

# KNOWLEDGE AND PRACTICES REGARDING COLOSTRUM FEEDING AMONG PREGNANT MOTHERS IN RAHIM YAR KHAN

Irfan Asghar,<sup>1</sup> Muhammad Anwar,<sup>1</sup> Muhammad Tahir Karim<sup>2</sup>

## ABSTRACT

**Background:** Colostrum plays important role in health and development of child and fighting the infections. **Objective:** To assess the knowledge and practices about Colostrum feeding regarding pregnant mothers in Rahim Yar Khan. **Methodology:** Study Design: Cross Sectional study. Duration and Setting: This Study was conducted from 8<sup>th</sup> March to 22<sup>nd</sup> August 2017, in Sheikh Zayed Medical College/Hospital, Rahim Yar Khan. A sample of 105 mothers was taken from Pediatrics department, Gynecology department and EPI center of Hospital that were selected by convenient sampling. A pre-designed questionnaire having variables like age of mothers, Education of mother, Occupation of mother, Residence area of mothers, knowledge about colostrum feeding, Source of information, Knowledge about importance of colostrum, Knowledge about prelacteal feeding, Practices about colostrum feeding, Practices about prelacteal feeding was filled by interviewing these women. Data was analyzed by using SPSS 16. **Results:** In our study, mean age of mothers was  $27.85 \pm 5$  years, 42.9% study subjects were illiterate, 77.1% were house wives, 76.2% women has information about colostrum 45.7% of study subjects mentioned that the source of information was friends and family 42.9% of mothers acknowledged colostrum as nutritious milk, 69.5% study subjects had misconception that prelacteal feeds are necessary for child health 28.6% women has started breast feeding within 1st hour and 73.3% has given prelacteal feeds to their newborn babies. **Conclusion:** Majority of mothers had good knowledge about colostrum feeding and they thought that it was nutritious milk and good for newborn health. But on the other hand, three fourth mothers practiced prelacteal feeding for their kids. There is a big gap between knowledge and practice about colostrum feeding. Health education programme should be started to cover this gap.

**Key Words:** Knowledge, Practices, Colostrum, Feeding.

## INTRODUCTION

Colostrum is first milk secreted at the time of parturition which differs from the milk secreted later, by containing proteins and also being rich in antibodies that confer passive immunity to the newborn.<sup>1</sup> Colostrum is known to contain immune cells as lymphocytes.<sup>2</sup> It helps to control diarrhea and Acute Respiratory Infection among children, which are among main factors causing death in children.<sup>3</sup> Although there is little milk at that time it helps to establish feeding and a close mother-child relationship, known as “bonding”.<sup>4</sup> Early initiation of breast feeding also reduces postpartum hemorrhage.<sup>5</sup>

Colostrum feeding is not practiced to new born due to various myths. In a false belief of ghutty, honey, glucose, and mishri water is used as pre-lacteal feeds in our country.<sup>6</sup> Infant mortality rate (74 deaths/1000 live births) means 1 in every 14 infants in Pakistan die before reaching one year of age, that indicate one child dies every minute from communicable diseases.<sup>7</sup> It is suggested that to control ill health, the mother should provide breast milk to infant within one hour of birth.<sup>8</sup> Timely initiation of breastfeeding, is not only the easiest,

but also the most cost effective and most successful intervention in improving the health of the newborn.<sup>9</sup> Health status of the infants in entire South East Asia is alarming, and the entire picture of South East Asia in terms of neonatal deaths is critical, Pakistan being one of the countries.<sup>10</sup> Working on Sustainable Development Goals, Colostrum feeding has a lot of importance in reducing child mortality and morbidity.<sup>11,12</sup> As there was limited data or research available related to Colostrum Feeding, this study was done to assess the Knowledge and relevant Practices of Colostrum Feeding among pregnant mothers of Rahim Yar Khan.

## METHODOLOGY

**Study Design:** Cross sectional study. **Study Setting:** Gynecology department, Pediatrics departments and EPI center of Sheikh Zayed Medical College/Hospital, Rahim Yar Khan. **Study Subjects:** Pregnant Mothers with at least one child of less than 2 years age. **Sample Size:** A total of 105 mothers were included in this study. **Sampling Technique:** Convenient sampling. **Duration of Study:** The study was conducted from 8<sup>th</sup> March to 22<sup>nd</sup> August 2017. **Inclusion Criteria:** Mothers having at least one child

1. Department of Community Medicine, Sheikh Zayed Medical College/Hospital, Rahim Yar Khan, University of Health Sciences Lahore, Pakistan.

2. Jinnah Hospital, Lahore, University of Health Sciences Lahore, Pakistan.

**Correspondence:** Dr. Irfan Asghar, Assistant Professor, Department of Community Medicine, Sheikh Zayed Medical College/Hospital, Rahim Yar Khan, Pakistan.

**Received:** 11-09-2017

**Accepted:** 25-12-2017

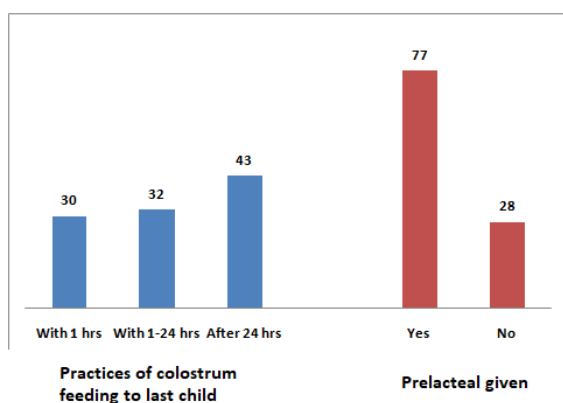
of less than 2 year age and pregnant and who gave informed consent. Exclusion Criteria: Mothers who were pregnant for the first time. This study was conducted on sample of 105 mothers that were selected by convenient sampling. A pre-designed questionnaire having variables like age of mothers, education of mother, Occupation of mothers, residence area of mothers, Information about colostrum feeding, Knowledge about colostrum feeding, source of information, Importance of colostrum to child health, Knowledge about prelacteal feeding, Practices about colostrum feeding, Practices about prelacteal feeding was filled by interviewing these women.

All the data was collected after getting verbal consent from mothers. Data Analysis: Data was entered and analyzed by using SPSS version 16. The frequencies and percentages were calculated on categorical variables. Means and Standard Deviation were calculated on numerical variables Age and Monthly income. Ethical approval was sought from Institutional Review Board.

## RESULTS

According to the results of study, mean age and mean monthly family income of pregnant mothers was  $27 \pm 5$  years and  $14847 \pm 4000$  (PKR). (Table I)

**Figure I: Colostrum feeding and prelacteal given**



Majority of mothers 81 (77.1%) were housewives, 45 (42.9%) were illiterate, 32 (30.55%) had four children and 57 (54.3%) belonged to urban areas, 80 (76.2%) mothers had heard about colostrum feeding, 48 (45.7%) got information from family and friends, 45 (42.9%) thought that colostrum was a nutritious milk, and 77 (73.3%) did prelacteal feeding, 43(41%) did colostrum feeding after 24 hours and 18 (40%) mothers told

colostrum is nutritious milk and 20 (35%) mothers belonging to urban areas did colostrum feeding within first hour after delivery. (Figure I) (Table I)

Table II shows knowledge and practices regarding colostrum feeding versus mother education and residence.

**Table I: Descriptive statistics and knowledge about colostrum. (n=105)**

| Education Status                                 |                  |
|--|------------------|
| Characteristics                                  | Frequency (%)    |
| Illiterate                                       | 45 (42.9)        |
| Primary  | 22 (21)          |
| Middle   | 13 (12.4)        |
| Matriculation                                    | 13 (12.4)        |
| Inter  | 8 (7.6)          |
| Graduate   | 4 (3.8)          |
| <b>Total</b>                                     | <b>105 (100)</b> |
| Occupation                                       |                  |
| House wife                                       | 81 (77.1)        |
| Govt. servant                                    | 5 (4.8)          |
| Private servant                                  | 5 (4.8)          |
| Village worker                                   | 8 (7.6)          |
| Labourer   | 6 (5.7)          |
| <b>Total</b>                                     | <b>105 (100)</b> |
| Source of information about colostrums feeding   |                  |
| Media  | 10 (9.5)         |
| Antenatal care Doctor                            | 14 (13.3)        |
| LHV  | 1 (1.0)          |
| LHW  | 4 (3.8)          |
| Family and Friends                               | 48 (45.7)        |
| Not Know   | 28 (26.7)        |
| <b>Total</b>                                     | <b>105 (100)</b> |
| Knowledge about importance of colostrums feeding |                  |
| Nutritious milk                                  | 45 (42.9)        |
| No Idea  | 25 (23.8)        |
| Thick milk                                       | 21 (20)          |
| First milk to be discarded                       | 8 (7.6)          |
| Ordinary Milk                                    | 6 (5.7)          |
| <b>Total</b>                                     | <b>105 (100)</b> |
| Prelacteal feeding is necessary for child        |                  |
| Agreed   | 73 (69.5)        |
| Not agreed                                       | 17 (16.2)        |
| No idea  | 15 (14.3)        |
| <b>Total</b>                                     | <b>105 (100)</b> |

**Table II: Knowledge and practices about colostrum feeding versus education of mothers and residence.**

| Mother education versus knowledge about colostrum             |                     |                       |                       |                                   |                |                  |
|---|---------------------|-----------------------|-----------------------|-----------------------------------|----------------|------------------|
| Education of mothers  | Ordinary milk No(%) | Thick milk No(%)      | Nutritious milk No(%) | First milk to be discarded No (%) | No idea No (%) | Total No (%)     |
| Illiterate  | 4(9%)               | 5(11%)                | 18(40%)               | 4(9%)                             | 14(31%)        | 45(100%)         |
| Primary   | 0                   | 6(27%)                | 9(41%)                | 2(9%)                             | 5(23%)         | 22(100%)         |
| Middle  | 1(7.5%)             | 2(15%)                | 8(61.5%)              | 1(7.5%)                           | 1(7.5%)        | 13(100%)         |
| Matric  | 0 (0%)              | 4(31%)                | 5(38%)                | 0 (0%)                            | 4(31%)         | 13(100%)         |
| Inter   | (12.5%)             | 3(38%)                | 2(25%)                | 1(12.5%)                          | 1(12.5%)       | 8(100%)          |
| Above inter   | 0 (0%)              | 1(25%)                | 3(75%)                | 0 (0%)                            | 0 (0%)         | 4(100%)          |
| <b>Total</b>  | <b>6(5.7%)</b>      | <b>21(20%)</b>        | <b>45(43%)</b>        | <b>8(7.6%)</b>                    | <b>25(24%)</b> | <b>105(100%)</b> |
| Education of mothers versus practices about colostrum feeding |                     |                       |                       |                                   |                |                  |
| Education of mothers  | Within 1 hr No (%)  | Within 1-24 hr No (%) | After 24 hr No (%)    | Total No (%)                      |                |                  |
| Illiterate  | 5 (11%)             | 14 (31%)              | 26 (58%)              | 45 (100%)                         |                |                  |
| Primary   | 4 (18%)             | 8 (36%)               | 10 (46%)              | 22 (100%)                         |                |                  |
| Middle  | 3 (23%)             | 7 (54%)               | 3 (23%)               | 13 (100%)                         |                |                  |
| Matric  | 8 (62%)             | 2 (15%)               | 3 (23%)               | 13 (100%)                         |                |                  |
| Inter   | 6 (75%)             | 1 (12.5%)             | 1 (12.5%)             | 8 (100%)                          |                |                  |
| Above Inter   | 4 (100%)            | 0 (0%)                | 0 (0%)                | 4(100%)                           |                |                  |
| <b>Total</b>  | <b>30 (28%)</b>     | <b>32 (30%)</b>       | <b>43 (42%)</b>       | <b>105(100%)</b>                  |                |                  |
| Residence VS Practices about colostrum feeding                |                     |                       |                       |                                   |                |                  |
| Residence   | Within 1hr No (%)   | Within 1-24 hr No (%) | After 24 No (%)       | Total No (%)                      |                |                  |
| Rural   | 10(21%)             | 20(42%)               | 18(37%)               | 48(100%)                          |                |                  |
| Urban   | 20(35%)             | 12(21%)               | 25(44%)               | 57(100%)                          |                |                  |
| <b>Total</b>  | <b>30(28%)</b>      | <b>32(30%)</b>        | <b>43(42%)</b>        | <b>105(100%)</b>                  |                |                  |

## DISCUSSION

In this study, we assessed knowledge and practices of mothers regarding colostrum feeding. The total sample size in this study was 105. The mean age of women was 27.85 years with standard deviation of 5.82 years, it was noted that 42.9% of the mothers were illiterate and 3.8% of them were graduate, while in another study only 2.5% were illiterate and 36.9% of them were secondary and above.<sup>13</sup> In our study, 54.3% subjects belonged to urban area while 45.7% to rural area. Occupation of the pregnant ladies was as follows: house wife 77.1%, village worker 7.6%, labourers 5.7%, government servant 4.8%, private servant 4.8%, which is in contrast to another study in which 95% of women were unemployed and only 5% were employed.<sup>14</sup> In this study, 76.2% women had heard about colostrum feeding. In another study it was 95%.<sup>15</sup> In this study, 45.7% women mentioned that the source of information was friends and family, and 13.3%, 9.5%, 3.3%, 1%, reported antenatal doctor, media, LHV, LHW respectively. According to another study, less than half of mothers said that they got information from the

MCH nurses.<sup>15</sup> This shows that non MCH or health care provider source, as information provider works a lot as for as breast feeding is concerned.

In this study, 42.9% mothers told that it was nutritious milk, 23.8% had no idea about colostrum, 20% thought it was thick milk, while according to 5.7% and 7.6% it as ordinary milk and first milk to be discarded respectively. In current study, 69.5% women told that prelacteal feeding is compulsory for child before colostrums feeding, 16.2 % women were not agreed with this while 14.3 % women had no idea.

In our study, 41% of women had started breast feeding after 24 hour while 28.6% and 30.5 % fed colostrum within 1<sup>st</sup> and 1 – 12 hours respectively. In this study, 73.3% had given pre lacteal feeds like “ghutti” to their newborn babies this trend was also practiced in Karachi where almost two third of mothers 73% gave pre-lacteal feeds to their neonates.<sup>16</sup>

Education status vs knowledge of colostrum illustrated that 40% illiterate mothers told that it was nutritious milk. This ratio increased with education status, 75% graduated mothers acknowledged it as nutritious milk. In this study, 11% illiterate mothers were feeding colostrum within 1<sup>st</sup> hour while all graduated mothers were feeding colostrum within 1<sup>st</sup> hour after delivery of newborn. In our study 21% women from rural area and 35% women from urban area were feeding colostrum within 1<sup>st</sup> hour.

## CONCLUSION

Majority of mothers had good knowledge about colostrum feeding and they thought that it was nutritious milk and good for babies health. But on the other hand majority mothers practiced prelacteal feeding for their kids at the place of colostrum feeding. There is a big gap between knowledge and practice about colostrum feeding in Rahim Yar Khan. Health education programme should be started in Rahim Yar Khan to cover this gap.

## REFERENCES

1. Godhia M.L, Patel N. Colostrum - its Composition, Benefits as a Nutraceutical - A Review. *Curr Res Nutr Food Sci* 2013;1(1):37-47.
2. Bertotto A, Castellucci G, Fabietti G, Scalise F, Vaccaro R. Lymphocytes bearing the T cell receptor gamma delta in human breast milk. *Arch Dis Child*.1990;65 (11): 1274–5.
3. Oddy W. Why Breast Milk Has Health Benefits for Infants and Children: A Review. *Pakistan Journal of Nutrition*. 2002;1(3):106-18.

3. Oddy W. Why Breast Milk Has Health Benefits for Infants and Children: A Review. *Pakistan Journal of Nutrition*. 2002;1(3):106-18.
4. K.Park. Feeding of infants. *Parks textbook of preventive and social medicine*. 2016;22(1):497-98.
5. United Nations Children's Fund, Child Info: Monitoring the Situation of Children and Women; Statistic by Area/Child Nutrition. Available at: <http://www.childinfo.org/breastfeeding.html>.
6. Ten Steps to Successful Breastfeeding [Internet]. *Unicef.org*. 2017. Available from: <http://www.unicef.org/newsline/tensteps.htm>
7. The Dawn. Child health in Pakistan. 17/4/2012. Available from: <http://www.dawn.com/news/711129/child-health-in-pakistan>.
8. WHO e-library of evidence for nutrition actions(eLENA). Early initiation of breast feeding. WHO;2014. Available from: [http://www.who.int/elena/titles/early\\_breastfeeding/en/](http://www.who.int/elena/titles/early_breastfeeding/en/)
9. Setegn T, Gerbaba M, Belachew T. Determinants of timely initiation of breastfeeding among mothers in Goba Woreda, South East Ethiopia: A cross sectional study. *BMC Public Health*. 2011;11(1):211-23
10. S.Hussain, S. Malik and M. K. Hayat. Demographic transition and economic growth in Pakistan. *European Journal of Scientific Research* 2009;26(3):160-71
11. Colostrum feeding. Available from: <http://www.medicalnewstoday.com/articles/78485.php>
12. World Health Organisation. Infant and young child feeding. (press release) July 2010.
13. Tadele N, Habta F, Akmel D, Deges E. Knowledge, attitude and practice towards exclusive breastfeeding among lactating mothers in Mizan Aman town, Southwestern Ethiopia: descriptive cross-sectional study. *International Breastfeeding Journal*. 2016;11(1):4-11.
14. Kuzma J. Knowledge, attitude and practice related to infant feeding among women in rural Papua New Guinea: a descriptive, mixed method study. *International Breastfeeding Journal*. 2013;8(1):16-18.
15. Hashim T, Mgongo M, Katanga J, Uriyo J, Damian D, Stray-Pedersen B et al. Predictors of appropriate breastfeeding knowledge among mothers in Moshi Urban, Tanzania: a cross-sectional study. *International Breastfeeding Journal*. 2016;12(1):1-16.
16. Gul S, Khalil R, Yousafzai MT, Shoukat F. Newborn care knowledge and practices among mothers attending pediatric outpatient clinic of a hospital in Karachi, Pakistan. *Int J Health Sci*. 2014;8(2):167-75

**Article Citation:** Asghar I, Anwar M, Karim MT. Knowledge and practices about colostrum feeding among pregnant mothers in Rahim Yar Khan. *JSZMC* 2018;9(1):1347-50.