

A Descriptive Study to Assess the Level of Knowledge Regarding Importance of Colostrum among Postnatal Mothers in Selected Hospital of Guwahati, Assam

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Abstract: “A newborn baby has only three demands. They are warmth in the arms of its mother, foods from her breast and security in the knowledge of her presence. Breastfeeding satisfies all three” - Grantly Dick. The medical dictionary define as ‘the first milk secreted at the time of parturition differing from the milk secreted later, by containing more lactalbumin and lactoprotein, and also being rich in antibodies that confer passive immunity to the newborn also called “foremilk”. It lasts for 2 - 4 days after the lactation is started colostrum is very important component of the breast milk and it has role to play in immune system of every mammal. Human colostrum is the first milk produced after birth and is particularly rich in immunoglobulin (Ig), antimicrobial peptides (lactoferin and lacto peroxidase) and other bioactive molecule, including growth factors which are important for nutrition, growth and development of newborn infants and also for passive immunity. This “early” milk has nutrient profile and immunological composition substantially different from ‘mature’ milk. It contains macronutrient like proteins, carbohydrates, oligosaccharides, fats and micronutrients like vitamins and minerals., also growth factors, antimicrobial compounds and immune regulating constituents either not present substantially in lower concentration.¹ Hence both human and bovin colostrum a complete diet with all the essential nutrients for the neonatal during the initial phase of its life, colostrum also provides essential immunological protection. In ruminants in particular, for which no exchange of immune factors occurs in utero, colostrum and, to a lesser extent, milk provide through a high immunoglobulin (Ig) content, without which the ruminant would not survive.¹ Globally, more than 4000 infants and young children die because they do not get colostrum within the 1st hour after birth, unfortunately colostrum feeding is not given to newborn for various societal myths and misconception. Mother and children constitute one fourth of the total national population. They are the most vulnerable group to ill health. One of the main causes of neonatal mortality and morbidity is inadequate breastfeeding following faulty breastfeeding technique, ignorance of mother regarding feeding practices. Many cultural belief and practices all prevalent in postpartum period that some mother may not feed the baby immediately after birth. They neglect colostrum instead of it they will give sugar water plain, honey etc.⁸ In Nepal, there are differences in cultures in the acceptability of colostrum and the prevalence of colostrum feeding. Although, breastfeeding is a common practice in Nepal, importance of colostrum feeding is still poorly understood. A study conducted on the awareness of the importance of colostrum feeding in pregnant women. The study shows that 74% of women had heard about colostrum, 69% knew that it is nutritious milk to be fed to the new born babies. Nine percent (9%) women were aware about its protective effect and 41 % had knowledge that it helps in proper growth of children and fight against infections. Thus, the student researcher felt one need to carry out a study an importance of colostrum among post-natal mother in the state of Assam.

Keywords: Knowledge, colostrums, postnatal mothers

1. Introduction

This chapter deals with the details of background of the study, need for study, statement of the problem, objectives of the study and conceptual framework of the study, operational definition of the terms used in the study, hypothesis, assumption and delimitation of the study and summary of the chapter.

The medical dictionary defines as ‘the first milk secreted at the time of parturition differing from the milk secreted later, by containing more lactalbumin and lactoprotein, and also being rich in antibodies that confer passive immunity to the newborn also called “foremilk”. It lasts for 2 - 4 days after the lactation is started colostrum is very important component of the breast milk and it has role to play in immune system of every mammal.

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peptides (lactoferin and lacto peroxidase) and other bioactive molecule, including growth factors which are important for nutrition, growth and development of newborn infants and also for passive immunity. This “early” milk has nutrient profile and immunological composition substantially different from ‘mature’ milk. It contains macronutrient like proteins, carbohydrates, oligosaccharides, fats and micronutrients like proteins, carbohydrates, oligosaccharides, fats and micronutrients like vitamins and minerals., also growth factors, antimicrobial compounds and immune regulating constituents either not present substantially in lower concentration.¹

Hence both human and bovin colostrum a complete diet with all the essential nutrients for the neonatal during the initial phase of its life, colostrum also provides essential immunological protection. In ruminants in particular, for which no exchange of immune factors occurs in utero, colostrum and, to a lesser extent, milk provide through a

high immunoglobulin (Ig) content, without which the ruminant would not survive.¹

Breastfed children perform better on intelligence tests, are less likely to be overweight or obese and less prone to diabetes later in life. Women who breastfeed also have a reduced risk of breast and ovarian cancers. Breast milk arrives in three stages.

Colostrum: When first deliver, milk hasn't yet arrived on the scene. The thick, yellowy (though sometimes clear) substance that producing is colostrum, the same stuff that leaked out of from breasts during pregnancy.²

Transitional milk: Next on the tasting menu is transitional milk, which breasts serve up between colostrum and mature milk, usually around the third or fourth day.

Mature milk: Arriving between day 10 and two weeks postpartum, mature milk is thin and white, though sometimes slightly bluish. While it looks like watery skim milk, it's packed with all the fat and other nutrients that growing babies need.²

Breastfeeding is one of the most effective ways to ensure child health and survival. Breast milk is the ideal food for infants. It is safe, clean and contains antibodies which help protect against many common childhood illnesses. Breast milk provides all the energy and nutrients that the infant needs for the first month of life, and it continues to provide up to half or more of a child's nutritional needs during the second half of the first year, and up to one third during the second year of life.³

Colostrum is considered the first immunity (or vaccination) baby receives. Breast milk is high in protective antibodies and white blood cells, which destroy bacteria. It also has probiotics and prebiotics, none of which are found in infant formula milk. Probiotics are the friendly bacteria and Probiotics are the food that feeds the good bacteria! Breast milk helps the good bacteria colonise in baby's gut, helping to prevent the bad bacteria from growing and causing illness.

Colostrum is often thought of as separate milk to "breast milk." In fact, colostrum is just the name of the first milk. Colostrum is the first breast milk that mammary glands make during pregnancy and in the first few days after the birth of baby. It is the first stage of breast milk production.⁴

Colostrum might look clear, but it's often a golden - yellow or orange color because it contains high levels of beta - carotene. Colostrum also tends to be thicker than transitional and mature breast milk. Colostrum may only come in small amounts, but it's packed full of concentrated nutrition. It's sometimes called "liquid gold" because it contains everything that baby needs in the first few days of life. Colostrum is also made up of health properties that protect newborn and help them fight off infection, illness, and disease. Other key facts about colostrum nutrition include.

Colostrum is higher in protein and lower in fat and sugar compared to transitional and mature breast milk, making easier. Colostrum is full of antibodies, white blood cells, and

other immune properties, it's like child's first immunization. The high levels of secretory immunoglobulin A (SIgA) found in colostrum protect baby's GI tract and helps to kill off viruses and bacteria. Colostrum is a natural Laxatives. It helps infant move their bowels and get rid of the meconium – the tar –like poop that collects in the bowels before baby is born. Since meconium contains bilirubin, the laxatives effect of colostrum helps to prevent newborn jaundice.⁵

"Colostrum is one of the natural sources of vital growth and healing factors"

2. Objectives

- 1) To assess the level of knowledge regarding importance of colostrum among postnatal mothers in selected hospital of Guwahati.
- 2) To find out the association of knowledge score regarding importance of colostrum among post natal mothers in the selected socio demographic variables in selected hospital of Guwahati.

3. Methodology

A non - experimental approach, descriptive research design was used in the present study to accomplish the objectives. Non - probability purposive sampling technique was used to obtain the adequate size of the sample.

The study population comprises the postnatal mothers of Marawari Hospital, Guwahati, Assam. One hundred and fifty- six (156) postnatal mothers were selected for the study.

Tools used:

TOOL - 1 - Demographic data

TOOL - 2 - Self structured questionnaire on knowledge regarding importance of colostrum

Description of Tool

The tool used for the study consisted of two sections –

Section A: Demographic data

It consists of demographic variables of postnatal mothers like age, religion, type of family, occupation, no. of parity, previous knowledge on importance of colostrum.

Section B:

It consists Self Structured knowledge questionnaire to assess the level of knowledge regarding importance of colostrum in selected hospital of Guwahati Assam. This section consists of 26 item (MCQ) regarding the importance of colostrum consist of five part

Part –I – Introduction on breastfeeding and importance of colostrum

Part –II – Types of breast feeding

Part –III - Advantage of breast feeding

Part –IV - Technique of breast feeding

4. Results/ Discussion

The findings of the study were discussed under the following headings:

Section I: Discussion on the basis of demographic variable of research study.

Section II: Discussion on the basis of the objectives of research study

Section I: Discussion on the basis of demographic variable of research study.

- The present study consisted of 156 postnatal mothers who are admitted at Marawari hospital Guwahati, Assam.
- The data finding shows that majority of postnatal mothers 78 (50%) were in age group of 28 - 32 years followed by 70 (44.9%) were in age group 23 - 27 years and (8 5.1%) of participants were in age group of 33 years and above.
- Majority of postnatal mothers 116 (74.4%) were in Hindu religion followed by 24 (15.4%) were Christian and 16 (10.2%) of participants belong to Islam.
- Majority of the postnatal mothers 90 (57.7%) were belong in nuclear family followed by 66 (42.3%) were in joint family.
- Majority of postnatal mothers 63 (40.4%) were in private employee, 62 (39.7%) were unemployed, 31 (19.9%) participants were self employed.
- Majority of postnatal mothers 85 (54.5%) were primi para and 71 (45.5%) of participants were multipara.
- Maximum of participant 93 (59.6%) were in HSSLC followed by 39 (25%) were in middle school and 24 (15.4%) of participants were graduate.
- Majority 86 (55.1%) participants got family income in between Rs.29, 973 - 49, 961, followed by 70 (44.9%) got income Rs 10, 002 - 29, 973.
- Majority 64 (41%) participants got information from mass media, 54 (34.6%) from health worker and 38 (24.4%) of participant got information from family.
- Similar study was done by **Dr Susheela kumar Ronad, Dr Chetan S patali, Suvarna S Pinnapati** conducted a study to assess the knowledge of primi gravida mother regarding importance colostrum at selected hospital Bagalkot, karnataka, India. In age 17 (56.67%) belongs to 20 - 25 years, 10 (33.33%) were 26 - 30 years. In Religion 18 (60%) belongs to Hindu, 9 (30%) belong to Christian, 3 (10%) belongs to Muslim. In education 18 (60%) were PUC, 6 (20%) were in secondary. In Occupation 21 (70%) belong to house wife, 5 (16.67%) private. In family income 18 (60%) were in Rs 5001 - 10000 / - income, 8 (26.6%) were in Rs 100001/ - income. Types of family 15 (50%) were in nuclear family, 9 (30%) were in joint family. source of information 19 (63.33%) from health personnel, 6 (20%) from husband.

Section II: Discussion on the basis of the objectives of research study

1) Distribution of level of knowledge regarding importance of colostrum among postnatal mothers.

- The result of this study shows majority of participants 93 (59.6%) had moderate knowledge and 39 (25%) of participant had inadequate knowledge, 24 (15.4%) had adequate knowledge regarding importance of colostrum with average mean score was 14.21 and standard deviation was 2.957.

- **Addisu Yeshambel Wassie** (2019) conducted a study on to assess the knowledge, attitude and associated factors towards colostrum feedings among antenatal care attendant mothers in Gununo Health center 226 (66.1%) were knowledgeable followed by fairly knowledgeable which was 77 (22.5%) and remaining 39 (11.4%) were poorly knowledgeable. From the total respondents majority of the mothers 180 (59.8%) believed that colostrum is important for the baby to prevent illness, followed by 101 (33.7%) were reported as it will have important for growth of the baby and remaining 20 96.6%) were reported it will have tendency to catch a cold.¹⁰

2) To find out the association between knowledge regarding importance of colostrum among postnatal mothers with selected demographic variables

- The chi square values of this study showed that Types of family ($\chi^2=7.274$), occupation ($\chi^2=12.64$), Family income ($\chi^2= 7.097$) were statistically found significant association at $P < 0.05$ level. The other demographic variables such as Age ($\chi^2=0.105$), Religion ($\chi^2= 0.231$), Parity ($\chi^2=0.012$), Education ($\chi^2=0.439$), previous source of information ($\chi^2=0.430$) were statistically non significant.
- **Dr kareema A Hussein, Dr Afifa radha aziz** 2013 conducted a study to assessment of knowledge and attitude of colostrum among postnatal mothers. The association of demographic variable of patient with knowledge score Age ($\chi^2=1.304$), education ($\chi^2= 7.122$), Occupation ($\chi^2=1.532$), types of family ($\chi^2= 42.79$), has highly significant association with chi square test which is highly significant at the level of $P < 0.05$.

5. Conclusion

The present study is to assess the level of knowledge regarding importance of colostrum among postnatal mothers in selected Hospital of Guwahati, Assam. In the present study it was also found that there is a significant association of knowledge level with selected demographic variables like types of family, occupation, Family income.

6. Limitation

Assessment of those postnatal mothers upto 1 week (0 - 7 days) of postpartum day.

7. Nursing Implication

The nurse role may be essentially unchanged or it may entail different duties by processing and practicing competencies making nurse better prepared to handle all types of disease/illness. The researcher has drawn the following implications in the field of Nursing practice, nursing, administration, nursing education and in nursing research.

1) Implication for Nursing practice:

Nurse are key personnel of a health team, who play a major role in the health promotion and maintenance. Nursing is a practicing profession so, the researcher, generally integrates findings into practice.

- a) Nurses can conduct teaching sessions for postnatal mothers during their hospital stay and during their visits to the hospital which will help in improving the knowledge of nurse as well as the postnatal mothers on knowledge on importance of colostrum.

2) Implication to Nursing administration

Staff development program in any organization is the prime responsibility of the nurse administrator. In the era of development of advanced technology, demand for quality and competent care, improved awareness on dignity of life, all poses and challenge to nurse administrators to demonstrate their efficiency in providing education to the postnatal mothers on importance of colostrum.

- a) The nurse administrator should assume leadership roles in training and providing health education programmes to nursing professional, paramedical staffs including grass root level workers in health care setting by making use of media and audio visual aids.

3) Implication to the Nursing education

It emphasis that adequate knowledge owned by the nurses may help to update themselves on the recent advancements, which in turn helps the nurses to give health education for the mothers on importance of colostrum, benefits of colostrum for baby. In order to achieve this, the Diploma as well as Degree curriculum should have adequate chapters on importance of colostrum

- a) Students nurses should be provided awareness on various aspects breastfeeding and related to colostrum feeding.
- b) The students nurses from school of nursing and college should encouraged to attend for specialized courses and seminars regarding importance of colostrum.
- c) Topic on importance of colostrum can be included in continuing education programmes for the student nurses.

4) Implication in Nursing research

Nursing research is the means by which nursing profession is growing, more research should be done related to colostrum feeding in order to prevent the complication and reduce the mortality and morbidity rate of infant. Dissemination of findings through conference and professional journals will make application of research findings to be effective.

- a) There is a need for extensive and intensive research in this area so that strategies for educating nurses and the mothers on importance of colostrum can be developed.
- b) This study will serve as a valuable reference material for future investigators.

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