CODEN [USA]: IAJPBB ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES
http://doi.org/10.5281/zenodo.3374926

Available online at: http://www.iajps.com *Research Article*

PRACTICE OF CHILD WEANING AMONG WOMEN IN SAUDI ARABIA

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Article Received: June 2019 **Accepted:** July 2019 **Published:** August 2019

Abstract:

Background: *Breastfeeding has generally considered by health professionals as the ideal feeding practice for infants. It is the normal way of providing young infants with the nutrients needs for healthy growth and development. The World Health Organization (WHO) and other international health bodies have recommended exclusive breastfeeding for six months after birth.*

Method: *This was a cross-sectional study conducted among 845 of studied mothers, KSA, aiming to assess the practice of child weaning among Saudi females. Pre-designed questionnaires were filled by participants and data was entered and analyzed using the Statistical Package for the Social Science (SPSS Inc. Chicago, IL, USA) version 23. Descriptive statistics were performed. Percentages were given for qualitative variables. The determinant factors were determined using the Chi-square test. P-value was considered significant if P < 0.05.*

Results: *The study results show that more than half of them 52.1% were 25-35 years old, the majority 67.8% was university or more education. The majority of cases reported mixed feeding by 60.4%, absolute breastfeeding in the first 6 months reported in 34.6% of cases. 44.1% of mother reported 4-6 months as a period of breastfeeding The majority (30.9%) reported difficulty of breastfeeding during working hours as a cause of abstinence from breastfeeding.*

Conclusion: *It was concluded that 34.6% of mothers had absolute breastfeeding in the first 6 months and the most common causes of stoppage from breastfeeding were the difficulty of breastfeeding during working hours and missing of support with correlation with mother's age group and work.*

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Please cite this article in press Khalid Ali Alsharif et al., ***Practice Of Child Weaning Among Women In Saudi Arabia.,*** *Indo Am. J. P. Sci, 2019; 06[08].*

INTRODUCTION:

Breastfeeding is the optimal method of infant feeding bringing short- and long-term benefits for infants, mothers, environment, economy and the entire society [1,2]. It is a natural impulse of all mothers as it allows them to express their love, tenderness, and protection of their children. It is vital for a child's survival, maternal health, and child spacing [3]. According to the World Health Organization definition, exclusive breastfeeding means no other food or fluids (including plain water and juices), and the infant consumes human milk with no supplements of any type except for vitamins, minerals, and medication [4, 5]. Breastfeeding is important, particularly in developing countries, because of its relationship with child health and birth spacing. It is well documented that mother's milk is the best food for the newborn child and it has a significant impact on reducing mortality in infants [6]. The World Health Organization (WHO) and other international health bodies have recommended exclusive breastfeeding for six months after birth [7, 8]. It is also recommended that breastfeeding continues for two years or longer together with nutritionally-adequate complementary foods [9, 1, 2]. Optimal breastfeeding of infants under two years of age has the greatest potential impact on child survival of all preventive interventions, with the potential to prevent over 800,000 deaths (13 percent of all deaths) in children under five in the developing world [10]. It provides the ideal food for the healthy growth and development of infants in terms of nutrition, immunological protection, economic, psychological, biochemical, anti-allergic, and anti-inflammatory benefits in addition to the benefit of child spacing as a result of lactation amenorrhea [3, 11]. Weaning is a transitional period from breastfeeding to adult diet and is associated with some concerns such as what food should be given to the child, how and when it should be given [12]. It is a process by which foods other than breast milk is introduced gradually into baby's diet after the first six months of life to initially complement the breast milk and then to wean totally off breast milk [13]. In developing countries, the age of introduction of weaning food is of public health importance because of the risk of diseases such as diarrhea and malnutrition from delayed weaning [14]. Correct infant weaning confers both short-term and long-term benefits to a child such as a reduction in the rate of infections and mortality among infants, improvement in mental and motor development [15]. The proper time for complete weaning has been suggested different in different textbooks, but the time agreed upon in most scientific references is about 24 months [16]. Delay or premature initiation of complementary or weaning foods may lead to deterioration of nutritional status and increased risk of infections, especially diarrheal diseases; a phenomenon termed weaning dilemma [17]. The process of complete weaning by the mother can be either gradual or sudden. Gradual weaning is recommended during the period from 6 months to 2 years which allows for the child to still receive the benefits from breastfeeding, while also consuming the necessary nutrients from the complementary foods [18]. The study showed that 52%of mothers abruptly weaned their children off breast milk completely while only 11.6% gradually weaned their children off breast milk [19]. Poor quality of weaning foods and improper weaning practices predispose infants to malnutrition, growth retardation, infection, diseases, and high mortality. Malnutrition, poor mental as well as physical status of the infant has persisted in infant welfare clinics [19].

OBJECTIVES:

To assess the practice of child weaning among Saudi females and its correlation of different variables.

SUBJECTS & METHODS:

Study design, setting and period: The study is a cross-sectional study which was carried out on a representative sample of mothers in Saudi Arabia from the period of January to July 2019.

Sample size: We expected a high response rate, however, we eliminated all invalid, incomplete responses or any responses that did not match the inclusion criteria with a total of 845 participants.

Inclusion Criteria: Saudi mothers who have given at least 1 birth, Aged more than 18 years old, Complete and correct filling of the form.

Exclusion Criteria: Age less than 18 years old, Women who do not have any children, Incomplete or incorrect filling of the form.

Sampling technique: We used a predesigned revised online questionnaire for collecting the data through unified sheets of complete and multiple-choice questions.

Data collection tools: A pre-designed online questionnaire has been distributed among the targeted population and was filled by participants after a brief introduction and explanation of the aims and objectives of the research to the participants. Sampled participants filled out the self-reported predesigned questionnaire to collect socioeconomic and data related to child weaning including:

- Socio-demographic characteristics of the participants including age, educational status, and employment.
- Data regarding the number of children, number of children that breastfeeding at the period of data collection, type of feeding, a period of breastfeeding and absolute breastfeeding, awareness of mothers regarding the benefits of natural milk.
- If the mother or the child has a chronic disease that prevents breastfeeding, and data concerning health education.

Data management and statistical analysis: The collected data was entered and analyzed using the Statistical Package for the Social Science (SPSS Inc. Chicago, IL, USA) version 23. Descriptive statistics were performed. Percentages were given for qualitative variables. The determinant factors were determined using the Chi-square test. P-value was considered significant if $P < 0.05$.

Ethical consideration: Privacy of mothers' information and confidentiality were carefully maintained throughout all steps of the research.

RESULTS:

Table 1: Shows Socio-demographic characteristics of the studied mothers; the study included 845 of studied mothers, more than half of them 52.1% were 25-35 years old, the majority 67.8% was university or more education. 54 % of the mothers were working.

Table 2: Shows child feeding-related variables; the number of children was ≤ 3 in 70.7% of cases, the majority of cases reported mixed feeding by 60.4% followed by breastfeeding 23.9% and artificial feeding by 15.7%. 44.1% of mother reported 4-6 months as a period of breastfeeding, 22.2% reported 7-12 months, 9.6% reported1-3 months, 9.1% reported 13-24 months and there were 14.9% of mothers reported no breastfeeding. Absolute breastfeeding in the first 6 months reported in 34.6% of cases. Only 15% of mothers believe that artificial feeding is better than breastfeeding. As regards causes of abstinence from breastfeeding; the majority (30.9%) reported difficulty of breastfeeding during working hours followed by missing of support 18.3%, preference of formula milk 8.3%, breastfeeding leads to obesity of the mothers 3.8%, difficulty of weaning 3.7% and 2.7% for breastfeeding leads to breast enlargement and redundancy. The majority of mother 45.9% had no health education.

Figure 1: Shows the percentages of each type of child feeding; mixed both artificial and breastfeeding was the commonest (60.4%), followed by breastfeeding (23.9%) and artificial feeding (15.7%).

Figure 2: Shows the prevalence of absolute breastfeeding in the first 6 months, which was reported in 34.6% of cases.

Figure 3: Illustrates the most common causes of abstinence from breastfeeding among the study population. The majority (30.9%) reported that it was due to the difficulty of breastfeeding during working hours. However, 18.3% could not continue breastfeeding due to lack of financial support. Other causes include preference of formula milk (8.3%), breastfeeding leads to obesity of the mothers (3.8%), the difficulty of weaning (3.7%) and (2.7%) for breastfeeding leads to breast enlargement and redundancy.

Table 3: Shows the relationship between mother's work and type of child feeding, a period of breastfeeding, absolute breastfeeding in the first 6 months and causes of abstinence from breastfeeding. We found a significant correlation between mother's work and all of them ($p<0.05$).

Table 4: Shows the relationship between mother's education and type of child feeding and absolute breastfeeding in the first 6 months. There was a significant relation with the type of child feeding ($p=0.01$) but, no relation found with absolute breastfeeding in the first 6 months and period of breastfeeding ($P>0.05$).

Table 5: Shows the relationship between mother's age group and type of child feeding, absolute breastfeeding in the first 6 months, a period of breastfeeding and causes of abstinence from breastfeeding. There was a significant relation with the type of child feeding and period of breastfeeding ($p<0.05$) but, no relation found with absolute breastfeeding in the first 6 months ($P=0.17$).

Table (1): Socio-demographic characteristics of the studied mothers

Mother age group	Frequency (N=845)	Percent
• < 25	138	16.3
• 25 -	440	52.1
• 35 -	245	29.0
• 45 +	22	2.6
Mother education		
• Primary or illiterate	23	2.7
• Preparatory	44	5.2
• Secondary	205	24.3
• University or more	573	67.8
Mother's work		
• Working	456	54.0
• Housewife	389	46.0
Pregnancy follow up		
• Follow up	650	76.9
• No follow up	195	23.1

Table (2): child feeding-related variables

Variables	Frequency (N=845)	Percent
No. of children		
• ≤ 3	597	70.7
• 4 -	156	18.5
• 6 +	92	10.9
No. of breastfeeding children		
• ≤ 3	687	81.3
• 4 -	112	13.3
• 6 +	46	5.4
Type of child feeding		
• Breastfeeding	202	23.9
• Artificial feeding	133	15.7
• Mixed	510	60.4
Period of breastfeeding (in months)		
• No breastfeeding	126	14.9
• 1 – 3	81	9.6
• 4 – 6	373	44.1
• 7 – 12	188	22.2
• 13 – 24	77	9.1
Absolute breastfeeding in the first 6 months		
• Yes	292	34.6
• No	553	65.4
Mother's believe that artificial feeding is better than **breastfeeding**		
• Yes	127	15.0
• No	718	85.0
Mother's health problems that prevent breastfeeding		
• Yes	52	6.2
• No	793	93.9
Child health problems that prevent breastfeeding		
• Yes	18	2.1
• No	827	97.8
Receiving health education about breastfeeding		
• From the doctors	108	12.8
• From health education team of the hospital	214	25.3
• From the media	38	4.5
• Other sources of health education	97	11.5
• No health education	388	45.9
Causes of abstinence from breastfeeding (N=623)		
• Missing of support	155	18.3
• Preference of formula milk	70	8.3
• The difficulty of breastfeeding during working hours	261	30.9
• Difficulty of weaning	31	3.7
• Breastfeeding leads to obesity of the mothers	32	3.8
• Breastfeeding leads to breast enlargement and redundancy	23	2.7
• More than one cause	51	6.0

Figure (1): Type of child feeding amongstudied mothers

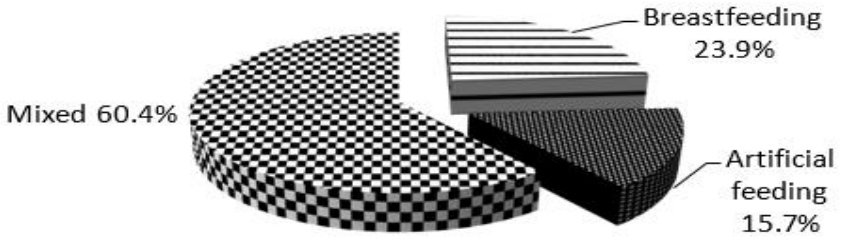

Figure (2): Absolute breastfeeding among the studied mothers, Arar, Northern Saudi Arabia, 2017

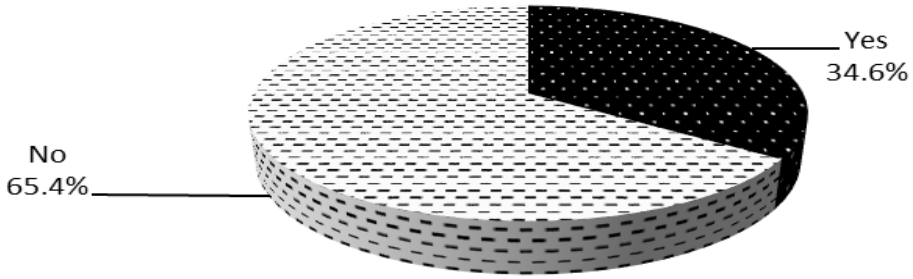

Figure (3): Causes of abstinence from breastfeeding among studied mothers

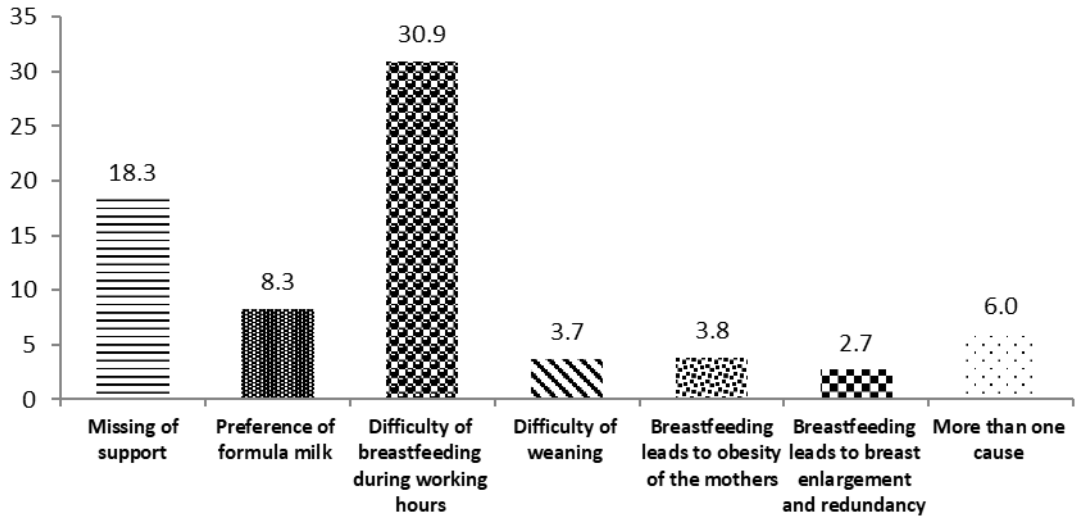

Table (3): the relationship between mother's work and type of child feeding, a period of breastfeeding, absolute breastfeeding in the first 6 months and causes of abstinence from breastfeeding

Variable	Mother's work		Total (N=845)	P value *
	Working mother (N=456)	Housewife (N=389)		
	No. (%)	No. (%)	No. (%)	
Type of child feeding				
• Breastfeeding	92 (20.2)	110 (28.3)	202(23.9)	0.008
• Artificial feeding	68 (14.9)	65 (16.7)	133 (15.7)	
• Mixed	296 (64.9)	214 (55.0)	510 (60.4)	
Period of breastfeeding (in months)				
• No breastfeeding	63 (15.0)	63 (17.8)	126 (16.3)	0.031
• 1 – 3	52 (12.4)	29 (8.2)	81 (10.5)	
• 4 – 6	189 (44.9)	184 (52.0)	373 (48.1)	
• 7 – 12	111 (26.4)	77 (21.8)	188 (24.3)	
• 13 – 24	6 (1.4)	1 (0.3)	7 (0.9)	
Absolute breastfeeding in the first 6 months				
• Yes	144 (31.6)	148 (38.0)	292 (34.6)	0.029
• No	312 (68.4)	241 (62.0)	553 (65.4)	
Causes of abstinence from breastfeeding				
• Missing of support	36 (10.7)	119 (41.6)	155 (24.9)	0.000
• Preference of formula milk	13 (3.9)	57 (19.9)	70 (11.2)	
• Difficulty of breastfeeding during working hours	243 (72.1)	18 (6.3)	261 (41.9)	
• Difficulty of weaning	8 (2.4)	23 (8.0)	31 (5.0)	
• Breastfeeding leads to obesity of the mothers	9 (2.7)	23 (8.0)	32 (5.1)	
• Breastfeeding leads to breast enlargement and redundancy	3 (0.9)	20 (7.0)	23 (3.7)	
• More than one cause	25 (7.4)	25 (9.1)	51 (8.2)	

*** Chi-Square Test was used**

Table (4): relationship between mother's education and type of child feeding and absolute breastfeeding in the first 6 months

Variable	Mother education				Total (N=845)	P-Value *
	Illiterate and primary (N=23)	Preparatory (N=44)	Secondary (N=205)	University (N=573)		
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Type of child feeding						
• Breastfeeding	5 (21.7)	16 (36.4)	65 (31.7)	116 (20.2)	202 (23.9)	0.019
• Artificial feeding	3 (13.0)	6 (13.6)	28 (13.7)	96 (16.8)	133 (15.7)	
• Mixed	15 (65.2)	22 (50.0)	112 (54.6)	361 (63.0)	510 (60.4)	
Absolute breastfeeding in the first 6 months						
• Yes	13 (56.5)	14 (31.8)	67 (32.7)	198 (34.6)	292 (34.6)	0.147
• No	10 (43.5)	30 (68.2)	138 (67.3)	375 (65.4)	375 (65.4)	
Period of breastfeeding (in months)						
• No breastfeeding	1 (6.3)	4 (10.0)	29 (15.0)	92 (17.5)	126 (16.3)	0.209
• 1 – 3	2 (12.5)	6 (15.0)	18 (9.3)	55 (10.5)	81 (10.5)	
• 4 – 6	11 (68.8)	21 (52.5)	108 (56.0)	233 (44.3)	373 (48.1)	
• 7 – 12	2 (12.5)	8 (20.0)	37 (19.2)	141 (26.8)	188 (24.3)	
• 13 – 24	0 (0.0)	1 (2.5)	1 (0.5)	5 (1.0)	7 (0.9)	

*** Chi-Square Test was used**

Table (5): relationship between mother's age group and type of child feeding, absolute breastfeeding in the first 6 months, period of breastfeeding and causes of abstinence from breastfeeding

Variable	Mother's age group				Total (N=845)	P value *
	< 25 (N=138)	25- (N=440)	35- (N=245)	45+ (N=22)		
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Type of child feeding						
• Breastfeeding	54 (39.1)	92 (20.9)	44 (18.0)	12 (54.5)	202 (23.9)	0.000
• Artificial feeding	30 (21.7)	78 (17.7)	25 (10.2)	0 (0.0)	133 (15.7)	
• Mixed	54 (39.1)	270 (61.4)	176 (71.8)	10 (45.5)	510 (60.4)	
Absolute breastfeeding in the first 6 months						
• Yes	49 (35.5)	161 (36.6)	72 (29.4)	10 (45.5)	292 (34.6)	0.179
• No	89 (64.5)	279 (63.4)	173 (70.6)	12 (54.5)	553 (65.4)	
Period of breastfeeding						
• No breastfeeding	29 (22.0)	76 (18.4)	21 (9.6)	0 (0.0)	126 (16.3)	0.003
• 1 – 3	13 (9.8)	41 (9.9)	25 (11.4)	2 (20.0)	81 (10.5)	
• 4 – 6	75 (56.8)	180 (43.5)	112 (51.1)	6 (60.0)	373 (48.1)	
• 7 – 12	14 (10.6)	113 (27.3)	59 (26.9)	2 (20.0)	188 (24.3)	
• 13 – 24	1 (0.8)	4 (1.0)	2 (0.9)	0 (0.0)	7 (0.9)	

*** Chi-Square Test was used**

DISCUSSION:

Breastfeeding (BF) is the ideal way of providing young infants with nutrients they need for healthy growth and development. Breast-milk represents an important source of energy and nutrients in children (6-23 months of age). It can provide half or more of a child's energy needs between the age of six months and up to the end of the first year and one-third of energy needs between the first and second year of the child's life. Moreover, breast-milk is also a critical source of energy and nutrients during childhood illness and decreases mortality among malnourished children [20]. Optimal breastfeeding recommends that when the child is about six months, breastmilk should be supplemented with appropriate solid, semi-solid and soft foods, which are sufficiently calorie-dense and containing enough key nutrients for the child's needs [21].

According to the type of breastfeeding our study found that the majority of cases reported mixed feeding by 60.4% followed by breastfeeding 23.9% and artificial feeding by 15.7%. Similar to our results another study conducted in Riyadh reported that About 51.6% of mothers practiced mixed feeding, 29.4% artificial milk, and only 19% reported exclusive BF [22]. In Central Saudi Arabia, another study conducted among 848 women reported; a mix of both breast and formula feeding 42.7%, breast-feeding 35.6% and only 1.1% for formula feeding [23]. In contrast to our results, In the north of Jordan, another study conducted among 344 women reported; full breastfeeding by 58.3%, mixed feeding was reported by 30.3% and infant formula feeding was reported by 11.4% [24]. Also, another study reported that breastfeeding was the most common type by 51.6% followed by mixed breast/artificial feeding in 47.0% [25]. However, in Arar city, Saudi Arabia another study reported that artificial feeding was the most common by 41.8% followed by mixed feeding in 41% of cases and breastfeeding reported in 17.2% of them [26].

Regarding period of breastfeeding (in months), we found that 44.1% of mother reported 4-6 months, 22.2% reported 7-12 months, 9.6% 1-3 months and 9.1% 13-24 months. There were 14.9% of mothers reported no breastfeeding. In India, another study found that the majority of mothers (53%) breastfed for >6 months followed by 30.4% for 1-6 months and only 16.6% breastfed for less than one month [27]. In Uganda a cross sectional study conducted among 203 respondents, 49.8% had exclusively breastfed their infants for six months and 12.3% for more than six months [28]. In Hafr Al-Batin City, Saudi Arabia another study found that more than two thirds (71.3%) of the study respondents reported breastfed their babies for less than six months followed by 16.8% for more than 1 year and 11. 8% breastfeed for 6-12 months [29].

Our study found that there were 34.6% of cases reported absolute breastfeeding in the first 6 months. Similar to our results, in Riyadh, another study conducted among 517 Saudi mothers found that 37% of them experienced exclusive breastfeeding in the first 6 months after birth [30]. Also, In Tabuk, another

study conducted among 589 mothers reported that 31.4% of mothers breastfeed for the first 6 months of their infant's life [31]. In contrast to our results, another study found that sustained exclusive breastfeeding up to six months without any supplement was reported by only 8.3% of participants [32]. However, in Tanzania, another study reported that the prevalence of exclusive breastfeeding was 58% [33].

As regards causes of abstinence from breastfeeding; the majority (30.9%) reported difficulty of breastfeeding during working hours followed by missing of support 18.3%, preference of formula milk 8.3%, breastfeeding leads to obesity of the mothers 3.8%, difficulty of weaning 3.7% and 2.7% for breastfeeding leads to breast enlargement and redundancy. In Southwestern, Saudi Arabia another study conducted among 384 women reported that breast milk was not sufficient was the most common reasons for stopping breastfeeding in 44% of cases, problem-related to workplace 38.5% and child refusal reported by 13.5% [31]. Another study reported; insufficient breast milk (49.5%), pain or illness (22.5%), job recruitment (12.6%) breast problems (6.3%), and cosmetic shape of breast/body represents (5.4%) [29]. Another study found that a mother's perception of breast milk being inadequate (41%) was the most common reason for stopping breastfeeding, followed by introduction of bottle milk (30%), mother felt that the duration of breastfeeding was adequate (19%), infant taking top feeds (15%), working mother (4%) and embarrassment in breastfeeding reported by 2% [27].

According to the relationship between mother's work and type of child feeding, a period of breastfeeding, absolute breastfeeding in the first 6 months and causes of abstinence from breastfeeding, we found a significant correlation between mother's work and all of them ($p<0.05$). Similar to our results, another study reported that working mothers breastfed less frequently and had a shorter duration than non-workers and that these differences were statistically significant [34]. As regards the relationship between mother's education and type of child feeding and absolute breastfeeding in the first 6 months; there was significant relation with the type of child feeding ($p=0.01$) but, no relation found with absolute breastfeeding in the first 6 months and period of breastfeeding ($P>0.05$). Results from other studies reported that education has no significant effect on breastfeeding status and duration [35, 36]. Regarding to relationship between mother's age group and type of child feeding, absolute breastfeeding in the first 6 months and period of breastfeeding; there was a significant relation with the type of child feeding and period of breastfeeding ($p<0.05$) but, no relation found with absolute breastfeeding in the first 6 months ($P=0.17$). In contrast to our results, another study found that increased maternal age was significantly associated with early initiation of breastfeeding (within 24 hours of delivery) ($p=0.016$); with longer duration (p-value = 0.001) and with the exclusivity of breastfeeding ($p = 0.034$) [34].

CONCLUSION:

It was concluded that 34.6% of mother had absolute breastfeeding in the first 6 months and the most common causes of causes of stoppage of breastfeeding were difficulty of breastfeeding during working hours and missing of support. The period of feeding is correlated with mother's age group and work.

REFERENCES:

1. Bins C, Graham K: Project report of the Perth Infant Feeding Study Mark II (2002–2004). Commonwealth Department of Health and Ageing: Canberra; 2005.
2. James DC, Lessen R: Position of the American Dietetic Association: promoting and supporting breastfeeding. J Am Diet Assoc. 2009, 109: 1926-1942.
3. Labor M, Cooney K, Coly S. Guidelines for Breastfeeding, Family Planning, and the Lactation Amenorrhea Method-LAM. Washington DC: Institute for Reproductive Health, Georgetown University, Department of Obstetrics and Gynecology; 2007.
4. Division of Child Health and Development, World Health Organization. Indicators for Assessing Breastfeeding Practice [reprinted report of an informal meeting 11–12 June 1991]. Publication number WHO/CDD/SER/91.14. World Health Organization, Geneva, 1991.
5. World Health Organization. Indicators for Assessing Infants and Young Child Feeding Practices. Part I. Definitions. Conclusions of a Consensus Meeting Held 6–8 November 2007, in Washington, DC, USA. World Health Organization, Geneva, 2008.
6. Khan, M. E. "Breast-feeding and weaning practices in India." Asia Pac Popup J 5.1 (1990): 71-88.
7. World Health Organization: Exclusive breastfeeding for six months best for babies everywhere. 2011.http://www.who.int/mediacentre/news/statements/2011/breastfeeding_20110115/en/index.html.

8. American Academy of Pediatrics: Breastfeeding and the use of human milk. Pediatrics. 2012, 129: e827-e841.
9. World Health Organization: Planning guide for national implementation of the Global Strategy for Infant and Young Child Feeding. Geneva: WHO; 2007.
10. . Lancet (2013). In UNICEF. Breastfeeding. Available at http://www.unicef.org/nutrition/index_24824.htm Retrieved 30 December 2015
11. Madani KA, Khashoggi RH, Al-Nowaisser A, Nasrat HA, Khalil MH. Lactation Ammenorrhea in Saudi women. Journal of Epidemiology and Community Health. 1994;48:286–9
12. WHO . The optimal duration of exclusive breastfeeding. Report of an Expert Consultation. Vol. 6. Geneva Switzerland: Department of Nutrition for Health and Development, World Health Organisation.; 2001. Mar 28-30, Accessed on November 2017.
13. Shadia M, Bedor MA. Infant feeding and weaning practise of mothers in hail. International Journal of Science and Research. 2013; 2(4):23-30.
14. WHO . Infant and Young Child Feeding. 2010. Accessed on November 2017.
15. Kimani-Murage EW, Madise NJ, Fotso JC, Kyobutungi C, Yatich N. Patterns and determinants of breastfeeding and complementary feeding practises in urban informal settlements, Nairobi, Kenya. BMC Public Health. 2011; 11(6):396-400.
16. . Dettwyler KA. When to wean: biological versus cultural perspectives. ClinObstetrGynecol2004;47(3): 712-23.
17. Osie-Efetie B, Oyibo PG, Okperi BO. Weaning practices among nursing mothers in Ethiope East Local government area of Delta State, Nigeria. Continental Journal of Biomedical Sciences. 2011;5(2):19–28.
18. Hanif HM. Trends in breastfeeding and complementary feeding practises in Pakistan, 1990–2007.International Breastfeeding Journal. 2011; 6(15):20-25.
19. Somiya GSM. Infants feeding and weaning practises among mothers in northern Kordofan State, Sudan. European Scientific Journal. 2014; 10(24):1857-1861.
20. WHO., 2016. Infant and young child feeding. World Health Organization, Geneva, Switzerland. http://who.int/mediacentre/factsheets/fs342/en/#.
21. Michael, F., 1996. A guide to qualitative research for improving breastfeeding practices. Wellstart International, Washington, DC., USA. http://pdf.usaid.gov/pdf_docs/PNABZ605.pdf.
22. Al-Mutairi NF, Al-Omran YA, Parameaswari PJ. Breastfeeding practice and knowledge among women attending primary health-care centers in Riyadh 2016. J Family Med Prim Care. 2017;6(2):392–398. doi:10.4103/jfmpc.jfmpc_243_17
23. Alwelaie, Yazeed A., et al. "Breastfeeding knowledge and attitude among Saudi women in Central Saudi Arabia." Saudi Med J 31.2 (2010): 193-8.
24. Khassawneh, Mohammad, et al. "Knowledge, attitude and practice of breastfeeding in the north of Jordan: a cross-sectional study." International breastfeeding journal 1.1 (2006): 17.
25. Elmougy AM et al.KNOWLEDGE, ATTITUDE AND PRACTICE OF BREASTFEEDING AMONG WORKING ANDNON-WORKING MOTHERS IN SAUDI ARABIA.Egyptian Journal of Occupational Medicine, 2018; 42 (1) : 133-150.
26. Murtadha Bin Abd et al. Breastfeeding Practice in Arar, Northern Saudi Arabia. The Egyptian Journal of Hospital Medicine (October 2017) Vol. 69 (6), Page 2618-2626.
27. Sultania, P., Agrawal, N.R., Rani, A., Dharel, D., Charles, R. and Dudani, R., 2019. Breastfeeding Knowledge and Behavior Among Women Visiting a Tertiary Care Center in India: A Cross-Sectional Survey. Annals of Global Health, 85(1), p.64. DOI: http://doi.org/10.5334/aogh.2093
28. Petit AI: Perception and knowledge on exclusive breastfeeding among women attending antenatal and postnatal clinics. A study from Mbarara Hospital-Uganda, August 2008. Dar Es Salaam Medical Student's Journal. 2010, 16 (1): 27-30.
29. Mohamed AG, Hables RM. Breastfeeding Pattern among Saudi Arabian Women, Hafr Al-Batin City.
30. Alshebly M, Sobaih B. Attitudes of Saudi mothers towards breastfeeding. Sudan J Paediatr. 2016;16(1):31-6.
31. Alzaheb, Riyadh A. "Factors influencing exclusive breastfeeding in Tabuk, Saudi Arabia." Clinical Medicine Insights: Pediatrics 11 (2017): 1179556517698136.
32. Al-Binali, Ali Mohamed. "Breastfeeding knowledge, attitude and practice among school teachers in Abha female educational district, southwestern Saudi Arabia." International breastfeeding journal 7.1 (2012): 10.

33. Nkala, Tiras Eshton, and Sia Emmanueli Msuya. "Prevalence and predictors of exclusive breastfeeding among women in Kigoma region, Western Tanzania: a community based cross-sectional study." International breastfeeding journal 6.1 (2011): 17.
34. Amin T, Hablas H, Al Qader AA. Determinants of initiation and exclusivity of breastfeeding in Al Hassa, Saudi Arabia. Breastfeed Med. 2011;6:59–68. doi: 10.1089/bfm.2010.0018.
35. Khattab MS. Cross-sectional study of a child health care programme at one family practice centre in Saudi Arabia. East Mediterr Health J. 2000;6:246–259.
36. Fida NM, Al-Aama JY. Pattern of infant feeding at a university hospital in Western Saudi Arabia. Saudi Med J. 2003;24:725–729.