

# FACTORS INFLUENCING BREAST FEEDING PATTERNS IN THI- QAR GOVERNORATE

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## ABSTRACT

**Background:** Human milk is the ideal and uniquely superior food for infant for first year of life . Some sociodemographic factor correlate most strongly with the prevalence and duration of breast feeding.

**Objectives:** To determine the prevalence of breast feeding and factors influencing the feeding practices in a study population in Thi qar governorate.

**Design:** Cross – sectional study.

**Methods:** in three hospitals in Thi qar governorate , the mother of infants in the primary health care units of these hospitals , had been randomly selected and interviewed with a questionnaire which included information about the age , sex and mode of feeding for the infants , and the sociodemographic status of the mothers. The sociodemographic variables included , urban / rural residence, educational level , occupation or employment , family income , place and type of delivery and contraceptive use .

**Results:** the prevalence of breast feeding was 90% , and bottle feeding prevalence was 10 % the mean time of weaning was 11 months .Factor that were significantly associated with duration of breast feeding were maternal age , level of education , area of residence , occupation , family income , place and type of delivery and contraceptive use . The most common reasons for refusing to breast feed were in adequate secreted and the mother employment outside the home .

**Conclusions:** the prevalence of women nursing breast feeding was higher than the estimated national data the prevalence of the bottle – feeding was higher in women who needed to work out of their homes and in those with higher educational level

key words : breast feeding , Thi Qar governorate

## INTRODUCTION

Human milk is the ideal and uniquely superior food for infants for the first year of life as the sole source of nutrition for the first 6 month of life (1). The world Health Organization (WHO) recommends exclusive breast feeding for approximately the first 6 month of life , with continued breast feeding a long with appropriate complementary food through the first 2 years of life This recommendation stems from the compelling advantages that breast feeding offers infants , mothers ,and

society (2,3). Breast feeding has been reestablished as the predominant mode of feeding young infants in the United states . Breast feeding initiation rates in 2002 were at on all time high of approximately 70% The number of infants still breast feeding by 6 month decreased to 33% and was even lower by 1 year (approximately 15%).(4) The present incidence of breast – feeding in Australia is over 80% on discharge from hospital, 76% at 6 week, 55% at 3 month,40% at 6 months and 10% at 12 months.(5) In Iraq , the mode of breast feeding is predominant as a pattern of

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## Factors Influencing Breast Feeding Patterns In Thi- Qar Governorate

feeding , but full or complete breast feeding ( only added plain water ) is much more common (48.5%) in infants aged 0-5 months , while exclusive breast feeding (no added food nor fluid ) including water occurred in 13.3% of infants from 0-5 months of age in Iraq.(6) . The proportion of (not breast feed) infants was 7.6 % for infant aged 0-11 months in middle and south governorate of our country in 1997 ( Nutritional status Survey of infants in Iraq , N R I , Oct. 1997.(6) Most women make the decision to breast fed or not during pregnancy . this decision is based on an interaction on the couples knowledge about infant feeding with perception from current fashion together with family and peer influences (7, 8) .Perinatal hospital routines and early pediatric care have a great influence on the successful initiation of breast feeding by promoting prenatal and postnatal education , frequent mother baby contact after delivery , one – on – one advice about breast – feeding technique , demand feeding , coming in , avoidance of bottle supplements , early follow up after delivery , maternal leave and advice about common problems , such as sore nipple (9). The breast feeding is undermined by the mother and baby separation (such as the baby being born by caesarian section , needing oxygen , phototherapy or antibiotics ) , bottle feeding babies in the nursery at night , routine supplemental bottle feeding , conflicting advice from the staff , incorrect infant positioning and latch-on , scheduled feeding , lack of maternal support , delayed follow up , early return to employment , and inaccurate advice for common breast feeding difficulties (10) .On a population basis sociodemographic factor correlate most strongly with the prevalence and duration of breast feeding , as well as the type of milk used by the mother during weaning (8,11). The importance of breast feeding especially in developing countries has been emphasized by many authors .(12,13). However , there appear

to be a decline in breast feeding at present in many countries (14,15,16,17). In the last 10 years , Thi-qar city has experienced rapid socio-economic changes and the expansion of urban areas as a result of migration of peoples from other governorate of the country . There is a lack of data on the pattern of breast feeding in Thi- qar city which prompt me to carry out this study. The aim of the study is verify the prevalence of different patterns of feeding for infants during the first years of life in Thi- qar city through a cross sectional survey and to assess the impact of sociodemographic variable on the patterns of infant feeding .

### **MATERIALS & METHODS**

This cross – section survey was carried out in three main hospitals ( Maternity and Children Hospital, Al Hussein Teaching Hospital , and Shatra General Hospital ) , in thi qar city during the period Aug. 2004- Aug. 2005 , to determine the prevalence of breast feeding and Factors influencing the feeding practices in a study mothers . The mothers were selected by systemic randomization from each hospital. Mothers who had at least one child with the age of 0-12 month included in the study. During their frequent visits to the primary health care unites (PHCU) in these hospital over 1 years period , mothers were asked by a premade questionnaire , about child feeding practices, area of residence , age , party , occupation , education , family income , type and place of delivery , contraceptive , outcome of previous pregnancies , pre- natal care of the breast and at what age and why breast feeding was stopped. The statistical analysis of variable were made by Statistical Package for the Social Sciences (SPSS- version 15) to perform logistic regression in order to determine the factor associated with the duration of breast feeding.(18)

## RESULTS

Of the 2010 mothers interviewed, forty percent of them were between the ages of 25-35 years and with an average of 6.2 pregnancies. Most (67.3%) came from low socioeconomic backgrounds with family income of 93,500, ID/ month / person month. 50% were illiterate, 30% had primary education, 19% had secondary education, and only 1% had university education. Regular employment outside their home occupied 13% -the teaching profession being the most popular. Of the infants 90% were exclusively breastfed initially (Fig.1), the figure dropping to 50% at 3 months, and to 10% at the age of 1 year. Only 8% of babies were exclusively bottle-fed initially, but by 6 months the figure had increased to 30%. By the age of 1 year, 60% of the babies had ceased to receive any breast milk. The cumulative frequency of breast feeding by age is shown in Fig.2. The median age of weaning was 11 months. A quarter of the mothers weaned their children before 7 months and another quarter after 15 months. The majority of mothers (86%) fed their babies on demand with no regard for interval or frequency. These infants were fed whenever they cried during day or night. Women who tried to adopt a regular 3-4 hr Schedule, found their milk supply diminished as nursing frequency was reduced and other infant foods were introduced. All mothers who initially refused to breast feed their infants, were asked about the reason. Table 1 indicates that inadequacy of milk secretion (31.3%) and employment of the mother (26.3%) were the most common causes. Duration of breast feeding was significantly associated with mother's age, her education level, area of residence, family income, occupation, place and type of delivery and contraceptive use (Table2). Numerous other independent variables did not have a significant association with the duration of breast feeding, e.g. parity, sex of the infant, previous pregnancies

and their outcome, prenatal care, night feeding, and regularity of feeding. The area of residence was the most significant influence on the duration of breast feeding. The rural Thi-qarian mothers breast feeding for the longest time with a mean of  $14.2 \pm 2.5$  months, compared with a mean of  $9.6 \pm 3.5$  for urban mothers. The difference was statistically significant ( $p < 0.001$ ). The duration of breast feeding was significantly ( $p < 0.01$ ) associated with the mother's age level of education, and the family income. Advanced maternal age was associated with a longer duration of breast feeding. There was a negative correlation between the level education ( $r = -0.88$ ), family income ( $r = -0.81$ ) and duration of breast feeding, which was also found to be significantly ( $p < 0.001$ ) associated with the mother's occupation. Housewives breast fed the longest with a mean value of  $12.8 \pm 2.3$  months compared with  $6.0 \pm 2.5$  months for mothers working outside home. Mothers who delivered at home nursed for a significantly ( $p < 0.01$ ) longer time than those who delivered in hospital.

The majority of the mothers (90%) stated that they had normal delivery. They breast fed for a longer time ( $11.7 \pm 2.1$  months), than those who had an abnormal delivery ( $9.8 \pm 3.4$  months). The difference between the two groups was statistically significant ( $p < 0.01$ ). The duration of breast feeding in contraceptive users was 7 months less than in the rest of population. The difference between the two groups was statistically significant ( $p < 0.01$ ). Women who used oral contraceptives, breast fed for a shorter period than those who used other methods.

## DISCUSSION

The majority of studied mothers in the present study breast fed their babies, but a great number introduced the bottle feeding too early, a practice to be discouraged. These results are similar to those reported from other developing countries (7,19, 20). Women who said

that they did not have enough milk may not have had the help and support they needed from their family Physiologically the amount of milk a woman produces depends more on the frequency, duration and intensity of infant suckling than on maternal age, nutrition or parity (21,22). Many mothers face obstacles in maintaining lactation because of lack of support from health care professionals and family and the need to return to work.(23) Primary lactation failure is rare, most women can succeed at breast feeding if given adequate information and support, especially in the early postpartum period. (24) No factor more important than a happy, relaxed state of mind worry and unhappiness are the most effective means for decreasing or abolishing breast secretion. Anxiety about "good enough" and amount are common places. A mother needs to feel that the person to whom she turns for a device understands her feeling, empathizes with her, take her concerns seriously and is able to provide sympathetic superior and encouragement. (9) More young thiqarian mothers will achieve academic excellence. They train in various professions and become involved in man power development. These developments will interrupt the practice of regular breast feeding and many of the mothers may resort to the many different baby milk formula which are now readily available in all parts of the country. Therefore, provision should be made for paid maternity leave of at least 4 months after delivery for all such mothers to enable them to breast feed. Also for these who must work a way from home, expressing helps to keep up mothers milk supply and it keeps her comfortable. The mother can carry a clean jar with her to collect the milk that she can bring it home for her baby. The policy of separation the infant from the mother in the early days after delivery in some hospital responsible for failure of breast feeding. Uneducated women, and those with a low income, usually

living in the rural area are less affected by factors curtailing breast feeding.. McCan et al (25) emphasized that breast feeding declines as urbanization, education and standard of living increase, probably related to business and absent time urban mothers. Women who use modern contraception, tend to be predominantly urban, better educated and from middle –or upper-income groups. Most contraceptive methods (IUDs, barrier methods, withdrawal, and abstinence) have no effect on lactation and can be used safely by breast feeding women. Several studies suggest that combined oestrogen – progestin oral contraceptives may reduce the amount of breast milk or the length of lactation. (26,27) Small amounts of steroids from hormonal contraceptives appear in breast milk, and are consumed by infant, but short term effects are rare and minor. (27,28) A significant relationship was observed between the duration of breast feeding and the area of residence, mothers age, level of education occupation, Family income, place and type of delivery, and contraceptive use. These variables should be given priority in community health education. Doctors, nurses, nutritionists and all health worker have an important duty to emphasize constantly to mothers in the ante – natal and out- patients clinics the importance of breast feeding. Child rearing practice with the emphasis on breast feeding should be included in the curriculum of health education for girls' in the secondary schools and colleges. Hospital policies and practices should be altered to promote successful breast feeding. The use of commercial pressure to encourage the widespread use of artificial formula products needs to be investigated. Artificial formulae for infants should be made available only to mothers unable to breast feed.

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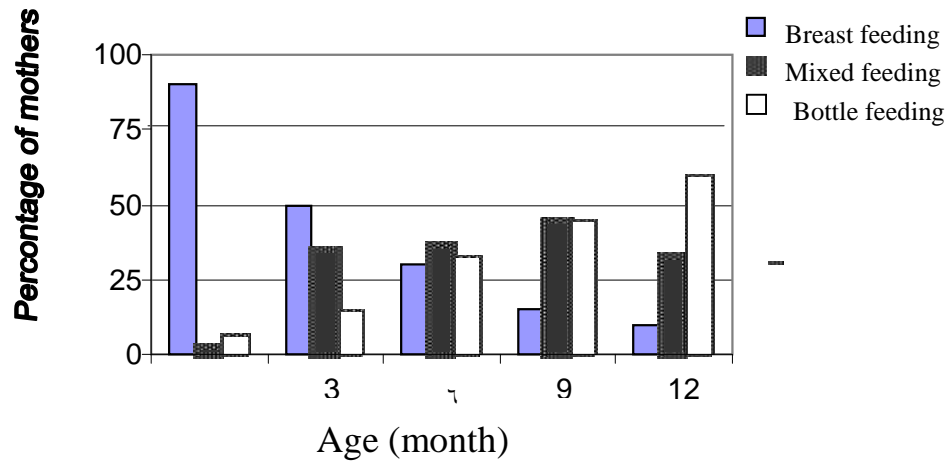


Figure 1- Infant feeding patterns during the first year of life

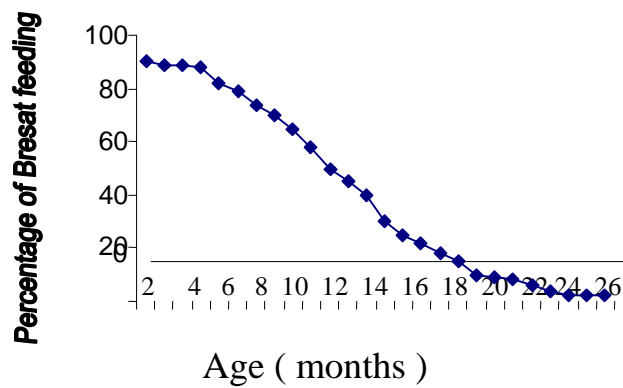


Figure 2. Frequency of mothers breast feeding by age of the child

Table (1) Main reasons for not breast feeding current child

Reason	No.	%
<b>Difficulties in the mothers</b>		
inadequacy of milk secretion	50	31.3
mother given medication	9	5.6
irritation of the nipple	6	3.8
breast abscess	2	1.3
Vaginal bleeding	1	0.6
<b>Personal in convenience</b>		
wanted to return to work	42	26.3
illness of mother	11	6.9
<b>Difficulties in the baby</b>		
ill	18	11.3
could not suck	12	7.5
premature	2	1.3
Social pressure	7	4.4
<b>Total</b>	<b>160</b>	<b>100.0</b>

## Factors Influencing Breast Feeding Patterns In Thi- Qar Governorate

Table (2) Association of social and medical factors with duration of breast feeding for current child .

Variables	N (%)	<3	3-6	7-12	13-18	>18	Mean ±SD
Entire sample	2010	78	290	678	794	170	11.4 ±3.1
<b>*1-area of residence</b>							
Rural	778 (3.8.7)	9(11.5)	39(13.4)	152(22.7)	428(54)	150(88)	14.2± 2.5
Urban	1232(61.2)	69(88.5)	251(86.6)	516(77.3)	366(46)	20(12)	9.6± 3.5
<b>**2-maternal age</b>							
15- 24	582(28.9)	42(54)	123(42.4)	223(33)	179(22.8)	15(8.8)	9.4± 3-3
25-34	686(34.1)	29(54)	152(42.4)	268(33)	288(22.8)	50(29.4)	10.6 ±3.5
35-44	551(27.4)	7(9)	15(5.2)	175(25.8)	280(35.8)	74(43.5)	13.2 ±2.3
> 45andover	90 (4.4)	0 (0)	0 (0)	12 (1.7)	47 (6)	31 (18.2)	15.9± 3.0
<b>**3-maternal education</b>							
Illiterate	928(46.1)	14(17.9)	66(22.7)	202(29.8)	502(63.2)	144(84.7 )	13.6± 2.4
Primary school	622(30.9)	20(25.6)	105(36.2)	274(40.4)	198(24.9)	25(14.7)	10.3 ±3.1
Secondary school	428(21.2)	34(55.1)	109(37.5)	190(28)	94(11.8)	1(0.6)	8.6± 3.7
University	32 (1.5)	10(12.8)	10(4.1)	12(1.8)	0(0)	0(0)	5.3± 3.4
<b>**4- family income per month(I.D.)</b>							
Low income	1354(67.3)	35(2.5)	151(11.1)	390(19.4)	618(30.7)	160(11.8 )	13.5±3.1
Lower middle income	438(21.7)	18(4.1)	70(15.9)	186(42.4)	154(35.1)	10(2.2)	11.1±3.7
Upper middle income	218(10.8)	26(11.9)	68(3.11)	102(46.7)	22(10)	0(0)	9.8± 2.9
High income-	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
<b>*5-occupation</b>							
Housewife	1744(86.7)	28(35.9)	186(64.1)	576(84.9)	784(98.7)	170(106)	12.8± 2.3
Employed	266(13.3)	50(64.1)	104(46.8)	102(15.1)	10(0.3)	0(0)	6.0 ±2.5
<b>**6-place of delivery</b>							
Home	1239(61.6)	19(24)	136(46.8)	381(56.1)	551(49.4)	152(89.4 )	12.6± 3.3
H0spital	771(38.3)	59(76)	154(53.2)	297(49.4)	243(30.6)	18(10.6)	9.5± 2.8
<b>**7-type of delivery</b>							
normal	1792(89.1)	49(62.8)	247(85)	570(84)	758(95.4)	168(98.9 )	11.7± 2.1
abnormal	218(10.9)	29(37.2)	43(15)	108(16)	36(4.6)	2(1.1)	9.8±3.4
<b>**8-contraceptive use</b>							
User	299(14.8)	31(40)	88(30.3)	168(24.8)	12(1.5)	0 (0)	7.0± 2.1
Non – user	1711(85.2)	46(60)	202(69.7)	510(75.2)	782 (98.5)	170(100_)	12.6± 3.2

\*P<0.001

\*\*p<0.01

## REFERENCES

1. Willim W. JR, Myron JI , Judith MS , Robin RD. Current Diagnosis and Treatment in Pediatrics . 18 th edition . Mc Grw Hill , 297-300.
2. Robert MK, Karen JM , Hell BJ , Richard EB . Nelson Essential of pediatrics , 5<sup>th</sup> edition , Elsevier Saunders , section VI , 131-134, 2006
3. Behrman RE, Kleigman RM, Jenson HB. , Nelson Textbook of pediatrics . 17<sup>th</sup> edition Philadelphia , WB Saunders ,150-155 .2004 .
4. American Acadimy of Pediatric Committee on Nutrition : Pediatrics Nutrition Handbook . 6 thed Elk Grove Village IL, American Academy of Pediatric , 2004.
5. Wathliquist ML , Food and Nutrition in Australia , 3<sup>rd</sup> ed , methem Australia , Melbourne ,2000.
6. Nutritional Status Survey of infants of Iraq. MOH /UNICEF, 1998.
7. Amine . Infant feeding patterns and weaning practices J . Royal Soc. Health . 109: 178-180, 1999.
8. Gartner IM etal : Breast feeding and the use of human milk. pediatrics , 2005 , 115. 496 (PMID:1568743).
9. Dann MH: The laction consult problem solving , Teaching and support for the breast feeding family . J ped Health care 2005 , vol. 9(1) : 12 (PMIDI: 15662357)
10. Dewing KG Nutrition , growth , and complementary feeding of the breast fed infant Ped . Clin . North . Am . 48:87-104. 2001
11. Ryan AS etal : Breast feeding continues to increase into new millennium . Pediatrics 2002 , 110 (6) : 110(PMID :12456909)
12. Jelliffe EP. Introducing breast feeding into modern health services J Trop pediat Env Chld Hlth 1999;21:280-283 .
13. Mata L . Breast feeding; Main promotor of infant health. AmJ Clin Nutr 2000; 31: 2058 – 2065 .
14. Jelliffe DB , Jelliffe EP . Recent trend of breast feeding. Ann Rev Public Health 1991; 2: 145-146 .
15. Hofrander Y, Petro Barvazian A . WHO collaborative study of breast feeding , Acta pediatric Scand 2002;5: 556-578 .
16. American Academy of pediatrics . Committee of nutrition. Encouroging breast feeding. Pediatric 1999; 65 : 657-658 .
17. Motzan F. International Review . Trend in infant feeding In developing Countries. Pediatrics 1994 (Suppli ) 4: 658-666v
18. Kim JO . Factor analysis In: Nie NH , Hull CH, Jenkins JG steinbrinner K, Bent DH eds , Statistical package for the social sciences , New York , Mc Graw – Hill , 1985:1-126
19. Nogra ,SA. Vantation in infant feeding practices in Pakistan with socioeconomic stratification . J.Trop. Ped. 1999, 33,103-106.
20. Serdula ,MK .etal . Seasonal differences in breast feeding . rural Egypt .J.Am .Clin. Nutr. 2000.
21. Helsing E.and Savage KF . Breast feeding in practies Oxford University .Press .1998.
22. Breast - feeding patterns , WHO .Technical Pubications .East Mediterranean seen 7, 1999.
23. Jelliffe DB. Epidemiology of under nutrition in Nutrition in the community .DS Molaren chapter 8 , 87-99 .2001.
24. John Bonltan Nutrition in : Practical paeditrics .Robinson MJ .Churchill Livingston , 90-94, 2000.
25. Mc Cann MF , Liskin LS , Piotrow PT , et al . Breast feeding , fertility and Family planning . Pop Rep J 1998 ;9:525-572 .
26. Toddywalla VS , Joshi L, Virka KD . Effect of contraceptive steroids on human lactation . Am J obs , Gunec , 1997 ; 127 : 245 – 249 .
27. Chopra JG . Effect of steroid contraceptives on lactation Am J Clin Nut 1992 ;25 : 1202 –1214 .
28. Nilssons , Nygren KG .Transfer of contraceptive steroids to human milk . Res Reproduction 2001; 11: 1-2-

## دراسة العوامل المؤثرة على طراز الرضاعة الطبيعية في محافظة ذي قار

د. مؤيد ناجي مجيد \*

### الخلاصة

**تمهيداً:** يعتبر حليب الأم الغذاء المثالي للأطفال خلال السنة الأولى من العمر . هنالك مجموعة من الخصائص الاجتماعية تؤثر وبشدة على مدى انتشار الرضاعة الطبيعية . ومدة الرضاعة  
**الأهداف:** تهدف الدراسة إلى تحديد مدى انتشار الإرضاع الثديي ( الرضاعة الطبيعية ) والعوامل المؤثرة على ممارسة الإرضاع في محافظة ذي قار .

**طرق البحث:** في دراسة المقطع العرضي هذه تم اختيار ٢٠١٠ امرأة عشوائياً من الأمهات اللواتي يراجعن وحدات الرعاية الصحية الأولية في ثلاث مستشفيات رئيسية في المحافظة . وقد تم جمع المعلومات باستخدام استمارة استبان أعدت لهذا الغرض تتضمن معلومات عن الرضيع ( الجنس ، العمر ، نمط الرضاعة ) والحالة الاجتماعية ومنطقة السكن للأمهات.

**النتائج:** ان معدل انتشار الرضاعة الطبيعية خلال الدراسة كان ٩٠% ومعدل انتشار الرضاعة في القنينة كان ١٠% للأطفال دون السنة من العمر . وكان الوقت الناصف للاطعام من الارضاع الثديي بعد الولادة ١١ شهر ، وكانت العوامل المعتدة المرافقة مع فترة الإرضاع الثديي هي عمر الوالدة ، ومستوى التعليم ، ومكان الإقامة ، والمهنة ، دخل الأسرة ، مكان ونمط الولادة ، واستخدام مانع الحمل . وكانت أهم أسباب رفض الإرضاع الثديي هي عدم كفاية إفراز الحليب وعمل الأمهات خارج المنزل.

**الاستنتاجات:** إن معدل انتشار الرضاعة الطبيعية أكثر من النتائج المسجلة في الدراسات العالمية الأخرى . وان نمط الرضاعة في القنينة أكثر انتشاراً بين الأمهات الأعلى مستوى ثقافي والأمهات اللواتي يعملن خارج البيت مما يتطلب تنشيط برنامج الرضاعة الطبيعية في هذا الاتجاه.