% of mothers said that colostrum not be able to protect babies from jaundice ,this results agree with the studies done by Haider *et al*. (2010); Odent (2011); and Singh (2004), who found that the majority of mothers said that colostrum not be able to protect the child from jaundice. Table also shows that 93.33% of mothers told that baby did not it, 70% said that colostrum make baby sick , while 67% reply that baby unable to suck , this results disagree with the study do by Ghash (2008), who found that 82% of mothers said baby like colostrum and 90% of mothers said colostrum protect the child to be sick and it is easy for child to be sick which present 75%. The present study shows that 76.67% of the mothers said that colostrum is difficult to digest and needs to be discarded . This study agree with the study done by Rahima *et al*. (2009), who emphasized that the majority of mother's had not correct believes about colostrum which 95%. Also the present study shows that 96% of sample told that the family said that it should not be given to the baby. These results agree found that 85% of mothers reply the family not encourage them to be given colostrum to their children.

Part IV: Association between knowledge of mothers about colostrum and demographic characterize

Table (4) shows that there is significant association between age of mother and level of education and knowledge of mothers regarding colostrum . Also there is significant association between knowledge of mothers with occupation of mothers at $P \leq 0.5$. This results agree with the studies done by Ghash (2008); Bansal and Sitharamans (2009), who found that there is significant association between age and level of education with the knowledge of mothers, while regarding the occupation of mothers with the knowledge of them regarding colostrum is disagree with the study done by Ghash (2008), who found that there is no significant association between knowledge of mothers and occupation . The study also shows that there is significant association between Residential area and knowledge of mothers this results agree with the studies done by Rahime *et al*. (2009) and Ghash (2008), who found that there is significant relationship between residential area and knowledge of mothers , and present study shows that there is significant relationship between type of family and place of deliver and knowledge of mothers.

Part IIV: Association between attitude of mothers about colostrum and demographic characterize

Table (5) shows that there is significant association between age of mothers , level of education and occupation of mothers with their attitude of mothers at $p \leq 0.5$ .This results agree with the studies done by Rahime et al. (2009) and Singh (2004), who found that there is significant association between mothers attitude with the age and level of education at $p \leq 0.01$. Also the results shows that there is significant association between attitude with the occupation, residential area and type of family at $p \leq 0.05$. This result agree with the studies done by Ghash (2008); Bansal and Sitharamans (2009), who found that there is relationship between residential area and the type of family , but the study disagree with the study done by Ghash (2008) found that there is no significant association between residential area and type of family with the attitude , the results shows that there is no significant association between place of delivery and attitude of mothers this results agree with the study done by Bansal and Sitharamans (2009), who found that there is no significant association between place of delivery with the attitude of mothers.

CONCLUSION

According to the interpretation and discussion of the study finding. The study concludes that most of mothers aged between (30-39) years and about 43.33% of mothers were

graduate from primary school. In addition, 52.33% of mothers have knowledge about colostrums and 92.67% of mothers said that colostrum cause obstruction of intestine. The study present that there is significant relationship between mothers knowledge with their demographic characters at P ≥ 0.5 and there is significant relationship between mothers' attitude with their demographic characterize.

RECOMMENDATIONS

The present study recommends that health education programs should be carried out for postnatal mothers regarding the important of colostrum. In addition, Health education in the hospital and health centre should play a role in awareness of mothers about colostrums. The study also recommends that mass media should play a role in educating the family or the mother's concerning colostrum.

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