

“Assess The Knowledge And Attitude Regarding Colostrum Feeding Among Antenatal Mothers In The I.G.M Hospital, Agartala, Tripura, With A View To Develop A Leaflet On Importance Of Colostrum”-A Descriptive Study.

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Abstract

Numerous cultural customs and beliefs that are common during the postpartum period suggest that some mothers could choose not to feed their new-born right away. They offer sugar water, plain water, honey, etc. in place of "COLOSTRUM," a method that suppresses lactating and depletes the newborn's immunity. For the baby, colostrum feeding works best. It is crucial in lowering new-born mortality and morbidity rates. Antenatal mothers should be knowledgeable about colostrum feeding and have a favourable outlook about it. Even Nevertheless, it is customary in hospitals to start right away after delivery. Thus, it is believed that breastfeeding should begin when colostrum is still being generated in order to reduce new-born mortality. Therefore, the purpose of the study to Identify the knowledge of antenatal mother's regarding colostrum and willingness to practice of colostrum feeding among the antenatal mothers.

Keywords: Assess, Knowledge, Attitude, Antenatal mothers, Colostrum.

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I. Introduction:

Colostrum which has also been called the “first milk”, “liquid gold” or “immune milk” is a clear, sticky, thick liquid that is produced by mother’s mammary glands after the first day of her baby’s birth and secreted during the first 3-4 days postpartum. On an average, women will make about 50 ml of colostrum in the first 48 to 72 hours after birth. Colostrum is rich in proteins, carbohydrates, vitamins and minerals, the benefits of colostrum are enormous. It contains over sixty components, thirty of which are exclusive to human milk. Colostrum is a concentrated (high in nutrients) liquid that is made especially for baby’s needs.¹ It contains more antibodies and cells with higher amount of proteins and fat-soluble vitamin (A, D, E, K). It is sufficient and protective for the baby and should not be discarded.¹

Colostrum also contains many antibodies and growth factors. The growth factors promote development of baby’s digestive system and the antibodies promote the immune system. Colostrum is high in leukocytes (protective white blood cells) that can help to protect baby against several bacterial and viral infections. It contains immunoglobulin A, which is an antibody that protects baby against infections of the throat, lungs and intestines. The antibodies in colostrum protect baby against respiratory infections such as pneumonia, flu and bronchitis, as well as stomach and ear infections. Gradually, baby will start producing his own antibodies².

According to ‘WHO’, colostrum is the yellowish, sticky breast milk produced at the end of pregnancy, is recommended by WHO as the perfect food for the new-born, and feeding should be initiated within the first hour after birth. Feeding colostrum in the first hour is the first step. It is imperative that every child receives colostrum to get ahead in the race against malnutrition.³

Colostrum has antioxidant and anti-inflammatory properties. The yellow colour of colostrum is due to B-carotene. Colostrum causes baby to bring up excretions. Colostrum calms the nausea that babies seem to have in those first few days.⁴

According to Sovereign laboratories report (2017) colostrum has been shown to helps to prevent and control infections. It inhibits the attachment of bacteria to the body’s epithelial (surface) tissue, contains lactoferrin that serves as a powerful natural antimicrobial and antiviral, and provides passive immunity to various high-risk organisms. In addition, colostrum includes immunoglobulin A (IgA) and immunoglobulin G (IgG) that neutralize viruses and bind bacteria. Colostrum provides passive immunity through the intestinal absorption of immunoglobulins. Passive immunity helps to prevent bacterial and viral infection, and it helps safeguard the gut’s

surface. Moreover, colostrum offers a viable treatment against Leaky Gut Syndrome (LGS), a leading cause of chronic disease. LGS refers to a health disorder in which the intestinal lining becomes more permeable, resulting in loss of tight junctions between cells of tight gut wall that allow bacteria, viruses, and other harmful particles to enter the bloodstream. It damages the protective coating of the IgA family and can increase susceptibility to bacteria and viruses that cause disease. Colostrum helps to reduce gut inflammation, safeguarding the gut against irritation from toxins and potential infection. It also promotes the recolonization of friendly flora, organisms that help people digest food and enhance nutrient absorption in the bowel.⁵

Objectives:

1. To assess the knowledge of antenatal mothers regarding colostrum feeding.
2. To assess the attitude of antenatal mothers regarding colostrum feeding.
3. To find out the co-relation between knowledge and attitude of antenatal mothers regarding colostrum feeding.

II. Research Methodology:

Research Approach:

A survey approach was used in this research study.

Research Design:

In this current study “Descriptive design” was selected.

Research Setting:

The final study conducted to the MCH clinic at I.G.M Hospital at Agartala, Tripura West.

Population:

Antenatal mothers attending MCH clinic at I.G.M Hospital at Agartala, Tripura West.

Sample size:

Sample size for the current investigation was determined, using Cochran’s formula and was found 100 antenatal mothers attending MCH clinics in IGM Hospital Agartala, Tripura.

Inclusion criteria:

The study includes the Primi and multi Para mothers. – who are available at the time of data collection.

Sampling technique:

A non-probability purposive sampling strategy was used in this investigation.

Development and description of tool:

After the extensive review of literature of the topic, the tool(s) are organized under three section:

Section I: Demographic data.

Section II: Structured Questionnaire.

Section III: 5 point Likert attitude scale.

III. Result Of The Study:

Section I: Analysis of demographic variables of antenatal mothers regarding colostrum feeding.

Table 1: Frequency and percentage distribution of antenatal mothers according to demographic data.

Sl No.	Demographic variables	Category	Frequency (f)	Percentage (%)
1.	Age (in years)	18-22	48	48%
		23-28	36	36%
		29-34	13	13%
		More than 34	3	3%
2	Religion	Hindu	80	80%
		Muslim	20	20%
		Christian	0	0%
		Other	0	0%
3.	Educational status	Can able to read and write	8	8%
		Primary school	10	10%
		High school	53	53%
		Higher secondary school	22	22%
		Graduate	3	3%
		Post-graduate and above	4	4%

4.	Occupation	Home maker	91	91%
		Daily labour	6	6%
		Self-employment	0	0%
		Private employee	0	0%
		Govt. employee	3	3%
5.	Type of family	Nuclear family	42	42%
		Joint family	58	58%
		Extended family	0	0%
6.	Family income (in rupees)	Less than or equal to 5,000	27	27%
		5001-9,999	23	23%
		10,000-14,999	31	31%
		15,000-19,000	9	9%
		More than or equal to 20,000	10	10%
7.	Period of gestation during study	1 st trimester	29	29%
		2 nd trimester	34	34%
		3 rd trimester	37	37%
8.i)	Parity	Primi para	64	64%
		Multi para	36	36%
ii)	If multipara, did you feed the colostrum to your previous child?	Yes	34	34%
		No	2	2%

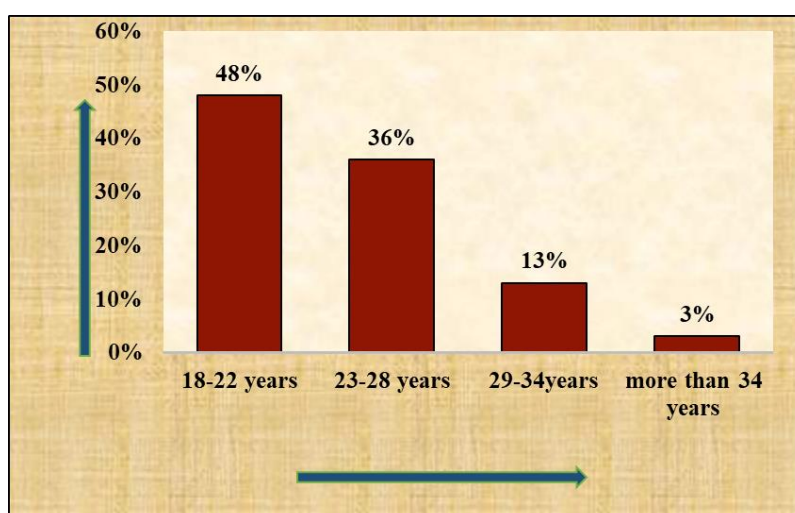


Fig 1: Bar graph shows frequency percentage distribution of antenatal mothers according to age in years.

The bar graph showed that 48% of antenatal mothers belongs to 18-22 years, 36% belongs to 23-28 years, 13% belongs to 29-34 years and only 3% of antenatal mothers belongs to more than 34 years.

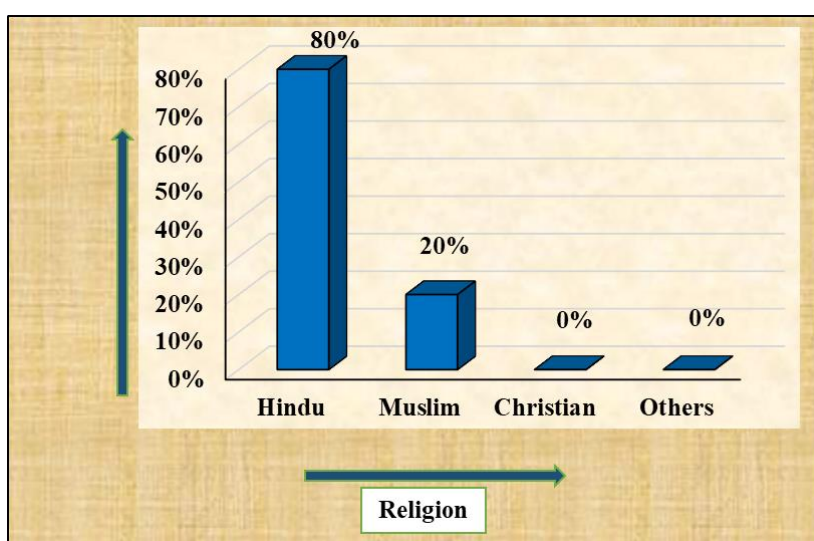


Fig 2: Bar graph shows frequency percentage distribution of antenatal mothers according to religion.

The bar graph showed that 80% of antenatal mothers belongs to Hindu religion and 20% antenatal mothers belongs to Muslim religion.

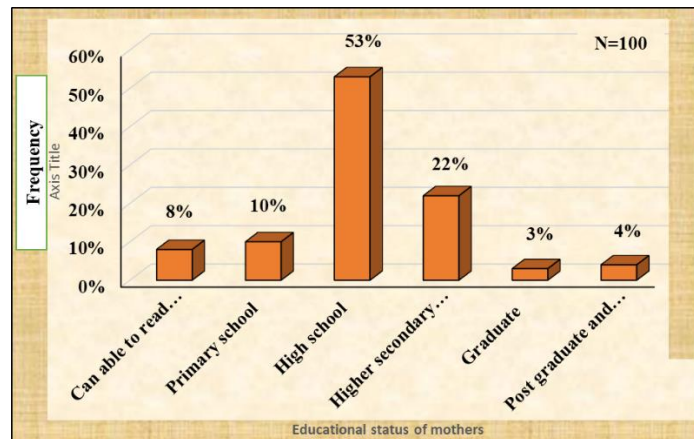


Fig 3: Bar graph shows frequency percentage distribution of antenatal mothers according to educational status.

The bar graph highlights that 53% antenatal mothers were high school passed, 22% were higher secondary school passed, 10% were primary school passed, 8% were can able to read and write, 4% were post graduate and above and 3% were graduate.

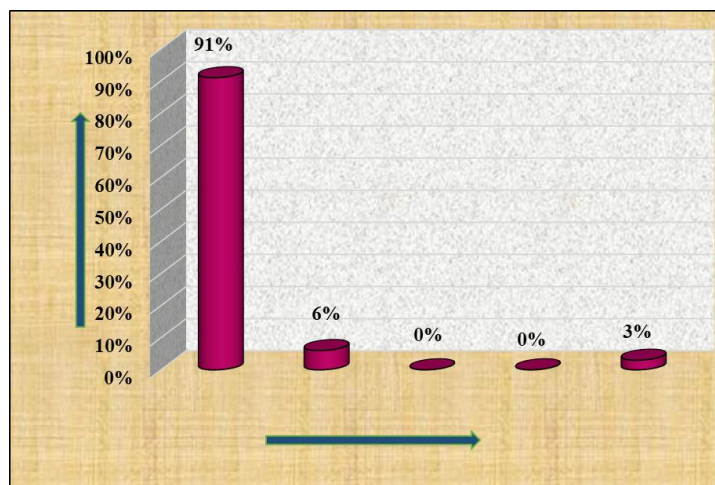


Fig 4: Cylindrical diagram shows frequency percentage distribution of antenatal mothers according to occupation.

Cylindrical diagram highlights that 91% antenatal mothers were home maker, 6% were daily labour and 3% were Govt. employee.

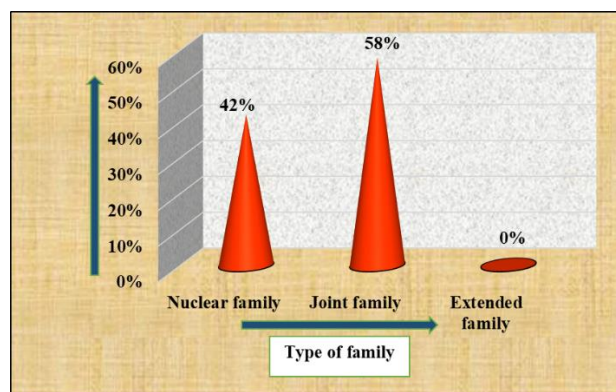


Fig 5: Cone diagram shows frequency percentage distribution of antenatal mothers according to type of family.

The cone diagram showed that 58% antenatal mothers were from joint family and 42% were from nuclear family.

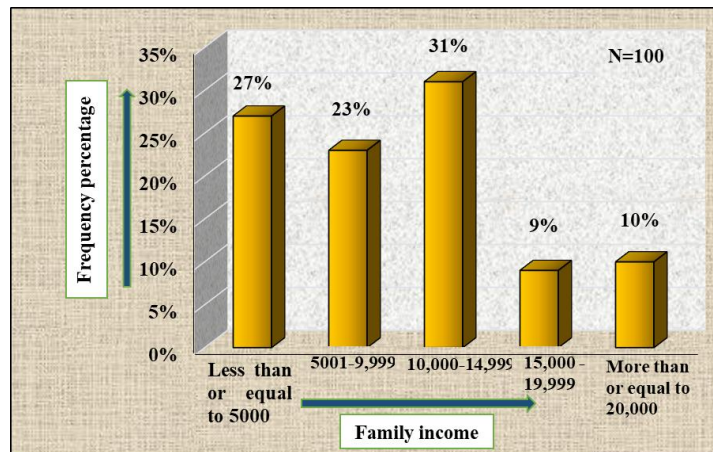


Fig 6: Bar graph shows frequency percentage distribution of antenatal mothers according to family income in rupees.

The bar graph showed that out of 100 antenatal mothers 31% had family income of 10,000-14,999 rupees, 27% had less than or equal to 5000 rupees, 23% had 5001-9,999 rupees, 10% had more than or equal to 20,000 rupees and 9% had 15,000-19,999 rupees.

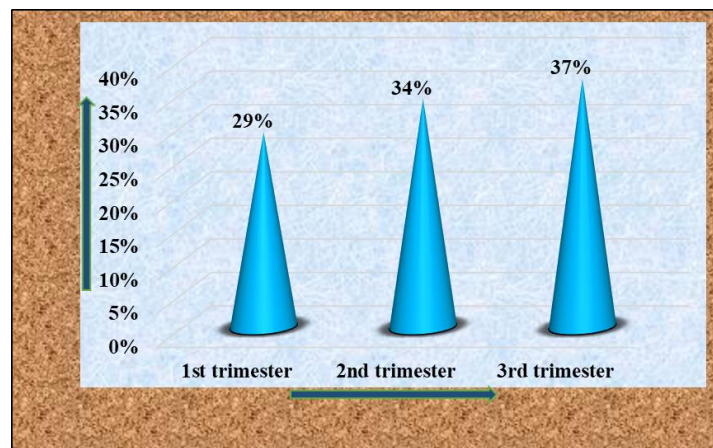


Fig 7: Cone diagram shows frequency percentage distribution of antenatal mothers according to period of gestation.

The cone diagram showed that 37% of antenatal mothers was in 3rd trimester, 34% in 2nd trimester and 29% in 1st trimester.

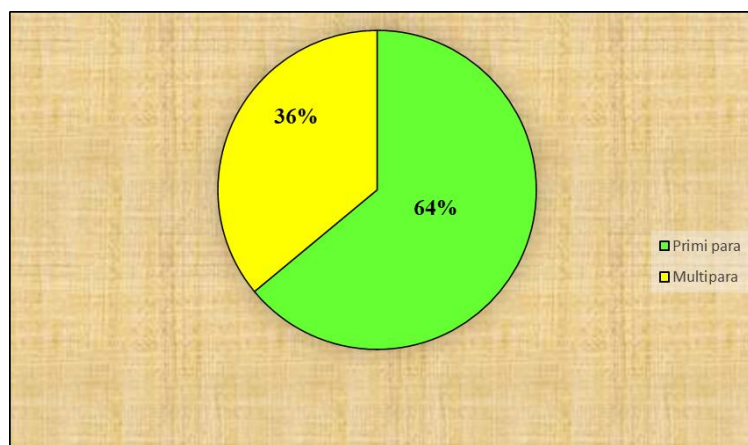


Fig 8: Pie graph shows frequency percentage distribution of antenatal mothers according to Parity.

The pie graph highlights that out of 100 antenatal mothers 64% were primi para and 36% were multipara mothers.

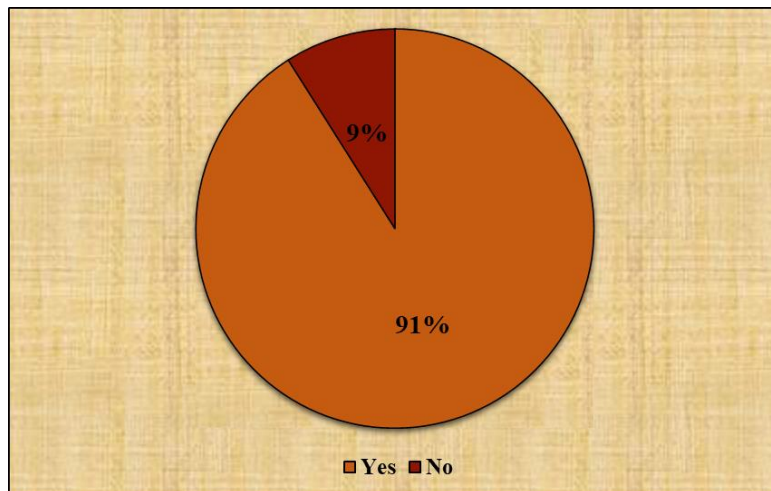


Fig 9: Pie graph shows frequency percentage distribution of antenatal mothers according to previous information regarding colostrum feeding to baby.

The pie graph showed that out of 100 antenatal mothers 91% had previous information regarding colostrum feeding and 9% had no information regarding colostrum feeding.

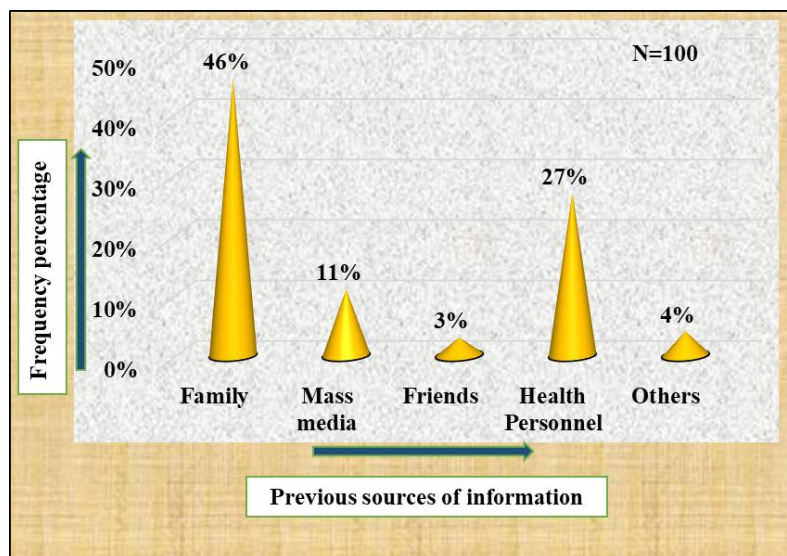


Fig 10: Cone diagram shows frequency percentage distribution of antenatal mothers according to previous sources of information regarding colostrum feeding to baby.

The cone diagram highlights that out of 100 antenatal mothers 46% got information regarding colostrum feeding from family, 27% got information from health personnel, 11% got from mass media, 4% got from others and 3% got information from friends.

Section-2: Finding related to knowledge of the antenatal mothers regarding colostrum feeding.

Table 2: Frequency & percentage distribution of knowledge score regarding colostrum feeding among antenatal mothers.

Knowledge score	Frequency (f)	Percentage (%)
1-3	0	0%
4-6	5	5%
7-9	10	10%
10-12	22	22%
13-15	40	40%
16-18	21	21%
19-21	2	2%
Total	100	100

Data reveals that out of 100 antenatal mothers the knowledge score range start from 4-21, whereas maximum frequency 40 (40%) lies in the knowledge score of 13-15 and only 2 (2%) lie on the knowledge score of 19-21.

Table 3: Frequency & percentage distribution on level of knowledge regarding colostrum feeding among antenatal mothers.

N=100

Level of knowledge	Score	Frequency (f)	Percentage (%)
Adequate	15-21	37	37%
Moderately adequate	8-14	55	55%
Inadequate	1-7	8	8%
Total	21	100	100

The data in table 4 shows that 55 (55%) of the antenatal mothers had **moderately adequate knowledge**, 37 (37%) had **adequate knowledge** and 8 (8%) antenatal mothers had **inadequate knowledge**.

Table 4: Area wise mean, mean percentage and standard deviation of knowledge score regarding colostrum feeding among antenatal mothers.

N=100

Sl No.	Aspects of knowledge	No. of items	Max. Score	Mean	Mean %	SD
1.	General information on colostrum feeding	12	12	7.48	63.33	2.24
2.	Importance of colostrum feeding	5	5	2.99	59.8	0.14
3.	Practices regarding colostrum feeding	4	4	2.5	62.5	0.3
	Overall knowledge	21	21	12.97	61.76	2.68

Minimum knowledge score = 1
Maximum knowledge score = 21

The result showed that the maximum knowledge score regarding colostrum feeding was **21**. The overall mean knowledge score regarding colostrum feeding was **12.97**, overall mean percentage was **61.76** and overall SD was **2.68**.

The highest mean knowledge score **7.48 (63.33%)** found in the area of general information on colostrum feeding, mean knowledge **2.99 (59.8%)** was found in importance of colostrum feeding and **2.5 (62.5%)** mean knowledge score noticed in the area of practices regarding colostrum feeding. This indicates antenatal mothers have maximum knowledge in the area of general information regarding colostrum feeding.

Section-3: Finding related to attitude of the antenatal mothers regarding colostrum feeding.

Table 5: Frequency & percentage distribution on level of attitude regarding colostrum feeding among antenatal mothers

N=100

Level of attitude	Score	Frequency (f)	Percentage (%)
Favourable	26-50	94	94%
Unfavourable	1-25	6	6%
Total	50	100	100

Minimum attitude score = 1
Maximum attitude score = 50

Data reveals that **94 (94%)** of antenatal mothers had favourable attitude and **6 (6%)** of antenatal mothers had unfavourable attitude regarding colostrum feeding.

Table 6: Mean, mean percentage and standard deviation of attitude score regarding colostrum feeding among antenatal mothers.

N=100

Sl No.	Aspects of attitude	No. of Statements	Max. Score	Mean	Mean %	SD
1.	Overall attitude	10	50	36.45	72.9	6.91

Data represents the 5 point Likert scale which consist of 10 statements. Each statement carries minimum score 1 and maximum score 5. Total attitude score was 50.

The findings of the Likert attitude scale showed that the mean score was **36.45**, mean score percentage was **72.9** and standard deviation (SD) was **6.91**. The investigator found that maximum mother has favourable attitude regarding colostrum feeding.

Section-4: Finding related to correlation between knowledge and attitude of antenatal mothers regarding colostrum feeding.

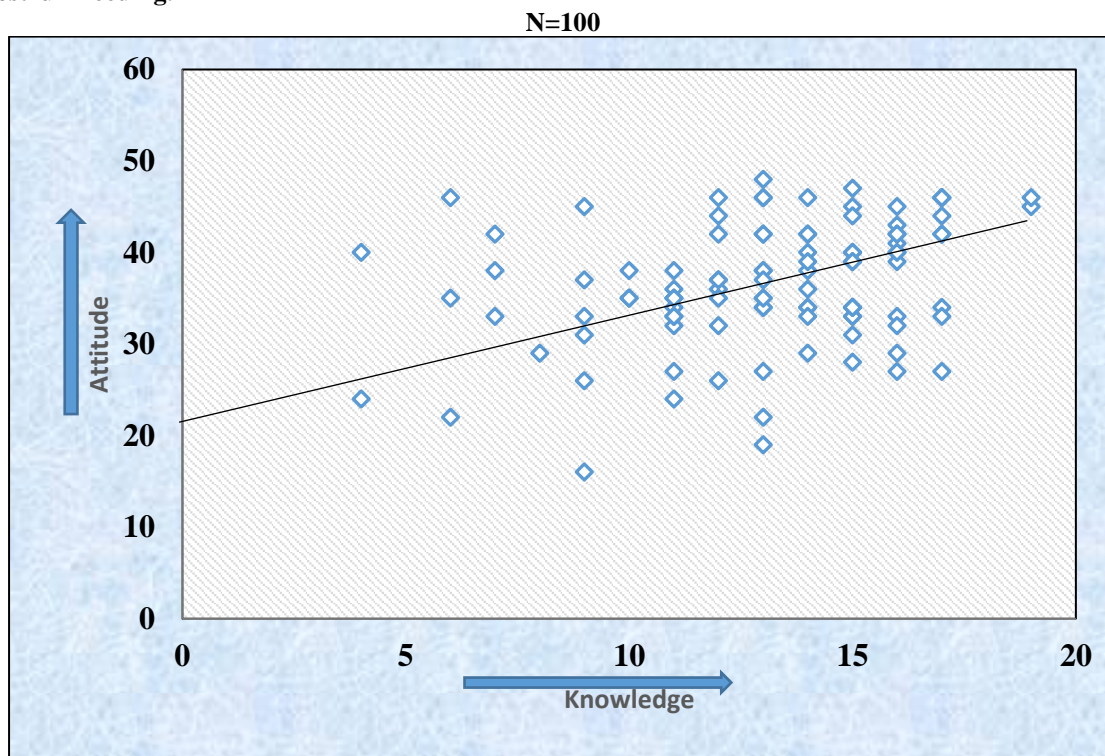


Fig 11: Scattered diagram shows positive correlation between knowledge & attitude score of antenatal mothers.

The scattered diagram showed that there was a positive correlation between the knowledge score and attitude score of antenatal mothers regarding colostrum feeding. All the points were highly scattered over the graph and show a rising tendency from the lower left hand corner to the upper right hand corner, which indicated that there was a low but positive correlation. So, there was an increase of knowledge score as well as attitude score.

IV. Discussion:

In this study, revealed that- out of 100 antenatal mothers, the highest knowledge score found in between 13-15 (40%), only 2% of antenatal mothers were obtain 19-21. 55 (55%) of antenatal mothers had moderately adequate knowledge, 37 (37%) had adequate knowledge and 8 (8%) antenatal mothers had inadequate knowledge. The area wise mean knowledge score was maximum (7.48) in general information on colostrum feeding and minimum (2.5) in practices regarding colostrum feeding. The overall mean knowledge score regarding colostrum feeding was 12.97, overall mean percentage was 61.76 and overall SD was 2.68.

Present study revealed that- 94 (94%) of antenatal mothers had favourable attitude and 6 (6%) of antenatal mothers had unfavourable attitude regarding colostrum feeding. The attitude mean score was 36.45, mean percentage was 72.9 and SD was 6.91.

Present study revealed that the correlation between knowledge and attitude was $r = 0.3$. The correlation between knowledge score and attitude score was equal ($r = 0.3$). This indicates there was a positive correlation between knowledge and attitude of antenatal mothers regarding colostrum feeding.

V. Conclusion:

The present study assessed the knowledge and attitude of antenatal mothers regarding colostrum feeding. From the findings of the present study it can be concluded that the antenatal mothers had moderately adequate knowledge regarding colostrum feeding and most of them had favourable attitude towards colostrum feeding. The findings of the study revealed that there was a positive low correlation, definite but small relationship between the knowledge score and attitude of antenatal mothers regarding colostrum feeding, which indicated that if the score of knowledge increases, the score of attitude increase.

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