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## Knowledge, attitude and practice of mothers towards infants feeding in Basra city

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### Abstract

**Background:** Breast milk is the ideal source of nutrients for infants, as a biological fluid required for a baby's optimal growth and development. The mother is the primary caregiver for a baby's physical and mental development; the mother's well-being, education, and attitudes towards childrearing play a crucial role in a child's health, so this study aimed to assess the knowledge, attitude, and practices of mothers regarding infant feeding in Basra city and determine the factors that influence the attitude and practices of mothers towards feeding.

**Methods:** This study was carried out from November 2022 until the end of March 2023 in four primary health centers to assess the knowledge, attitude, and practices of mothers regarding infant feeding in Basra city and determine the factors that influence the attitude and practices of mothers towards feeding in the first year of infant life.

**Results:** The result of this study showed that mother's age at interval (20-24) years had the highest percentage (39%), (54%) with secondary education level, (85.5%) housewife mothers, (67.5%) was for multipara mothers, and (72%) delivered vaginally mothers. Also, the result showed reasons for stopping breastfeeding: mothers who felt that breast milk was inadequate had the highest percentage (43.9%), and the highest percentage (16.6%) was answers that breast milk keeps the child healthy when asked about the benefits of breastfeeding. Based on knowledge scores about advantages of breastfeeding, 70% of the respondents had poor knowledge scores, while 81% had a positive attitude. The result showed a significant relationship between education level, occupation, and total knowledge score of mothers towards advantages of breastfeeding at levels (0.005, 0.001) sequentially.

**Conclusion:** Most participant mothers in this study demonstrated poor knowledge and a positive attitude towards breastfeeding, and about practices most mothers were colostrum given to their babies. The main reason for stopping breastfeeding for most mothers was they felt that breast milk was inadequate. There is an association between educational level, occupation of mothers, and total knowledge score at P value <0.05.

**Keywords:** Knowledge, attitude, practices, mothers, infant, feeding, Basra city

### 1. Introduction

The mother is the primary caregiver for a baby's physical and mental development, mother's well-being, education, and attitudes towards childrearing play a crucial role in a child's health. (Suhag & Akter, 2020) <sup>[33]</sup>.

Breast milk is a biological fluid required for a baby's optimal growth and development because it contains a variety of bioactive molecules that affect the function of the immune system, gastrointestinal system, and development of the brain. This makes mother's milk the ideal source of nutrients for infants. (Lessen & Kavanagh, 2015) <sup>[19]</sup>. Also, it is a natural human action that is necessary for the health of the mother and child as well as providing significant economic benefits to families and society (Tadele *et al.*, 2016) <sup>[35]</sup>.

According to the American Academy of Pediatrics (AAP), newborns should continue breastfeeding for a minimum of 12 months after their first six months of life as mothers and infants wanted (Eidelman *et al.*, 2012) <sup>[7]</sup>.

The optimal feeding program for infants involves breast milk with complementary meals from six months of age until at least 12 months of age, according to the Academy of Nutrition and Dietetics (AND), with exclusive breastfeeding offering the best nutrition and health safeguarding for the first six months of life. (Lessen & Kavanagh, 2015) <sup>[19]</sup>.

During the changing stage, infants are vulnerable and take complementary feeding. To meet infants' dietary requirements, complementary foods should be on time, sufficient, secure, and correctly provided (Suhag & Akter, 2020) <sup>[33]</sup>.

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A child's psychological and physical growth can be negatively impacted by poor nutrition in their early years, and it may interfere with an adult's success and productivity in the long and short term. (Hansen, 2016) <sup>[11]</sup>.

Globally, infant nutrition programs still need to be active and committed to enhancing feeding techniques in order to have the greatest possible influence on lowering infant morbidity and mortality. (Kuzma, 2013) <sup>[17]</sup>.

There are many advantages to breastfeeding a baby: Breast milk helps children to fight infection and disease, even later in life. "Develop the immune system (Binns *et al.*, 2016; Cochrane *et al.*, 2020) <sup>[33, 6]</sup>; it is reducing the risk of acute illness during infant feeding (Branger *et al.*, 2019) <sup>[5]</sup>; breast milk promotes the development of a child's microbiome (Pannaraj *et al.*, 2017) <sup>[28]</sup>. Breastfeeding can help children sleep better because breast milk produces melatonin, which acts as a calming hormone, reducing colic and helping children enjoy a restful sleep (Mindell & Williamson, 2018) <sup>[23]</sup>. Breastfeeding reduces the risk of obesity in the long term and aids in the development of the eyes, brain, and other body systems (Bardanzellu *et al.*, 2020) <sup>[2]</sup>.

The advantage of breastfeeding to mothers: Burn extra calories, which can lead to faster weight loss during lactation (Segura *et al.*, 2016) <sup>[31]</sup>; hormone oxytocin secretion helps the uterus return to the normal position before pregnancy; and reduces postpartum bleeding (Abedi *et al.*, 2016) <sup>[1]</sup>. Breastfeeding helps to reduce postpartum depression (Pope & Mazmanian, 2016; Huang *et al.*, 2012) <sup>[30, 12]</sup>, reducing the risk of osteoporosis, heart disease, obesity, type 2 diabetes, and certain types of cancer such as breast and ovarian cancer (Kumaran *et al.*, 2017) <sup>[16]</sup>. Mothers who exclusively breastfeed their babies naturally sleep more (Gordon *et al.*, 2021) <sup>[8]</sup>.

Nonetheless, the dynamic nature of breast milk allows it to adjust over time to the child's evolving demands. The milk that is released first (Foremilk) during each breastfeeding session is thinner and contains more lactose, which quenches a baby's thirst; the milk that is expressed second (Hind milk) is creamier and contains a significantly higher fat content, which the baby needs for growth and development. (Bobiński & Bobińska, 2020) <sup>[4]</sup>.

Many variables influence the decision to feed an infant at a hospital or delivery center, including policies that keep the mother and child apart, family or society pressure to introduce different foods or liquids because of beliefs about what the baby needs for health. (Mason & Rawe, 2015) <sup>[22]</sup> such as pressure-related nervousness, such as physical tiredness and anxiety, as well as disparities in relationships, particularly marital ones, cause the mother to discontinue her ability to create plenty of milk, and also postpartum hemorrhage: this severe blood loss leads to a blood clot in the pituitary gland, which is the main source of prolactin secretion, resulting in a delay in the initiation of breastfeeding (Munblit *et al.*, 2015) <sup>[26]</sup>, also drugs: some medications contain the flu and common colds may harm nursing infants (Pham *et al.*, 2020) <sup>[29]</sup>. A mother's stress also delays milk production, in which the milk hormone prolactin does not appear in the normal amount needed to stimulate milk production. (Mama *et al.*, 2017) <sup>[21]</sup>.

Formula milk is not advised for infants since it increases the risk of illness and, because it is more expensive than breast milk, it increases the possibility of dilution and malnutrition in these infants. (Moreira-Monteagudo *et al.*, 2022) <sup>[25]</sup>.

Numerous factors, including psychosocial elements, social demographic traits, hospital practices, environmental variables, and medical issues, affect the decision to

breastfeed. (Tanash, 2014) <sup>[36]</sup>.

Therefore, the purpose of this study is to examine mothers' knowledge, attitudes, and practices regarding breastfeeding infants, as well as to identify the reasons behind any interruptions or discontinuations in breastfeeding. Additionally, the study will analyze the factors related to mothers' knowledge and practices regarding feeding babies during their first year of life.

## 1.2. Aims of the study

1. To evaluate mothers' practices, attitudes, and knowledge about infant feeding in Basra city.
2. To determine the factors that influence the attitude and practices of mothers towards feeding.

## 2. Materials and Methods

### 2.1 Design, setting and data collection of study

This study is a descriptive cross-sectional study conducted in four primary health centers in Basra city from November 2022 to March 2023. The data was collected through interviews with mothers of under-1 year infants (200 mothers) who attended primary health care centers by using a questionnaire: The parts of the questionnaire included:

**The first part:** included socio-demographic characteristics for mothers and infants, such as age of mothers, educational level, occupational, parity, type of delivery, age of child, and sex of child.

**Second part:** included Practices of mothers to wards feeding infants, such as colostrum given, how to breastfeed, duration of each feed, duration of exclusive breastfeeding, prelactil feeding given, and reasons for stopping breastfeeding. Pre-lacteal feeding: is the act of giving infants liquids other than breast milk during the first three days of life (Laksono *et al.*, 2021) <sup>[18]</sup>.

**Third part:** Maternal knowledge to ward infant feeding, such as maternal knowledge regarding advantages of breastfeeding for mothers and infants and knowledge of mothers about duration of breastfeeding continued along with complementary feeds.

**Fourth part:** Maternal attitude towards breastfeeding such as (Breastfeeding leads to figure loss, breastfeeding is old-fashioned, breastfeeding is the simplest method of feeding infants, the infant feeding formulas gain weight quickly, breast milk strengthens the relationship between mother and child, and breastfeeding in public is terrible.).

### 2.2 Inclusion and exclusion criteria

All mothers of infants less than 1 year who attend primary health care centers are included. This study excluded mothers and their infants older than 1 year and the mothers with chronic conditions such as tuberculosis and cancer.

### 2.3 Statistical Analysis

The answers from the questionnaire were transferred to code sheets, the data was input into a computer, and then analyzed using the statistical package for social science (SPSS-28). The data was presented as frequency and percentage.

The Pearson Chi-square (X<sup>2</sup>-test) test was used to determine whether the difference between the percentages (qualitative

data). The P-value was regarded as significant when it was equal to or lower than 0.05.

#### 2.4. Ethics permission

The Basra health directorate's training and development department gave approval to carry out this study.

### 3. Results

#### 3.1 Socio-demographic characteristics of mothers and infants

This information was collected through a questionnaire from a real interview of mothers in health care centers.

The table (3-1) showed socio-demographic characteristics

for mothers and infants. The age of mothers showed the highest percentage (39%) of the mothers participants in this study were aged 20–24. Regarding the level of education of mothers, the highest percentage was (54%), with a secondary level of education.

As for the mother's occupation, the highest percentage (85.5%) were housewives. Related to the type of birth, the most common (72%) is the normal delivery. The result also showed the highest percentages for multipara mothers (67.5%); with regard to the age of the child, it was clear from the table that the highest percentage (42%) were 4-6 months old and the highest percentages (53.5%) were female sex.

**Table 1:** Socio-demographic characteristic for mothers and infants

| Socio-demographic characteristic for mothers and infants |                   | No. | %     |
|--|-------------------|-----|-------|
| Age of mothers   | Below 19          | 28  | 14.0% |
|  | 20-24             | 78  | 39.0% |
|  | 25-29             | 56  | 28.0% |
|  | 30 And above      | 38  | 19.0% |
| Educational level  | Illiterate        | 22  | 11.0% |
|  | Primary           | 39  | 19.5% |
|  | Secondary         | 108 | 54.0% |
|  | High education    | 31  | 15.5% |
| Occupation   | Employed          | 29  | 14.5% |
|  | Housewife         | 171 | 85.5% |
| Parity   | Primi-para        | 65  | 32.5% |
|  | Multipara         | 135 | 67.5% |
| Type of delivery   | Normal delivery   | 144 | 72.0% |
|  | Caesarian section | 56  | 28.0% |
| Age of child   | Birth-3 months    | 62  | 31.0% |
|  | 4-6 m             | 84  | 42.0% |
|  | 7-9 m             | 34  | 17.0% |
|  | 10-12 m           | 20  | 10.0% |
| Sex of child   | Male              | 93  | 46.5% |
|  | Female            | 107 | 53.5% |

**3.2 Practices of participant mothers to wards breastfeeding:** The table (2) below explains the mothers practices towards breastfeeding; it shows the largest percentages of mothers (91%) had given colostrum to their babies, and almost mothers (84.5%) gave milk to their children on demand.

Regarding the duration of each feed, the highest percentage was (74%) who breastfed for >15 minutes, and the highest percentage for duration of exclusive breastfeeding was (44%) for 3-6 months, and (71%) were Pre-lacteal feeding given to their babies.

**Table 2:** Practices of participant mothers to wards breastfeeding

| Practices of participant mothers to wards breastfeeding |             | No. | %     |
|---|-------------|-----|-------|
| Was colostrum given                                     | Yes         | 182 | 91.0% |
|   | No          | 18  | 9.0%  |
| How to breastfeeding                                    | on demand   | 169 | 84.5% |
|   | on schedule | 31  | 15.5% |
| Duration of each feed                                   | >15 minute  | 148 | 74.0% |
|   | 15-30min    | 42  | 21.0% |
|   | <30min      | 10  | 5.0%  |
| Duration of exclusive breastfeeding                     | 1-3mon      | 86  | 43.0% |
|   | 3-6mon      | 88  | 44.0% |
|   | >6mon       | 26  | 13.0% |
| Pre-lacteal feeding given                               | Yes         | 142 | 71.0% |
|   | No          | 58  | 29.0% |

#### 3.3 Reasons for stopping breastfeeding (Multi-Responses)

The table (3) explains reasons for stopping breastfeeding (multi-responses).

We note from the results of this study regarding the section

related to reasons for stopping breastfeeding, the highest percentage was mother felt that breast milk was inadequate for feed their infants as it constituted (43.9%), while the lowest percentage reason for stopping breastfeeding was Working mother (12.1%).

**Table 3:** Reasons for stopping breastfeeding (Multi-Responses)

|                                     |  | Multi-Responses |         |
|-------------------------------------|--|-----------------|---------|
|                                     |  | N               | Percent |
| Reasons for stopping Breast-feeding | (a) Mother's ill health.                         | 31              | 13.9%   |
|                                     | (b) Working mother.                              | 27              | 12.1%   |
|                                     | (c) Mother felt that breast milk was inadequate. | 98              | 43.9%   |
|                                     | (d) Infant refused breastfeed                    | 67              | 30.0%   |
|                                     | Total  | 223             | 100.0%  |

### 3.4 Maternal knowledge regarding advantages of breastfeeding (Multi-Responses)

The table (4) showed the knowledge of mothers regarding the benefits of breastfeeding for mothers and infants, their answers were multiple, so it was concluded that the highest

percentage (16.6%) was answers that breast milk keeps the child healthy, while the lowest percentage (0.4%) only mothers showed that breast milk helps mothers reduce uterine contractions.

**Table 4:** Maternal knowledge regarding advantages of breastfeeding (Multi-responses)

|  |  | Multi-Responses |         |
|--|--|-----------------|---------|
|  |  | N               | Percent |
| Maternal knowledge regarding advantages of breastfeeding | (a) Child remains healthy  | 169             | 16.6%   |
|  | (b) More healthy and nutritious  | 159             | 15.6%   |
|  | (c) Provide immunity naturally   | 113             | 11.1%   |
|  | (d) Reduces the likelihood of future conception (Lactational Amenorrhea) | 39              | 3.8%    |
|  | (e) Mother's milk is the best milk.                                      | 158             | 15.6%   |
|  | (f) Skin to skin contact   | 70              | 6.9%    |
|  | (g) Purified and free.   | 104             | 10.2%   |
|  | (h) Enhances growth and development.                                     | 128             | 12.6%   |
|  | (i) Feeding twin infants   | 28              | 2.8%    |
|  | (j) Fore milk and Hind milk  | 9               | 0.9%    |
|  | (k) Aiding mothers in uterine contractions                               | 4               | 0.4%    |
|  | (l) Assist mothers in losing weight after delivering a baby.             | 35              | 3.4%    |
|  | Total  | 1016            | 100.0%  |

### 3.5 Mothers' knowledge about the duration of breastfeeding with complementary foods

Table (5) explains mothers' knowledge about the duration of breastfeeding in addition to complementary foods; the

highest percentage (58.5%) answered that children continue to be breastfed with complementary foods at durations (1-2 years). And only (12%) answered that they breastfed and gave complementary feeds at durations (< 6 months).

**Table 5:** Maternal knowledge about duration of breastfeeding with complementary feeds

|   |                   | No. | Percent (%) |
|---|-------------------|-----|-------------|
|   |                   |     |             |
| How long was breastfeeding continued along with complementary feeds | < 6 months        | 24  | 12.0        |
|   | 6 months - 1 year | 42  | 21.0        |
|   | 1-2 years         | 117 | 58.5        |
|   | > 2 years         | 17  | 8.5         |

### 3.6 Attitude of participant mothers to wards breastfeeding:

The table (6) explains the attitude of the participant's mothers towards breastfeeding. The study revealed that (89.5%) of the mothers showed that breastfeeding does not lead to a loss of body shape. And the highest percentage (96.5%) answered that breastfeeding is not old-fashioned.

And about (88%) answered that breastfeeding is the simplest way to feed infants, and (84.5%) of participants mothers showed that the infant formula gained weight quickly. and (65%) from mothers in this study showed that breast milk does not strengthen the relationship between mother and child. Regarding breastfeeding in public, most mothers (76.5%) showed is not terrible.

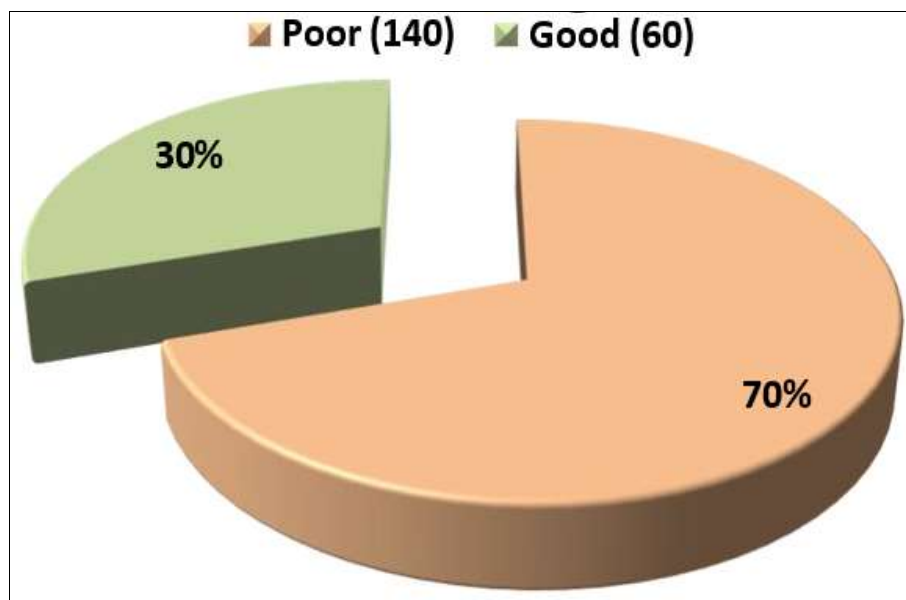
**Table 6:** Attitude of participant mothers to wards breastfeeding

| Attitude of participant mothers                                       |     | No. | %     |
|---|-----|-----|-------|
| (A) Breastfeeding leads to figure loss                                | Yes | 21  | 10.5% |
|   | No  | 179 | 89.5% |
| (B) Breastfeeding is old fashioned.                                   | Yes | 7   | 3.5%  |
|   | No  | 193 | 96.5% |
| (C) Breastfeeding simplest method of feeding infant                   | Yes | 176 | 88.0% |
|   | No  | 24  | 12.0% |
| (D) The infant feeding formula are gain weight quickly                | Yes | 169 | 84.5% |
|   | No  | 31  | 15.5% |
| E) Breast milk strengthens the relationship between mother and child. | Yes | 70  | 35.0% |
|   | No  | 130 | 65.0% |
| (F) Breastfeeding in public is terrible.                              | Yes | 47  | 23.5% |
|   | No  | 153 | 76.5% |

### 3.7 The total knowledge score

The Figure (1) explains that the total knowledge score for participant's mothers was 140 at percentage (70%), which is

poor knowledge, while 60 at percentage (30%) had good knowledge about the advantages of breastfeeding.



**Fig 1:** Total knowledge score

### 3.8 The relationship between socio-demographic characteristic for mothers and infants and total knowledge score

The table (7) explains the relationship between the social-demographic characteristics of the mother and total knowledge score.

The current study's results demonstrated that mothers with a secondary school education level (77.8%) have a poor knowledge score, and a high percentage of mothers (54.8%) with a high education level have a good knowledge score compared with other levels of education (Illiterate, primary). This means there was a significant association between

mother's level of education and total knowledge score (P-value 0.005).

As for the occupation, this study showed that (75.4%) of housewives mothers had a high percentage of poor knowledge scores, and a high percentage (62.1%) of employed mothers had a good knowledge score. There was a significant association between mother's occupation and total knowledge score at a significant level p value (0.001). The result also showed that age of mothers, Parity, not statistically significant which means there is no relation between mothers' age, Parity with total knowledge score at p. value (0.510) (0.070) sequentially.

**Table 7:** The relationship between socio-demographic characteristic for mothers and infants and total knowledge score.

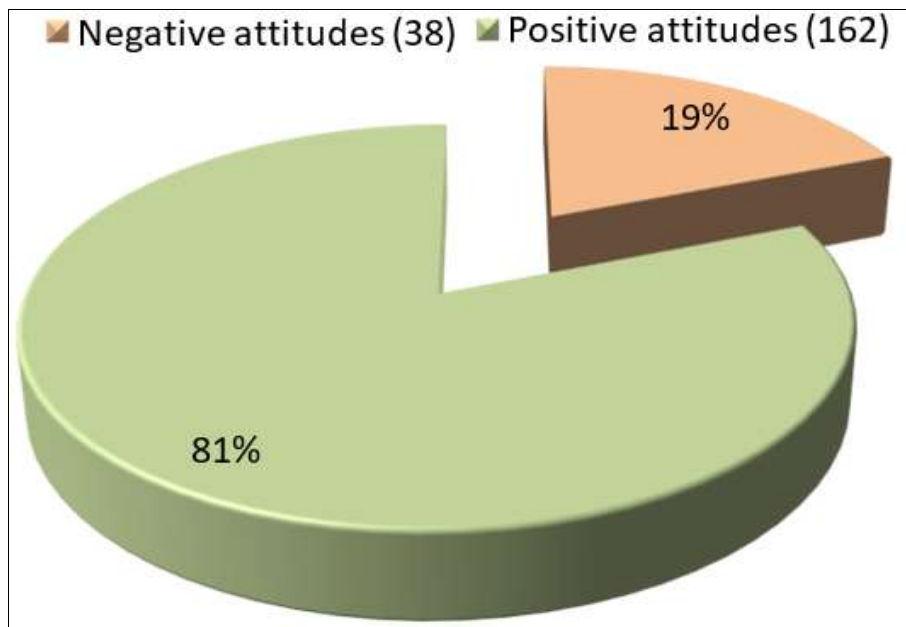
| Socio-demographic characteristic for mothers and infants |                | Total knowledge Score |       |                  |       | P. value |
|--|----------------|-----------------------|-------|------------------|-------|----------|
|  |                | Poor (<8 score)       |       | Good (>=8 score) |       |          |
|  |                | No.                   | %     | No.              | %     |          |
| Age of mothers   | Below 19       | 21                    | 75.0% | 7                | 25.0% | 0.510    |
|  | 20-24          | 57                    | 73.1% | 21               | 26.9% |          |
|  | 25-29          | 39                    | 69.6% | 17               | 30.4% |          |
|  | 30 and above   | 23                    | 60.5% | 15               | 39.5% |          |
| Educational level  | Illiterate     | 14                    | 63.6% | 8                | 36.4% | 0.005*   |
|  | Primary        | 28                    | 71.8% | 11               | 28.2% |          |
|  | Secondary      | 84                    | 77.8% | 24               | 22.2% |          |
|  | High education | 14                    | 45.2% | 17               | 54.8% |          |
| Occupation   | Employed       | 11                    | 37.9% | 18               | 62.1% | 0.001*   |
|  | Housewife      | 129                   | 75.4% | 42               | 24.6% |          |
| Parity   | Primi-para     | 40                    | 61.5% | 25               | 38.5% | 0.070    |
|  | Multipara      | 100                   | 74.1% | 35               | 25.9% |          |

### 3.9 The total attitude score

The figure (3-2) explains the total attitude score for the participant's mothers. The result showed positive attitudes

(162) at a high percentage (81%), while (38) at a percentage (19%) have negative attitudes towards breastfeeding.





**Fig 2:** The total attitude score

### 3.10 Pearson correlation between total knowledge score and total attitude score

From table (3-8) the result explains the relationship between total knowledge score of mothers towards breastfeeding and total attitude score at Pearson correlation (0.346) and P. value ( $<0.001$ ) for 200 samples in this study.

**Table 8: Pearson correlation between total knowledge score and total attitude score.**

|                       |                     | Total attitude score |
|-----------------------|---------------------|----------------------|
| Total knowledge score | Pearson Correlation | 0.346**              |
|                       | P. value            | $<0.001$             |
|                       | N                   | 200                  |

## 4. Discussion

The WHO advises exclusive breastfeeding for the first six months of a baby's life for the best progress, growth, and good health. This practice should be continued for at least two years. At six months of age, complementary foods that are safe, well-fed, and high in nutrients should begin to meet the baby's changing requirements. (Kimani-Murage *et al.*, 2011) [14].

In this study, most socio-demographic of 200 mothers, the largest percentage (39%) of the ages of 20-24 years, and highest percentage was (54%) with a secondary level of education, the highest percentages (85.5%) were housewives. This agrees with results revealed in Kirkuk in 2011 from a non-probability sample; more than two-thirds (84.7%) of mothers were housewives (Mahmud, 2011) [20].

Related to parity (67.5%) were multipara mothers and (72%) is the normal delivery were interviewed in PHCs in Basra city.

Related to reasons for stopping breastfeeding, the highest percentage was that mothers felt that breast milk was inadequate for feeding their infants, as it constituted 43.9%). This led mothers to the child getting supplements from a bottle because they felt that breast milk was insufficient. This is a widespread issue among mothers, and this result is in agreement with another study (Swetha *et al.*, 2017) [34], or may be the mother assumes the breast milk was inadequate. This is because the infant is crying and she is unaware that it

is not always due to a lack of feeling satisfied. (Kumar, 2011) [15].

This study concluded that the highest percentage (16.6%) of mothers answered that breast milk keeps the child healthy, while another study showed 85% of respondents were unaware that breastfeeding keeps health and preserves children from disease. (Suhag & Akter, 2020) [33].

The lowest percentage is (0.4%) only from mothers showed that breast milk helps mothers reduce uterine contractions in our study, and this disagrees with the study showed that breastfeeding allows the uterus to return to its pre-pregnancy state more rapidly, by nearly all of the mothers (96.66%;  $n = 29$ ). (Tanash, 2014) [36].

According to the attitudes of mothers, the study revealed that 89.5 percent of the mothers showed that breastfeeding does not lead to a loss of body shape, but another study showed that more than half of the participants believed that nursing would cause mothers' breasts to fold. (Zhou *et al.* (2010) [37]. And the highest percentage (96.5%) answered that breastfeeding is not old-fashioned; this is consistent with the study's claims that "formula feeding is a symbol of wealth" and "breastfeeding is outdated," which were strongly disputed ( $> 90\%$ ). (Zhou *et al.*, 2010) [37].

About 88% of mothers answered that breastfeeding is the simplest way to feed infants, and 84.5% of participants mothers showed that the infant formula gained weight quickly. and (65%) from mothers in this study showed that breast milk does not strengthen the relationship between mother and child, and this disagrees with the study concluded (72.50%) of mothers who strongly agree breastfeeding increases bonding between the mother and her infant. They also disagree that regarding breastfeeding in public for most mothers is not terrible. (Mohammed & Soliman, 2018) [24].

In relation to the to the total score of knowledge mothers towards breastfeeding, 70% of them had poor information about advantages of breastfeeding; this study, resembling another study, showed a considerable deficiency of the knowledge of mothers about breast feeding (Kadhum., 2013) [13].

Related to the total score of mothers' attitudes towards

breastfeeding in this study, (81%) of them had positive attitudes and (19%) of the mothers had negative attitudes, and this indicates the importance of breastfeeding in the lives of these individuals and society. It also may be due to the fact that early breastfeeding is linked to the successful establishment of breastfeeding and maintaining it throughout the lactation period, and this practice is due to a positive attitude for mothers without needing more knowledge about breastfeeding. This is corroborated by past studies that found women have a positive view of breastfeeding. (Haghighi & Varzandeh, 2016) <sup>[10]</sup>.

Mother's occupation and educational levels had a high significant relation with mothers knowledge score about advantages of breastfeeding, where housewives (75.4%) mothers have poor knowledge compared with employed, and a high percentage of mothers (54.8%) with high education levels have a good knowledge score compared with other levels of education. This may be because of their mother's poor educational background, which prevents them from understanding the educational content found in magazines and posters. As a result, they require direct health instruction from medical facilities. This is our result in agreement with the study in Erbil city (Shaker *et al.*, 2012) <sup>[32]</sup>.

More than half of the mothers (58.5%) knew about the duration of breastfeeding with complementary feeds 1-2 years, but more of them (71%) gave the baby the pre-lacteal feeding early in life before the breastfeeding like water, sugar, formula milk, or just water, and this may be due to poor knowledge of mothers about risk feeding the infant in early life, and this may cause breast engorgement and diminish milk supply. While a study was observed in Najaf in 2009 until 2011, it was reported that 99% of mothers want to breastfeed, and 83% of them received guidance and knowledge about breastfeeding from their families. (Kadhum, 2013) <sup>[13]</sup>.

The most important finding of practices towards breastfeeding was that 91% of mothers had given colostrum to their babies. This may be due to knowing about the benefits of colostrum for babies. Also, most mothers (84.5%) gave milk to their children on demand, and this similar study showed most mothers breastfeed babies on demand (Habib *et al.*, 2019) <sup>[9]</sup>, and the highest percentage was 74% who breastfed for >15 minutes; the highest percentage for duration of exclusive breastfeeding was 44% for 3-6 months. This disagrees with the study's discovery that respondents' comprehension of the phrase "exclusive breastfeeding" was inadequate because 33% of respondents thought that exclusive breastfeeding (EBF) lasted for 12 months. (Ogunba & Agwo, 2014) <sup>[27]</sup>.

This study has a lot of limitations. First of all, there is a limited sample size. Second, the convenience factor limits the results; samples were taken at primary health centers and maternity and child health units, which raises the possibility that certain mothers were chosen over others. Nonetheless, since many women in Basra City use the clinics to treat and monitor their newborns.

## 5. Conclusions

1. The total knowledge score for participant's mothers was (70%) poor knowledge, while (30%) had good knowledge about advantages of breastfeeding.
2. The result showed positive attitudes (81%) while (19%) had negative attitudes towards breastfeeding.

3. The main reason for stopping breastfeeding for most mothers in this study was they felt that breast milk was inadequate.
4. We find a statistical association between educational level, occupation of mothers, and total knowledge score at P. value (0.005, 0.001) consequently.

## 6. Recommendation

1. Government health services have to promote and reinforce the value of ongoing training programs for all hospitals and health centers, particularly those engaged in MCH, as these programs have the potential to impact the early breastfeeding patterns of future generations of women.
2. Improve health services provided during pregnancy and early diagnosis and treatment of the mothers to reduce the health problems facing them during and after childbirth that impact breastfeeding.
3. Promoting and broadening infant feeding research and studies that determine problems of mothers towards proper nutrition of babies.

## 7. Finances: None available

## 8. The dispute of interest: No disclosed

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