

# Assessment of knowledge, attitude and practice of post natal mothers towards colostrum breast milk in debre markos town governmental health institutions east gojjam zone, Amhara regional state, Ethiopia

## Abstract

**Introduction:** Colostrum is gold or bright yellow in color, and has a sticky, thick consistency. It is highly concentrated and is produced in small amounts from the first hour of birth to the second or third day after delivery. Breast milk should be made a baby's first taste and there should be no pre-lacteal feeds. However, there is a lack of understanding of the importance of and poor adherence to exclusive breastfeeding for the first six months postpartum among mothers.

**Objective:** To assess knowledge, attitude and practice of post natal mothers towards colostrum breast milk in Debre Markos town governmental health institutions.

**Methods:** Institution based cross-sectional study was conducted among 378 post natal mothers. Data was collected using interviewer administered questionnaire. Study populations who were attending under five clinics at four health centers and one referral hospital were selected until the sample size is reached. Both descriptive and inferential statistics were used to present the data.

**Result:** About 290(76.72%) of mothers have good knowledge about colostrum breast milk. About 299(79.10 %) women heard about colostrum from various sources. Majority of heard about colostrum and its importance from health institutions. About 298(78.84%) had favorable attitude towards colostrum breast milk. And 50(13.23%), 65(17.20%), 72(19.05%) believed that colostrum causes intestinal obstruction, diarrhea and it is difficult to digest which needs to be discarded respectively. And 293(77.51%) have good practices of colostrum feeding. While 299(79.10%) feed colostrum for their babies, 79(20.9%) did not feed their babies colostrum but other pre lacteal feeds

**Conclusion and Recommendations:** Knowledge, attitude and practice of postnatal mothers towards colostrum is not appreciable. About (76.72%), (78.84%) and (77.71%) of mothers had good knowledge, favorable attitude and good practice of colostrum feeding respectively. As a result, health education programs should be carried out for all pregnant mothers, reproductive age groups and community members regarding the importance of colostrum breast milk feeding at all levels and the avoidance of pre lacteal feeding.

**Keywords:** knowledge, attitude, practice, post natal, mothers, colostrums, ethiopia, diarrhea, age

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## Introduction

Colostrum is produced in a mother's breasts from the first hour of birth to the second or third day after delivery. It is highly concentrated and is produced in small amounts. It is gold or bright yellow in color, and has a sticky, thick consistency. Because of its high nutrient content it acts as a primer for breast milk, leading pediatric nutrition specialists refer to it as "liquid gold".<sup>1</sup>

Babies who are feed nothing but breast milk from birth through the first six months of life get the best start. Exclusive breastfeeding provides babies the perfect nutrition and everything they need for healthy growth and brain development.<sup>2</sup> However, there is a

lack of understanding of the importance of and poor adherence to exclusive breastfeeding for the first six months postpartum among mothers.<sup>3,4</sup> For example, there is significant relationship between mothers knowledge with their demographic characters and there is also significant relationship between mothers' attitude with their demographic characteristics.<sup>3</sup>

Breast milk should be made a baby's first taste and there should be no pre-lacteal feeds such as fenugreek water, water with sugar, thin gruel, other liquids, or ritual foods.<sup>5</sup> However, giving prelacteal feed is almost universal with 88% of mothers feeding their children with prelacteal feeds.<sup>4</sup>

In Ethiopia, colostrum (Inger) and breast milk (Yetutwotet) were seen as different substances. Colostrum was said to cause abdominal problems, but discarding a portion was sufficient to mitigate this effect. Almost all (nineteen of twenty) women breast-fed and twelve (63%) reported ritual prelacteal feeding. A majority (fifteen of nineteen, 79%) reported discarding colostrum and breast-feeding within 24 hour of birth.<sup>6</sup> Attention to feeding practices is important because inadequate knowledge about appropriate foods and feeding practices is more often a cause of malnutrition than lack of food.<sup>5</sup>

Malnutrition has been responsible, directly or indirectly, for 60% of the 10.9 million deaths annually among children under five. Well over two-thirds of these deaths, which are often associated with inappropriate feeding practices, occur during the first year of life. No more than 35% of infants worldwide are exclusively breastfed during the first four months of life; complementary feeding frequently begins too early or too late, and foods are often nutritionally inadequate and unsafe.<sup>7</sup>

Malnourished children who survive are more frequently sick and suffer the life-long consequences of impaired development. Because poor feeding practices are a major threat to social and economic development, they are among the most serious obstacles to attaining and maintaining health that face this age group.<sup>7</sup>

In Ethiopia, studies conducted so far on the title are very limited. And majority of the findings are focused on complementary and exclusive breast feeding practices. As a result, knowledge, attitude and practice of mothers towards colostrum have not been widely studied among post natal mothers with varied socio demographic characteristics and cultural variations. Therefore, this cross sectional study was conducted to assess knowledge, attitude and practice of post natal mothers towards colostrum breast milk feeding.

## Objectives

### General objective

To assess knowledge, attitude and practice of post natal mothers towards colostrum breast milk in Debre Markos town governmental health institution East Gojjam Zone, Amhara Regional State, Ethiopia, 2015.

### Specific objective

- i. To assess knowledge of the mothers towards colostrum breast milk.
- ii. To determine attitude of the mothers towards colostrum breast milk.
- iii. To determine colostrums breast milk feeding practice of the mothers.

## Methods and materials

### Study area

The study was conducted in Debre Markos town which is found in East Gojjam Zone, Amhara regional state of Ethiopia. One referral hospital and four health centers were the site of study.

### Study design

Institution based cross sectional study design was used.

### Study period

The data was collected from April to May /2015.

### Source population

All post natal mothers (less than six weeks of delivery).

### Study population

All post natal mothers (less than six weeks of delivery) who fulfill the inclusion criteria were included.

### Inclusion criteria

- a. Mothers who had under six weeks old Child.
- b. Biological mothers.

### Exclusion criteria

- a) Mothers who were chronically ill and unable to communicate during data collection.
- b) Mothers who did not give their consent for participation.

### Sample size

A total of 378 postnatal mothers were interviewed in this study.

### Sampling procedure

Study populations (post natal mothers/ less than six weeks of delivery) who were attending under five clinics at four health centers and one referral hospital were selected until the sample size is reached.

### Instrument and measurement

The data collection tool was a structured interviewer administered questionnaires. Post natal mothers (mothers less than six weeks of delivery) were interviewed to avoid recall bias. Structured interviewer administered questionnaires adapted and modified from previous studies.<sup>6,8</sup> It was prepared in English language and translated in to the local language Amharic. And then, it was translated back into English for its consistency.

### Personnel

Four final year nursing students were involved in the data collection.

### Data quality control

Data collectors were trained on how to interview and record. In order to assess the validity and reliability of the instrument, clarity of the questions and respondent reaction to the question and interviewer, pre- test was done in another town at 5% of actual respondents. After the pre- test unclear questions were collected and interviewers adjusted themselves as required. But the data from the pre-test was not included in the analysis. During the data collection time, regular monitoring and supervision of the overall activity was done by the supervisors and principal investigators to ensure the quality of data.

### Data processing and analysis

The data was cleaned, coded and entered in Epi data version 3.1 and transferred to SPSS version 20.0 for analysis. Finally, descriptive and inferential statistics were used to summarize the data.

**Variables**

**Dependent variables:** Knowledge, attitude and practice (KAP) of colostrums breast milk.

**Independent variables**

**Socio-demographic characteristic:** Age, marital status, religion, place of the origin, educational status, occupation, ethnicity, place of delivery.

**Sources of information:** health institution, family, friends, mass-media.

**Ethical consideration**

Ethical approval and clearance to conduct this research were obtained from Research and Ethical Review Committee of College of Medicine and Health Sciences, Debre Markos University. Permission to conduct the study was also requested from Debre Markos Town

Administration Health Office. Voluntariness was asked and signed on the consent form. The aim of the study was explained and participants were informed about confidentiality of the data.

**Result**

**Socio demographic characteristics**

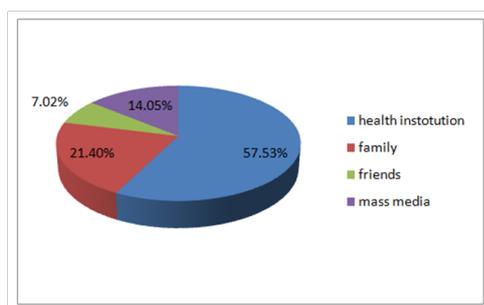
The response rate was 378(89.36%). Majority of the respondents were between 25-35 years old and about 288 (76.19%) were urban dweller Table 1.

**Knowledge of the study participants towards colostrum breast milk**

In this study, majority of the mothers 290(76.72%) have good knowledge about colostrum breast milk. About 299(79.10 %) women heard about colostrum from various sources. Majority of heard about colostrum and its importance from health institutions Figure 1.

**Table 1** Socio-demographic characteristics of mothers in Debre Markos town, East Gojjam

Variables	Category	Frequency (N)	Percentage (%)
Age	< 25	78	20.63
	25-35	145	38.36
	35-45	92	24.34
	>45	63	16.67
Residence	Urban	288	76.19
	Rural	90	23.81
	Single	37	9.79
Marital status	Married	318	84.13
	Divorced	23	6.08
	Orthodox	347	91.79
Religion	Muslim	21	5.56
	Protestant	8	2.12
	Other	2	0.53
	Unable to read and write	59	15.61
Educational status	Able to write and read	73	19.31
	Primary school	62	16.4
	Secondary school	74	19.58
	College/ university graduate	110	29.1
Occupation	Employed	120	31.75
	Unemployed	258	68.25



**Figure 1** Sources of information of breastfeeding mothers towards colostrum breast milk in Debre markos governmental health institutions 2015.

Out of 299 respondents who have ever heard about colostrum, 263(87.96%) replied as colostrum is yellowish milk and 177(59.2%) as colostrum is thick, sticky and yellowish in color. About 243(81.27%), 172(57.53%) and 286(95.65%) of the women’s know that colostrum is the best milk for babies, first milk given to the baby and protects baby’s health and high in protein respectively Table 2.

**Attitude of study participants towards colostrum breast milk**

Among 378 mothers participated in the study, 298 (78.84%) had favorable attitude towards colostrum breast milk. About 169(44.71%) perceived colostrum breast milk as dirty and looks like pus. And

50(13.23%), 65(17.20%), 72(19.05%) believed that colostrum causes intestinal obstruction, diarrhea and it is difficult to digest which needs to be discarded respectively.

80(21.16%) believed that babies do not like colostrums, colostrum makes babies sick, babies unable to suck colostrum, it is given to child and mothers had no colostrum breast milk respectively Table 3. But none of the participants replied as they have neutral concern.

About 74(19.58%), 65(17.20%), 61(16.14%), 75(19.84%) and

**Table 2** Knowledge of post natal mothers about colostrum in Debre Markos town, East Gojjam Zone, Amhara regional state, Ethiopia May, 2015 (N=378)

Variable	Category	Frequency(N)	Relative frequency (%)
I heard/knew about colostrums	Yes	299	79.10
	No	79	20.90
	Family	64	21.40
	Friends	21	7.02
Source of information	Mass media	42	14.05
	Health institution	172	57.53
	<b>Total</b>	<b>299</b>	<b>100</b>
Color of colostrums	Yellow	263	87.96
	White	32	10.70
	Other	4	1.34
	<b>Total</b>	<b>299</b>	<b>100</b>
It's best milk for the baby	Yes	243	81.27
	No	56	18.73
	Strongly agree	172	57.53
	Agree	106	35.45
It is first milk given to the baby	Disagree	15	5.02
	Strongly disagree	6	2.00
	<b>Total</b>	<b>299</b>	<b>100</b>
It protects diseases and high in protein	Yes	286	95.65
	No	13	4.35
	Strongly agree	177	59.20
	Agree	92	30.77
It is thick, sticky, and yellowish in color	Disagree	20	6.69
	Strongly disagree	10	3.34
	<b>Total</b>	<b>299</b>	<b>100</b>

**Table 3** Attitude of post natal mothers towards colostrum in Debre Markos town, East Gojjam Zone, Amhara regional state, Ethiopia May, 2015 (N=378)

Variables	Category	Frequency (N)	Percentage (%)
I had no colostrum breast milk	Strongly agree	21	5.56
	Agree	59	15.61
	Disagree	228	60.32
	Strongly disagree	70	18.51
	Strongly agree	50	13.23
Colostrum breast milk is dirty, looks like pus	Agree	119	31.48
	Disagree	138	36.51
	Strongly disagree	71	18.78

Table Continued...

Variables	Category	Frequency (N)	Percentage (%)
Causes obstruction sin the intestines	Strongly agree	15	3.97
	Agree	35	9.26
	Disagree	238	62.96
	Strongly disagree	90	23.81
colostrum breast milk Causes diarrhea	Yes	65	17.20
	No	313	82.80
Baby did not like colostrum breast milk	Yes	74	19.58
	No	304	80.42
Colostrums makes the baby sick	Strongly agree	17	4.50
	Agree	48	12.7
	Disagree	193	51.06
	Strongly disagree	120	31.74
Baby unable to suck colostrum	Strongly agree	15	3.97
	Agree	46	12.17
	Disagree	221	58.47
	Strongly disagree	96	25.39
It is difficult to digest and needs to be discarded	Strongly agree	21	5.56
	Agree	51	13.49
	Disagree	195	51.59
	Strongly disagree	111	29.36
My family says it should not to be given	Yes	75	19.84
	No	303	80.16

**Practice of study participants towards colostrum breast milk**

From the total study participants, 293 (77.51%) have good practices

of colostrum feeding. While 299(79.10%) feed colostrum for their babies, 281(74.34%) feed colostrum immediately after birth with in 1hour. Contrarily, 79(20.9%) did not feed their babies colostrum but other prelacteal feeds Table 4.

**Table 4** Postnatal mothers colostrums milk feeding practice in Debre Markos town, East Gojjam Zone, Amhara regional state, Ethiopia May, 2015 (N=378)

Variables	Category	Frequency (N)	Frequency (%)
I fed colostrum for my child after birth	Yes	299	79.1
	No	79	20.9
	Cow milk	8	10.13
I didn't feed first milk for my child rather I gave	Butter	59	74.68
	Others	12	15.19
	Total	79	100
	Strongly agree	195	51.59
I feed colostrum for my child, since it is useful for my child health.	Agree	102	26.98
	Disagree	68	17.99
	Strongly disagree	13	3.44
I started feeding colostrum breast milk after delivery	Within an hour	281	74.34
	After 4 hours	24	6.35
	After white milk appeared	33	8.73
	After I discarded first milk	40	10.58

## Discussion

A total of 378 post natal mothers have participated in this study. Of this, 299(79.10 %) women heard about colostrum from various sources. This is nearly similar to a study done in another place in which (74 %) women knew about colostrum from various sources.<sup>9</sup>

In this study, majority of the mothers (76.72%) have good knowledge about colostrum breast milk. On the other hand, in another study (98%) of the breast feeding mothers indicated satisfactory breastfeeding knowledge.<sup>10</sup> The difference might from methodological differences of the study. In this study, the objective is to study about colostrums and in later study the objective is to study breast feeding in general. With the respects to the mothers' knowledge about colostrum the study shows that about 172(57.53%) of the post natal mothers knew as colostrums is first milk given to the baby. This agrees with study done at Babylon maternal and child hospital and Alkather health centre which is (52.33%).<sup>8</sup> In this study, about 286(95.65%) knew that colostrums protects baby's health and high in protein. In contrarily, 92.67% of mothers didn't knew that colostrum content antibodies and high protein in another study.<sup>8</sup> The difference may from sociodemographic differences between study participants.

The result also shows about 177(59.2%) of the mothers knew as colostrum is thick, sticky and yellowish in color. But in another study, about (86.66%) of the study participants didn't knew that colostrum is thick, sticky and yellowish in color.<sup>8</sup> The difference might from educational differences between study populations. In this study, majority have above college education, and in later study majority have primary education.

Regarding attitude of mothers towards colostrums, 298(78.84%) had favorable attitude towards colostrum breast milk. And (44.71%) perceived colostrum breast milk as dirty and looks like pus and (13.23%), (17.20%), (19.05%) believed that colostrum causes intestinal obstruction, diarrhea and it is difficult to digest which needs to be discarded respectively. In contrarily to this study, (92.67%) of mother's said that cause obstruction of intestine, (67%) of mothers told that colostrum causes diarrhea and (85.33%) of them said colostrum causes constipation.<sup>8</sup> The difference might from educational differences of study populations.

With regard to practice of colostrum breast milk, in this study (77.51%) have good practices of colostrum feeding. About (79.10%) feed colostrum for their babies. In line with this study, study done at rural Papua New Guinea shows (98%) of the mothers (n=138) were breastfeeding their babies but only two-thirds (68%) had given colostrums to their babies (n=96).<sup>3</sup> In contrarily, in another study, giving prelacteal feed is almost universal with (88%) of mothers feeding their children with prelacteal feeds.<sup>4</sup> The difference might from cultural and socio demographic differences. In this study, (74.34%) feed colostrum immediately after birth with in 1hour. In another study, (90%) of the mothers reported feeding their newborn

colostrums and 109(85.83%) initiated colostrums feeding within 24 hours.<sup>11</sup> The difference could be explained by sociodemographic and cultural differences among study population.

## Conclusion and recommendations

About (76.72%) of mothers had good knowledge about colostrum breast milk. And (78.84%) had favorable attitude towards colostrum and (77.71%) of respondents had good practice of colostrum. But about (74.68%) mothers were still feed their baby with pre lacteal foods like butter than colostrum. As a result, health education programs should be carried out for all pregnant mothers, reproductive age groups and community members regarding the importance of colostrum breast milk feeding at all levels and the avoidance of pre lacteal feeding.

## Acknowledgements

None.

## Conflict of interest

The author declares no conflict of interest.

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