

# Colostrum Feeding Practice and its Associated Factors among Postnatal Mothers Admitted in AMCH, Dibrugarh, Assam

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**Abstract:** 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 research approach adopted for the study was Quantitative Research Approach. Descriptive Research Design was used in this study to accomplish the objectives. The study was conducted among 390 postnatal mothers admitted in Assam Medical College and Hospital (AMCH) fulfilling the criteria of sample selection for the study. Majority, 42.6% belongs to the age group  $\leq 25$  year, 97.9% were married, 41.3% had primary education, 78.5% were home maker, 82.3% Hinduism, 55.4% were primipara, majority (37.4%) educational level of husband was primary education and 55.6% occupation of husbands was daily labourer. 42.3% had good, 44.1% moderate and 13.6% had poor level of practice. Majority (67.4% mothers) attended antenatal care visit, 63.1% hadn't received counselling about colostrum feeding during ANC, 97.4% had delivered at hospital, 61.3% undergone spontaneous vaginal delivery & 78.2% started feeding within one hour. Majority (78.25) were term babies, 51.3 % babies were females, 74.4% had birth weight 2500gms-4000gms, 96.7% were singleton babies, 29.5% were the second baby. There is a positive correlation between the practice towards Colostrum feeding and Associated factors among postnatal mothers admitted in maternity ward i.e.,  $r=0.132$  &  $r=0.099$  respectively.

**Keywords:** Colostrum Feeding, Practice, Associated Factors & Postnatal Mothers

## 1. Introduction

Breastfeeding has been universal & necessary for the survival of the new-born. 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. Attention to feeding practices is important because inadequate knowledge and inappropriate neonatal feeding are primary factors of neonatal morbidity.<sup>1</sup> Colostrum is highly concentrated and rich in antibodies and nutrients, providing crucial immune support and nourishment for a new-born. The World Health Organization (WHO) recommends colostrum feeding within the first hour of birth. Colostrum is high in protein and low in fat and sugar. It's filled with white blood cells that produce antibodies. These antibodies strengthen your baby's immune system, protecting him or her from infection. Colostrum is highly concentrated and nutrient-dense even in tiny doses, so your baby's tummy doesn't need a lot to reap its benefits. There is limited literature on the title and most of the results are focused on exclusive breastfeeding practices. Institutional based cross-sectional study was conducted by Kebede N<sup>1</sup>, Getnet A.<sup>2</sup>, et. all among postnatal mothers in Antsokia Gemza woreda health centers in North Shao zone, Ethiopia from January to March 2022 to assess the Colostrum feeding practice and its associated factors among postnatal mothers who attend at health facility, Ethiopia. Systematic sampling technique was used to select 391 participants. Data were collected using a pre-tested interviewer-administered questionnaire. Data entry performed by using Epi data version 3.1 and was exported to SPSS version 25 for analysis. Descriptive statistics was

done. Multivariable Logistic regression was used to predict the role of independent variables on colostrum feeding practice. The overall proportion of mothers feed colostrum to their neonate within an hour to five days which was low (64 %) when it is compared to WHO recommendation. WHO recommends that every new-born baby has to feed colostrum breast milk within 1 h after birth. Based on the finding from current study, it is better to provide culturally tailored health education for pregnant mothers by health extension workers focusing on the essentials of colostrum feeding for the betterment of their babies.<sup>1</sup>

Thus, this study aimed to assess colostrum feeding Practice and its associated factors among postnatal mothers admitted in AMCH, Dibrugarh”.

## Objectives of the Study

- 1) To assess the Practice towards Colostrum feeding among postnatal mothers admitted in maternity ward, AMCH, Dibrugarh
- 2) To assess the associated factors towards Colostrum feeding among postnatal mothers admitted in maternity ward, AMCH, Dibrugarh
- 3) To find out the correlation between Practice and Associated factors towards Colostrum feeding among postnatal mothers admitted in maternity ward, AMCH, Dibrugarh

## 2. Research Methodology

Research methodology is a science of studying how research is done scientifically. It is a way to systematically solve the

research problem. It includes the various steps that are generally adopted by an investigator. It not only includes the research methods but also considers the logic behind the methods used in the context of the research study and explains why a particular methods or technique is used. So that research results are capable of being evaluated.

### Research Approach

Research approach is the basic procedure for conducting the research inquiry. It is an umbrella that covers the basic procedure for conducting research. Treece & Treece, (1995) define research approach as the basic procedure for conducting the research. The selection of the approach depends on the purpose of the study.<sup>2</sup>

In the present study, a Quantitative Research approach was used as the investigator aimed at assess The Knowledge, Practice and Associated Factors towards Colostrum Feeding among Mothers Admitted in AMCH, Dibrugarh

### Research Design

Research design refers to the investigator's overall plan for answering the research questions or testing the research hypothesis. It can be defined as a blue print to conduct a research study.

'Research design is an overall plan for obtaining answers to the research questions or for testing the research hypothesis' Nieswiadomi (2004).<sup>3</sup>

As the study aims to assess the colostrum feeding practice and its associated factors among mothers admitted in AMCH, Dibrugarh, a descriptive research design was selected for this study.

### Setting of the Study

The Setting refers to the area where the study is conducted. It is the physical location and condition in which the data collection takes place in the study.

The study was conducted in AMCH, Dibrugarh, Assam.

### Variables

Variables are concepts at various levels of abstraction that are measured, manipulated or controlled in the study. It is also an attribute of a person or object that varies when taken on different values. The categories of variables discussed in the present study are:

**Research Variables:** Practice and Associated factors

**Demographic variables:** Age, Marital Status, Education of Mother, Occupation of Mother, Religion, Parity, Education of Husband, Occupation of Husband.

### Population of the Study

The population represents the entire group or all the elements like individual or objects that meet certain criteria for inclusion in the study.

'Population is the entire aggregation of the cases that meet a design set of criteria. It is the entire group to whom the

researcher exerts to be able to generalize the study results.' Abdellah & Levine (1996).<sup>4</sup>

In the present study the population consists of 390 women admitted in Maternity Ward, AMCH, Dibrugarh, Assam.

### Sample

A sample refers to a subset population selected to participate in the research study.<sup>5</sup>

In present study, the sample was drawn from Assam Medical College and Hospital, Dibrugarh, Assam.

The sample size was 390 women who have fulfilled the criteria of sample selection for the study.

### Sample Technique

Sampling is a process of selection representative units from an entire population of a study.<sup>6</sup>

In the present study, the sampling technique used was Non Probability Convenience Sampling Technique.

### Criteria for Sample Selection

#### Inclusion criteria

- All mothers admitted in the postnatal ward will be included in the study

#### Exclusion criteria

- Mothers not able to breast feed due to any reason will be excluded from the study.
- Mothers who are unavailable at the time of data collection and unwilling to participate in the research study.

### Development And Description Of Tool

This is the most important and crucial step of the research process. It is essential to devise methods and tools to measure the research variables as objectively and accurately as possible. The plan and design of the tools for data collection depends on several factors, such as type of research design, variables, subjects, researcher's expertise, available resources, and time for study. Based on the research problem and the objectives of the study, the technique adopted by the investigator was self-administered questionnaire.

#### Description of tools:

The tools have been prepared in four sections:

- **Tool I:** Socio demographic variables
- **Tool II:** Structured self -administered questionnaire on practice of colostrum feeding
- **Tool III:** Structured self -administered questionnaire on factors associated with colostrum feeding.

### Data Collection Procedure

Burns & Grove (2007), "Data collection is a precise systematic gathering of information relevant to the research purpose or the specific objectives, questions or hypothesis of the study."<sup>6</sup>

Protocol was maintained to obtain permission to conduct study in Assam Medical College and Hospital, Dibrugarh,

Assam. The data was collected from 390 women to assess the practice and its associated factors towards colostrum feeding among mothers admitted in AMCH, Dibrugarh. The subject was selected using Non-Probability Convenience Sampling Technique keeping in mind the study criteria. Subject was asked to participate in the study after self-introduction by the Investigator. The subjects were informed about the purpose of the study and their consent was attained. The questionnaires were distributed in phases.

### 3. Result

#### 1) Distribution of Socio Demographic Variables

Out of 390 postnatal mothers' majority, 42.6% of the mothers belongs to the age group  $\leq 25$  year, 97.9% were married, 41.3% had primary education, 78.5% were home maker, 82.3% belongs to Hinduism, 55.4% were primipara, the highest percentage of educational level of husband was 37.4% which is primary education and the highest percentage of occupation of husbands was 55.6%.

**Table I:** Frequency and Percentage Distribution regarding socio demographic variables of the postnatal mothers, N=390

Variables	Category	Frequency	Percentage (%)
Age	$\leq 25$	166	42.6
	26-30	163	41.8
	31-35	55	14.1
	$\geq 36$	6	1.5
Marital Status of Mothers	Single	8	2.1
	Married	382	97.9
Education level of Mothers	No formal education	44	11.3
	Primary Education	161	41.3
	HSLC	140	35.9
	Diploma, Graduate and above	45	11.5
Occupation of Mothers	Government Employee	10	2.6
	Private Employee	28	7.2
	Home maker	306	78.5
	Daily Labourer	41	10.5
	Other Specify	5	1.3
Religion of Mothers	Hindu	321	82.3
	Christian	31	7.9
	Islam	38	9.7
Parity	Nullipara	4	1.0
	Primipara	216	55.4
	Multipara	167	42.8
	Grand-Multipara	3	0.8
Occupation of Husbands	Government employee	23	5.9
	Private employee	106	27.2
	Daily labourer	217	55.6
	Home maker	15	3.8
	Other specify	29	7.4
Education level of Husbands	No formal education	26	6.7
	Primary education	146	37.4
	HSLC	143	36.7
	Diploma, Graduates and above	75	19.2

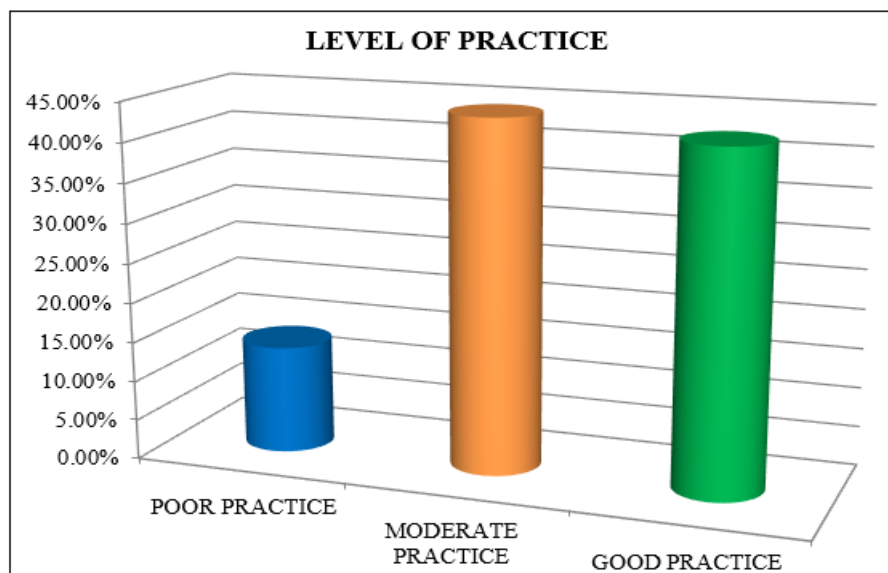
#### 2) Practice of Colostrum Feeding among Postnatal Mothers

In this study, majority 92.6 % of the study participants given colostrum feeding, regarding the time of colostrum feeding in this study 78.2% started feeding within one hour, 82.6% had not given pre lacteal feed, 66.9% had burping after feed, 83.3% had given colostrum feeding if new born was sick and 54.1% had given colostrum feeding when mother had illness during pre or postnatal period.

**Table II:** Frequency and Percentage Distribution regarding Colostrum feeding Practice among postnatal mothers, N=390

Variables	Category	Frequency	Percentage
Colostrum Feeding given	Yes	361	92.6
	No	29	7.4
Colostrum feeding within one hour	Yes	305	78.2
	No	85	21.8
Pre lacteal feed given	Yes	68	17.4
	No	322	82.6
Burping after Feed	Yes	261	66.9
	No	129	33.1
Colostrum feed given if new-born was sick	Yes	325	83.3
	No	65	16.7
Colostrum feeding when mother had illness during pre or postnatal period	Yes	211	54.1
	No	179	45.9

As we can conclude that 42.3% had good level of practice, 44.1% had moderate level of practice and 13.6% had poor level of practice.



**Figure 1:** Level of Practice regarding colostrum feeding among postnatal mothers

### 3) Distribution of Associated Factors Towards Colostrum Feeding

a) **Health Utilisation Factors:** In this study, majority, 67.4% mothers were coming for antenatal care visit,

63.1% had not received counselling about colostrum feeding during ANC, 97.4% had delivered at hospital & 61.3 % undergone spontaneous vaginal delivery & 78.2% started feeding within one hour.

**Table III:** frequency and percentage distribution of Health Utilization factors towards colostrum feedings, N=390

Variables	Category	Frequency	Percentage (%)
Antenatal Care Visit	1-2 Visit	103	26.4
	3-5 Visit	263	67.4
	6-8 Visit	18	4.6
	More than 8 Visits	6	1.5
Counselling About Colostrum feeding during anc	Yes	144	36.9
	No	246	63.1
Place of Delivery	Hospital Delivery	380	97.4
	Home Delivery	9	2.3
	Work place Delivery	1	0.3
Mode of Delivery	Spontaneous vaginal delivery	239	61.3
	CS	151	38.7
Breastfeeding Initiation Time	Within Half hours	72	5.1
	Within 1 hour	253	78.2
	Within 24 hours	65	16.6

### b) Infant Related Factors

In this study, Majority 78.2 % babies were term babies, 51.3% babies were male, 74.4% baby's birth weight between 2500 gms to 4000 gms, 96.7% babies were singleton and 61.8% baby's birth order were first baby.

**Table IV:** Frequency and percentage distribution of Infant Related factors towards colostrum feedings, N=390

Variables	Category	Frequency	Percentage
Term of Child	Preterm	63	16.2
	Term	305	78.2
	Post term	22	5.6
Sex	Male	200	51.3
	Female	189	48.5
Birth Weight	Less than 2500gms	99	25.4
	2500gms-4000gms	290	74.4
	More than 4000 gms	1	0.3
Number of Babies	Singleton	377	96.7
	Twins	13	3.3
Birth Order	First Baby	241	61.8
	Second baby	115	29.5
	Third and above	34	8.7

### 4) Correlation Between Practice and Associated Factors Towards Colostrum Feeding among Postnatal Mothers Admitted in Maternity Ward

a) **Correlation between Practice and Associated Factors (Health utilization factors):** There is a positive correlation between the practice towards Colostrum feeding and associated factors (Health Services) among postnatal mothers admitted in maternity ward, AMCH, Dibrugarh i.e.,  $r = 0.132$ .

b) **Correlation between Practice and Associated Factors (Infant Related factors):** There is a less positive correlation between the practice towards Colostrum feeding and associated factors (Infant Related factors) among Mothers admitted in maternity ward, AMCH, Dibrugarh i.e.,  $r = 0.099$ .

## 4. Major Findings of the Study

### Section I: Socio Demographic Variables

Out of 390 postnatal mothers majority, 42.6% of the mothers belongs to the age group  $\leq 25$  year, 97.9% were married,



41.3% had primary education, 78.5% were home maker, 82.3% belongs to Hinduism, 55.4% were primipara, the highest percentage of educational level of husband was 37.4% which is primary education and the highest percentage of occupation of husbands was 55.6%.

## Section II: Practice of Colostrum Feeding Among Postnatal Mothers

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## Section IV: Correlation Between Practice and Associated Factors Towards Colostrum Feeding Among Postnatal Mothers Admitted in Maternity Ward

There is a positive correlation between the practice towards Colostrum feeding and associated factors (Health Services) among postnatal mothers admitted in maternity ward, AMCH, Dibrugarh i.e.,  $r = 0.132$ .

There is a less positive correlation between the practice towards Colostrum feeding and associated factors (Infant Related factors) among Mothers admitted in maternity ward, AMCH, Dibrugarh i.e.,  $r = 0.099$ .

## 5. Implication and Conclusion

### The findings of the study have implications in the area of Nursing-

- a) **Education** through in-service education for nursing with advanced knowledge regarding colostrum feeding should be organized.
- b) **Practice:** the findings suggest that there is an increase need for awareness programme in the community and would also help the nurses working in maternity & paediatric unit.
- c) **Administration:** Administrator should communicate on the proper selection placement & effective utilization of the nurse in maternity & paediatric department for creative interest & ability in educating the mothers.
- d) **Research** provides nurses the ability to influence making policy & protocol formulation regarding interventional strategies to meet specific need for educating mothers.

Thus, this study is concluded that majority 44.1% had moderate level of practice and there is a positive correlation between the practice towards colostrum feeding and its associated factors among postnatal mothers admitted in AMCH, Dibrugarh.

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## Author Profile



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