

## DETERMINANTS OF SUCCESSFUL BREASTFEEDING: ASSESSING KNOWLEDGE, ATTITUDES, AND PRACTICES AMONG LACTATING MOTHERS

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### Abstract

**Introduction:** Breast milk is a whole food & provides benefits to not only infants but to mothers as well. It reduces the risk of many diseases in infants and acts as a natural contraceptive for mothers along with many other benefits. Breastfeeding is common in Pakistan but the practices related to it are unsatisfactory. Many factors are contributing to this situation including the poor knowledge and attitude of mothers towards breastfeeding. The education of mothers regarding breastfeeding is important in order to achieve optimum health of an infant as it significantly influences their decision regarding breastfeeding practices.

**Objective:** To assess breastfeeding-related knowledge, attitude, and practices among lactating mothers and to analyze the determinants of breastfeeding practice among lactating mothers.

**Methodology:** Cross-sectional study conducted in different hospitals of Lahore. The sample size was 400 lactating mothers. Data was collected using a KAP questionnaire from lactating mothers who had infants aged 0-24 months.

**Results:** 31% mothers knew that BF is beneficial for mothers, 44.8% mothers agreed that EBF is enough for infants, 66% mothers find it difficult to breastfeed their infant, 46.8% said they will continue to breastfeed their infant for 2 years while 53.3% gave the answer in no.

**Conclusion:** Mother's knowledge & attitude significantly affected their breastfeeding practices. They had poor knowledge and less positive attitude towards breastfeeding. Education of mothers related to breastfeeding is important to enhance breastfeeding practices. Both government & non-government organizations should arrange breastfeeding awareness seminars and programs to educate the mothers.

### INTRODUCTION

Breast milk is a complete & distinctive food for infants. It cannot be substituted by other

alternative food because it has all the fundamental nutrients necessary for infant growth and

development<sup>1</sup>. The significance of breastfeeding is underrated. Breastfeeding, especially for the first six months of life is remarkably linked with increased immunity among newborns<sup>2</sup>. Starting breastfeeding at the right time plays an important role in preventing high fatality rates in newborns & plays a significant role in the achievement of Millennium Development Goals (MDGs)<sup>3</sup>. Breastfeeding is notably an economic way to prevent disease and decrease the fatality rate which occurs due to the increased risk of infectious diseases among newborns. Mother milk also helps the infant to fight against multiple infections such as diarrhea and acute respiratory tract infections<sup>4</sup>. In addition to this, breastfeeding is favorable for mothers as well, as it is associated with decreased risk of breast & endometrial cancer, acts as a natural contraceptive, and increases the period of lactation amenorrhea as well as it is also an antiquated recommendation that the sentimental relationship between mother and child is affected by the early initiation of breastfeeding & defend the infant against several diseases<sup>5</sup>.

There are many factors that influence the breastfeeding practices such as the use of pre-lacteal feed, breastfeeding the infant within the first hour of delivery and EBF<sup>6</sup>.

According to WHO optimum breastfeeding is able to avert under-five fatality by 13%. In addition, breastfeeding combined with adequate nourishment is able to avert fatality by 19%. Worldwide 39% of newborns obtain exclusive breastfeeding. In under-developed countries, the occurrence of exclusive breastfeeding was observed to be insignificant. It could be because of inadequate knowledge, use of infant formula, quick start of complementary feeding, insufficient consultation by health care practitioners, academic circumstances, and values & beliefs of the mothers (1).

A Pakistan Demographic and Health Survey states that at most, infants < 6 months of age are exclusively breastfed & 53% of infants go on to be breastfed till they are 2 years of age<sup>7</sup>.

Education related to proper breastfeeding practices is necessary in order to achieve the goal of optimum nutrition for the infant. It is predicted

that not breastfeeding the infant exclusively for 0-6 months results in an increased risk of fatality<sup>8</sup>.

An infant requires comfort from a mother, protection in her arms, and nutrients from breast milk, and all of these demands are met by breastfeeding but the mother's inadequate knowledge, poor attitude & practice increase the risk of diseases in an infant<sup>9</sup>. Breastfeeding practices in Pakistan are of low quality which can result in an unfriendly outcome. The percentage of EBF in Pakistan was 26% in 1995 which later on increased to 36 percent in 2006-2007<sup>10</sup>.

WHO and UNICEF have done great efforts in order to encourage and assist breastfeeding through baby-friendly hospital initiatives. But, a number of elements including traditions, customs, attitude, and knowledge of the mother may create a fence in the achievement of this goal<sup>11</sup>. Various types of researches indicate that mothers with good behavior towards breastfeeding lengthen the time of breastfeeding. In fact, mothers who have knowledge about the benefits of breastfeeding adopt it<sup>12</sup>.

Despite Breastfeeding being a natural action, it is also learned. Every mother is able to breastfeed her baby if she has the appropriate knowledge, encouragement from her family, and approach to health care services to learn proper breastfeeding practices & to gain information regarding how to avoid and settle breastfeeding-related issues<sup>13</sup>.

By increasing breastfeeding prevalence, we will be able to rescue the lives of 820000 children & 20000 women yearly, improve the IQ of children, and avert obesity. Breastfeeding is also closely associated with UN SDGs (Good health & well-being)<sup>14</sup>.

WHO and UNICEF advise starting breastfeeding in the first hour of birth and exclusive breastfeeding to be continued for the first 6 months of age. It is as well recommended by the WHO to carry on breastfeeding in addition to weaning until 2 years of life or more (13). Despite all of this, in underdeveloped countries, inappropriate breastfeeding behaviors and before-time weaning practices are frequently being used resulting in an increased percentage of malnutrition & children being underweight,

stunted, and wasted in underdeveloped countries<sup>15</sup>.

Helpful policies are required to make improvements in the breastfeeding related practices in Pakistan. The aim of this research was to analyze the knowledge, attitude, and practices related to breastfeeding, the use of colostrum, and hygienic breastfeeding practices in mothers, and to examine at which point we are and what improvements are needed to make in our previous policies. The study can be helpful for the Govt. policymakers to adjust their policies regarding breastfeeding initiation programs & help plan an effective awareness program.

**Objective:** To assess breastfeeding-related knowledge, attitude, and practices among lactating mothers and to analyze the determinants of breastfeeding practice among lactating mothers.

## MATERIALS AND METHODS

### Study design:

The cross-sectional study on the topic of breastfeeding knowledge, attitude and practices among lactating mothers was conducted in different Lactation Clinics (Hospitals) of Lahore. All the lactating mothers who met the inclusion criteria were included in this study.

### Sample Size:

Sample size of our study was 400 lactating mothers which were calculated using the formula

$$n = Z^2 p (1 - p) / d^2$$

Whereas, n= Sample size with finite population correction, Z= Z statistic for a level of confidence, P= Expected prevalence, d = precision (if precision is 5% then d= 0.05).

As the prevalence of breastfeeding is 53% in Pakistan. By putting values in the formula: Z = 95%, P = 0.53 or 53% and d = 0.05

According to the recent PHDS 2017-2018, the prevalence of BF is 53% in Pakistan.

In the previous research, which was conducted in the Sanghar, Sindh among lactating mother to assess their knowledge, attitude, and practices related to EBF, the sample size calculated was 377<sup>10</sup>.

### Sampling Technique:

To conduct this study, we used purposive sampling technique. In this technique, we can select a sample that is most useful to the purpose of the research.

### Inclusion criteria:

- Lactating mothers with infants aged 0-24 months
- Lactating mothers without any acute and chronic illness
- Mothers who were willing to participate
- 

### Exclusion criteria:

- Lactating mothers who don't want to participate in the study
- Infants aged older than 24 months
- Mothers and infants who are HIV exposed

### Methodology

Different breastfeeding hospitals in Lahore were approached for data collection. The lactating mothers visiting the breastfeeding centers were asked for their consent to participate in the study. Structured questionnaire was used to collect data from participants who gave their consent and was filled through interview technique. Using the interview technique, we easily & accurately collected data from the participants by making them at ease. It took 5-6 minutes to collect data from one participant. The questionnaire contained both qualitative and quantitative data. The participants were asked about their demographic data (respondent name, mother age, child age, education level, occupation status, and geographical background), anthropometry measurements (weight & height). Using the participant's weight & height their BMI was calculated by us and the KAP questionnaire was used to assess the knowledge, attitude, and practice related to breastfeeding among lactating mothers. Variables such as knowledge & attitude among lactating mothers related to breastfeeding were compared with practices among lactating mothers related to breastfeeding in the statistical analysis.

### Outcome Measure Tool

KAP questionnaire containing closed ended questions was used to collect data from the participants and was filled using interview technique.

The knowledge part of the questionnaire consisted of 15 questions which were used to assess the knowledge of mother related to breastfeeding. The attitude part of the questionnaire consisted of 5 questions which were used to assess the mother's attitude towards breastfeeding. The practice part of the questionnaire consists of 10 questions which were used to assess the mother's practices related to breastfeeding in correlation to their knowledge and attitude related to breastfeeding.

A standard questionnaire was used, obtained from two studies, the first one conducted in Sanghar, Sindh for the assessment of exclusive breastfeeding knowledge and practices among lactating mothers, and the second one conducted in Ghanaian rural areas to assess exclusive breastfeeding knowledge, attitude, and practices among lactating mothers<sup>10, 17</sup>.

Knowledge and attitude score calculated according to FAO guidelines. Knowledge score < 70% is considered as low, >70% as high and attitude <70% considered less positive<sup>18</sup>

The mothers had knowledge & attitude score < 70% which indicates that they had low level of knowledge and less positive attitude towards breastfeeding. Urgent nutrition intervention is needed to make improvement in mothers 'knowledge & attitude towards breastfeeding.

### KAP Questionnaire:

It assesses knowledge (what the participant

knows), attitude (what the participant thinks), and practice (what the participant does). It is a structured, standardized questionnaire and can help identify knowledge gaps, attitudes, and practices of individuals. KAP study is easier to carry out, quantifiable, and easily explainable.

Data obtained from the KAP questionnaire is significant to assess the needs, planning, and implementation of public health programs.

### Statistical Analysis:

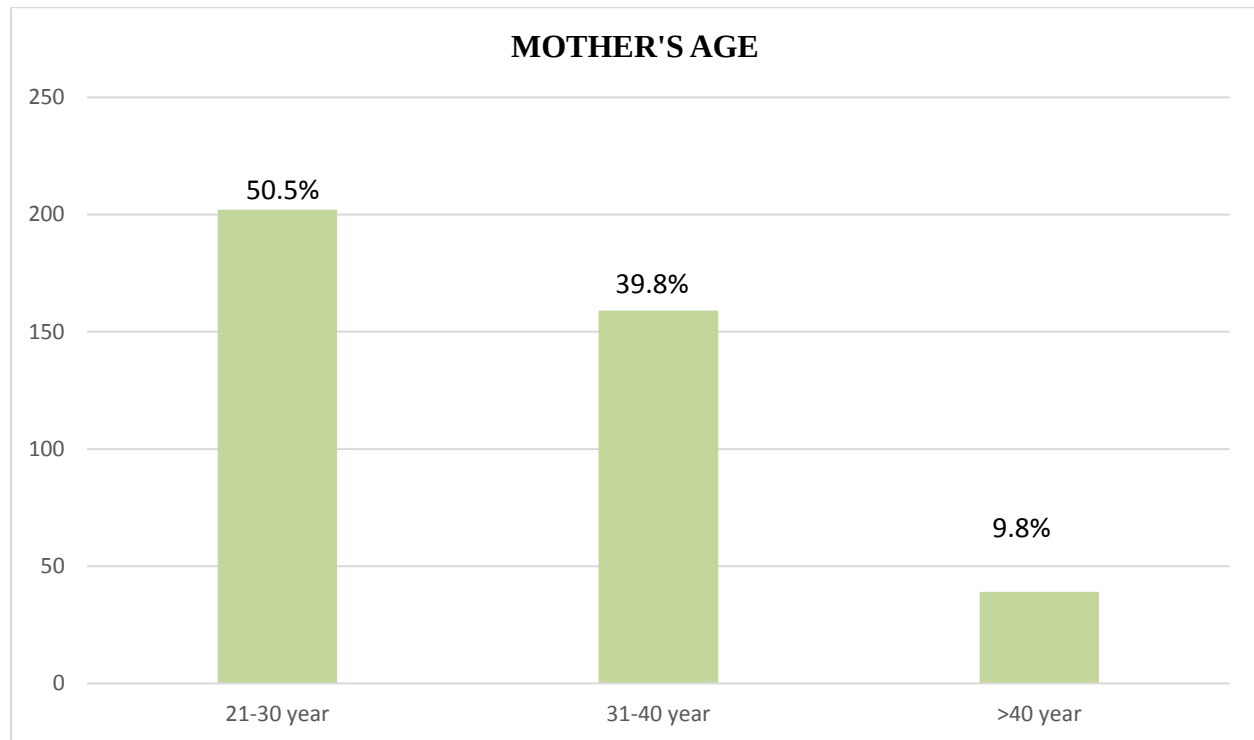
Data was entered into Microsoft excel 2019 and analyzed by SPSS version 21. General characteristics of the lactating mothers were analyzed through descriptive statistics. General frequencies and percentages were calculated for categorical variables. The relationship of characteristics of mothers who do and do not practice breastfeeding was analyzed using Chi-square and correlation

test. The significance value of p was kept <0.05 and significance value of R was kept >0.5.

### RESULTS

Current study was conducted in different hospitals of Lahore (Indus Manawan, Indus Raiwand, Services, General). The data was collected from lactating mothers who had infant aged 0-24 months using KAP questionnaire. The data was collected for various parameters including demographic data, anthropometric data and KAP questionnaire and analyzed by using Microsoft excel and SPSS 21.

**Figure 1** shows that 50.5% mothers were 21-30 years of age, 39.8% were 31-40 years of age, and 9.8% mothers were >40 years of age



**Figure 1** Mother's Age

**Figure 2** shows that 24.5% mothers were un-  
educated, 19.5% were under-matric, 23.8% were

matric pass, 18.8% were intermediate, and 13.5%  
mothers were graduated

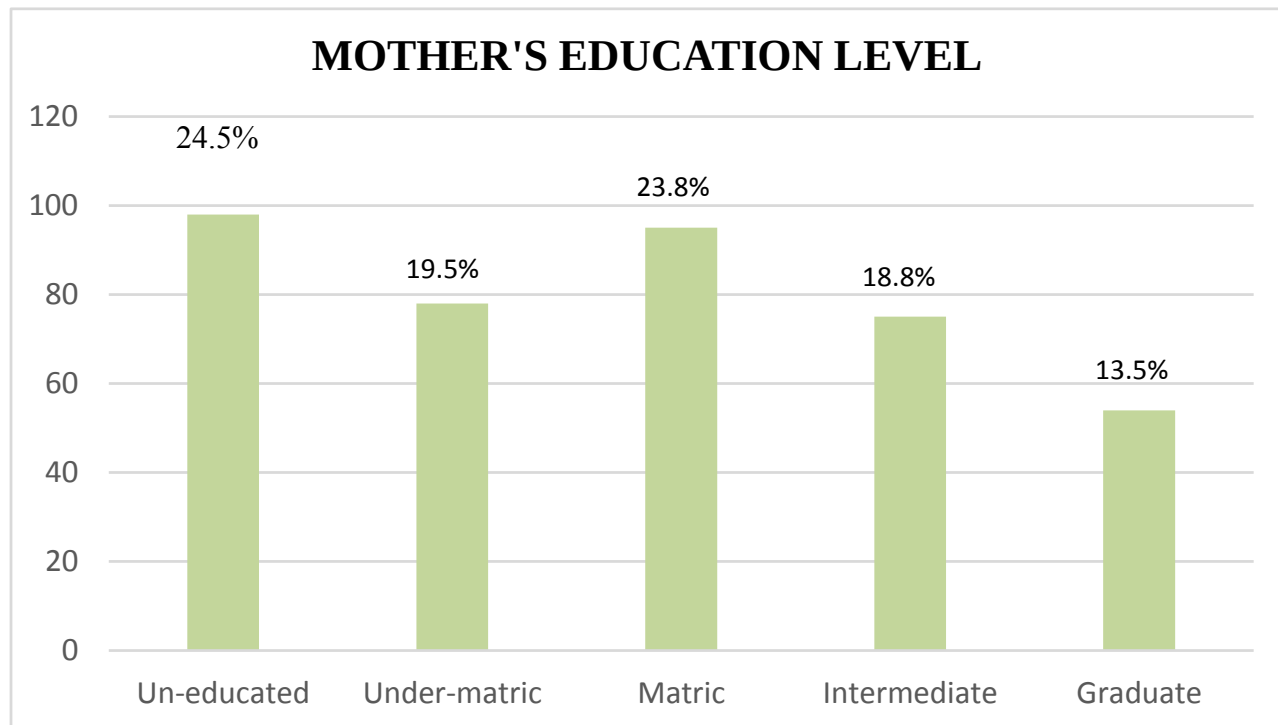
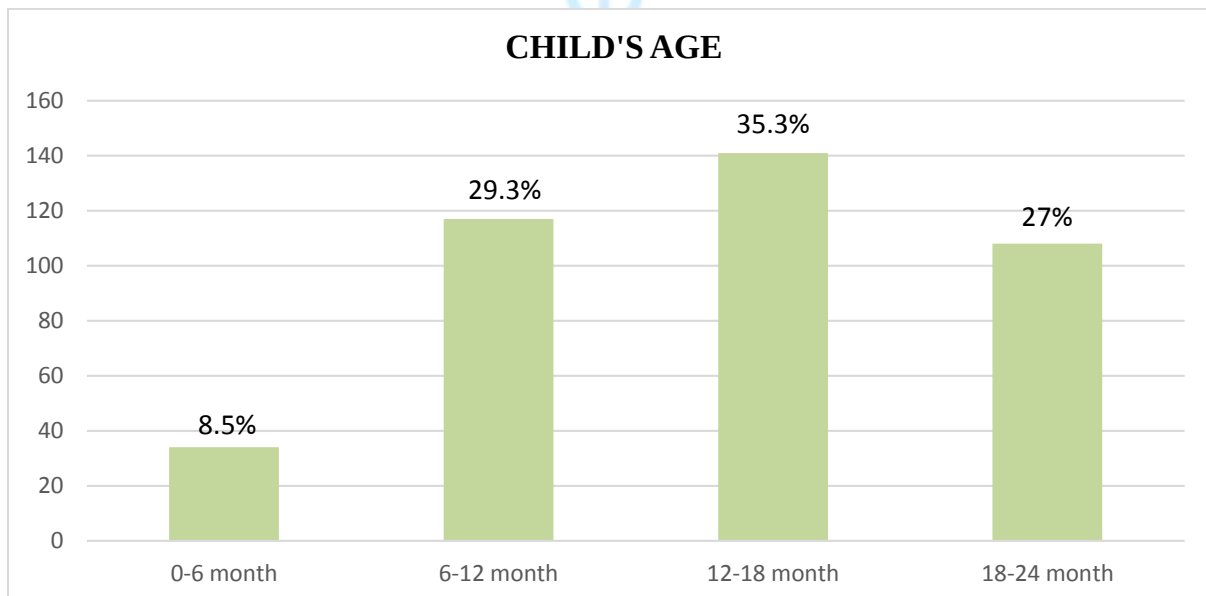


Figure 2 Mother Education

Figure 3 shows that 8.5% child were 0-6 months old, 29.3% child were 6-12 months old, 35.3% children were 12-18 month old and 27% child were 18-24 month old.



**Table 1 Breastfeeding Related Knowledge of Mothers**

| Questions                                                             | Frequency (%) |            |
|-----------------------------------------------------------------------|---------------|------------|
|                                                                       | Yes           | No         |
| First food for new born is breast milk.                               | 398 (97.3)    | 11 (2.8)   |
| Baby should take only breastmilk for first 6 months.                  | 327 (81.8)    | 73 (18.3)  |
| Exclusive breastfeeding is giving breastmilk for first six months.    | 63 (15.8)     | 337 (84.3) |
| The baby should be breastfed on demand only.                          | 195 (48.8)    | 205 (51.3) |
| Has knowledge of breastfeeding benefits to baby.                      | 338 (84.5)    | 62 (15.5)  |
| Breastfeeding is beneficial for mothers as well.                      | 124 (31)      | 276 (69)   |
| Breastmilk supply can be sustained by eating well.                    | 394 (98.5)    | 6 (1.5)    |
| Breastmilk can be stored after expressing and can be given to infant. | 87 (21.8)     | 313 (78.3) |
| Do you agree that breastfeeding is better than formula milk?          | 366 (91.5)    | 34 (8.5)   |
| Do you agree that breastmilk is enough for first 6 months?            | 179 (44.8)    | 221 (55.3) |
| Do you ever believe that colostrum should be discarded?               | 239 (59.8)    | 161 (40.3) |
| Infant Bf is healthier than a child who is not BF.                    | 291 (72.8)    | 109 (27.3) |
| Health personnel can assist to overcome breastfeeding difficulties.   | 134 (33.5)    | 266 (66.5) |
| A mother with hepatitis C can breastfed her infant.                   | 38 (9.5)      | 362 (90.5) |
| Recommended time period to breastfed infant is 2 years.               | 358 (89.5)    | 42 (10.5)  |

**Table 1** shows that only 15.8% mothers know about EBF, 69% mothers considered breast milk not beneficial for themselves, 21.8% mothers had knowledge about expressing and storing breast

milk, 59.8% mothers believed that colostrum should be discarded, 9.5% mothers knew that breastfeeding should be continued during hepatitis C whereas majority of mothers 90.5% believed BF should be stopped during hepatitis C.

**Table 2 Breastfeeding Related Attitude of Mothers**

| Question                                              | Frequency (%) |            |
|-------------------------------------------------------|---------------|------------|
|                                                       | Yes           | No         |
| Feels good to breastfed my infant.                    | 342 (85.5)    | 58 (14.5)  |
| Find difficult to breastfed my infant on demand.      | 120 (30)      | 280 (70.0) |
| Will feel confident expressing breastmilk.            | 130 (32.5)    | 270 (67.5) |
| Feel formula milk is more convenient than breastmilk. | 76 (19)       | 324 (81.0) |
| Feel difficult to breastfed infant till 2 years.      | 264 (66)      | 136 (34.0) |

**Table 2** shows that 85.5% of mothers were feeling good to breastfeed their child, while 66% mothers were finding it difficult to breastfeed infant until 2 years.

**Table 3 Breastfeeding Related Practice of Mothers**

| Questions                                                                         | Frequency (%) |            |
|-----------------------------------------------------------------------------------|---------------|------------|
|                                                                                   | Yes           | No         |
| Did you start breastfeeding within an hour after delivery?                        | 157 (39.3)    | 243 (60.8) |
| Did you face any trouble breastfeeding the infant in the first hours of delivery? | 112 (28.0)    | 288 (72.0) |
| Do you set timings to feed your child?                                            | 137 (34.3)    | 263 (65.8) |
| Do you ensure proper breastfeeding position?                                      | 361 (90.3)    | 39 (9.8)   |
| Do you feed your infant from both breasts?                                        | 394 (98.5)    | 6 (1.5)    |
| Do you clean your breast and hands before feeding?                                | 158 (39.5)    | 242 (60.5) |
| Do you stop breastfeeding the infant if he suffers from diarrhea?                 | 142 (35.5)    | 258 (64.5) |

|                                                         |            |            |
|---------------------------------------------------------|------------|------------|
| Will you breastfeed your infant if you had hepatitis C? | 15 (3.8)   | 385 (96.3) |
| Do you express milk before going outside?               | 35 (8.8)   | 365 (91.3) |
| I will breastfeed my infant for 2 years                 | 187 (46.8) | 213 (53.3) |

Table 3 shows that only 39.3% mothers-initiated BF within hour after delivery and 60.8% did not start BF within hour, 35.5% stopped breastfeeding to their infant if baby suffer from diarrhea, only

8.8% mothers were express and store Breast milk before going outside but majority of mothers 91.3% did not express and store Breast milk and 46.8%mothers breast fed their child for two year.

**Table 4 Characteristics of mothers who do and do not practice breastfeeding (n=400)**

| Characteristics of mothers who do and do not practice breastfeeding |             |            |         |         |
|---------------------------------------------------------------------|-------------|------------|---------|---------|
| Variable                                                            | Yes (n=187) | No (n=213) | P-Value | R-value |
| <b>Age of mother (Year)</b>                                         |             |            |         |         |
| 21-30                                                               | 104         | 98         | 0.112   | 0.43    |
| 31-40                                                               | 69          | 90         |         |         |
| >40                                                                 | 14          | 25         |         |         |
| <b>Mother's Employment status</b>                                   |             |            |         |         |
| Employed                                                            | 24          | 10         | 0.003*  | 0.69    |
| Unemployed                                                          | 163         | 203        |         |         |
| <b>Mother's Educational Level</b>                                   |             |            |         |         |
| Uneducated                                                          | 24          | 74         | 0.00*   | 0.76    |
| Under-matric                                                        | 32          | 46         |         |         |
| Matric                                                              | 40          | 55         |         |         |
| Intermediate                                                        | 45          | 30         |         |         |
| Graduate                                                            | 46          | 8          |         |         |
| <b>Mother's Geographical Background</b>                             |             |            |         |         |
| Urban                                                               |             |            | 0.00*   | 0.66    |
| Rural                                                               | 129         | 104        |         |         |
|                                                                     | 58          | 109        |         |         |
| <b>Mother's Knowledge of Breastfeeding</b>                          |             |            |         |         |
| Low                                                                 |             |            | 0.00*   | 0.74    |
|                                                                     | 235         | 165        |         |         |
| <b>Mother's attitude towards breastfeeding</b>                      |             |            |         |         |

|               |     |     |       |      |
|---------------|-----|-----|-------|------|
| Less positive | 186 | 213 | 0.00* | 0.81 |
|---------------|-----|-----|-------|------|

**Table 4** shows the correlation of characteristics of mothers who do and do not practice breastfeeding. Out of 400 sample of lactating mothers 187 mothers were practicing exclusive breastfeeding and 213 were not practicing breastfeeding. Characteristics of mother such as employment status, education, breastfeeding knowledge and attitude significantly affecting the mother's practice to breastfeed their infant with P-value of <0.05.

## DISCUSSION

Despite of the fact that breastfeeding is common in Pakistan the practices related to it are not satisfactory due to which the expected outcome of breastfeeding which is optimal health of an infant is not achieved completely. Various researches show that knowledge related to breastfeeding and the attitude of mothers toward breastfeeding significantly affect their practices regarding breastfeeding along with many other factors.

This study was conducted to assess the knowledge, attitude & practices related to breastfeeding in lactating mothers who had infants aged 0-24 months. The results of the study supported the hypothesis. In the present study only 39.3% mothers-initiated breastfeeding within the first hour of delivery, a similar study was conducted in Sindh whose results shows that 68% mothers started breastfeeding within the first hour of delivery <sup>19</sup>. Factors that were found to affect the practices of lactating mothers in this study were the mother's employment status, education level, geographical background, knowledge related to BF and their attitude towards BF. The knowledge of lactating mothers about breastfeeding was low and they had a less positive attitude towards breastfeeding.

According to the result of present study out of 400 sample of lactating mothers only 63 (15.5%) knew about exclusive breastfeeding, 124 (31%) considered breastfeeding is beneficial for mothers as well, only 87 (21.8%) knew that breastmilk can be expressed and stored, 179 (44.8%) considered EBF is enough for infants, 239 (59.8%) believed

that colostrum should be discarded, and 38 (9.5%) knew that breastfeeding can be continued during hepatitis C. Similar study conducted in tamale metropolis of Ghana showed that 277 (70.5%) mothers out of 393 knew about exclusive breastfeeding <sup>20</sup>. A study conducted in Sivas hospital showed that 92.6% mothers considered breastfeeding is beneficial for mothers <sup>16</sup>. A study conducted in Ghanaian rural areas showed that only 21 (11.1%) mothers knew that breast milk can be stored and expressed and 78.4% mothers agreed that EBF is enough for an infant. A study conducted in rural areas of Sindh, Pakistan showed that 27.9% mothers thought that that colostrum should be discarded <sup>18</sup>. The results of the present study indicate that knowledge of mothers related to breastfeeding was low, majority of them thought that breastfeeding makes a mother weaker, they had a misunderstanding that EBF is not enough to meet the nutritional requirement of infant alone and additional food is required, they also believed in discarding colostrum as it is harmful for the infant and causes digestive issues in infant.

The current study indicates that mothers had less positive attitude towards expressing breastmilk and majority of mothers find it difficult to breastfeed their infant till 2 years. A similar study conducted in rural Coastal, Kenya showed that mothers had negative attitude towards expressing breastmilk while a study conducted in rural areas of Limpopo, South Africa showed that 3/4<sup>th</sup> of the participants thought that there is no need to breastfeed infant till 2 years, they had a negative attitude <sup>21,22</sup>. Mother's attitude was less positive because they had lack of knowledge regarding breastfeeding and had cultural beliefs that expressing breastmilk is not ethical.

The practices related to breastfeeding among lactating mothers were not significant according to the present study, (34.3%) set timings to feed their infant, 35 (8.8%) expressed milk before going outside, and 187 (46.8%) mothers said that they will breastfeed their infant until the infant is 2 years old. A relevant study conducted in Sanghar,

Sindh states that 99 (26.3%) mothers set timings to breastfeed their infant, and 229 (60.7%) mothers expressed milk before going outside<sup>10</sup>. The practices were poor related to breastfeeding due to their poor knowledge and less positive attitude towards breastfeeding which significantly affected their practices.

Current study helps us to bring into light the level of knowledge and attitude of mothers related to breastfeeding and how it affects the breastfeeding practices of mothers, which can be a basis to develop effective awareness programs and policies to educate mothers regarding the benefits of breast milk for both mother and the child and to bring positive change in their attitude and believes towards breastfeeding.

## CONCLUSION

According to WHO optimum breastfeeding is able to avert under-five fatality by 13%. In addition, breastfeeding combined with adequate nourishment is able to avert fatality by 19%. Worldwide 39% of newborns obtain exclusive breastfeeding. In under-developed countries, the practice of exclusive breastfeeding was observed to be insignificant. It could be because of inadequate knowledge, use of infant formula, quick start of complementary feeding, insufficient consultation by health care practitioners, academic circumstances, and values & beliefs of the mothers. According to Pakistan Demographic and Health Survey states that, infants < 6 months of age are exclusively breastfed & 53% of infants go on to be breastfed till they are 2 years of age. In Pakistan poor breastfeeding are more prevalent which can result in an unfavorable outcome in terms of infant's health and can put economic burden. According to results, mother's knowledge toward breastfeeding was low. They had less positive attitude toward breastfeeding because of low level of knowledge. Urgent corrective actions are required to improve mother's knowledge & attitude towards breastfeeding.

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