

Knowledge of Antenatal Women Regarding Breastfeeding: A Descriptive Cross-sectional Study

Juliana Linnette D'Sa¹

Akash C. Koshy*, Bimi Baby*, Jesmi Asok*, Nileema D'Souza*, Sweetie Theresa D'Souza*

Abstract

This descriptive cross-sectional study was conducted among antenatal women in a hospital in Mangalore, India. This study aimed at exploring the knowledge of antenatal women regarding breastfeeding and finding association with selected socio-demographic factors. Fifty primigravidae who were either admitted to the antenatal ward or were attending the Outpatient Department of a tertiary care hospital were selected for the study using convenience sampling. Data were collected using a Breastfeeding Knowledge Questionnaire (BKQ) that had 20 multiple choice questions, developed by the authors. The average mean score (M=12), with an overall mean percentage of 60, indicated that the women had average overall knowledge but lacked knowledge in specific content areas of breastfeeding. It ranged from 18 percent in the area 'nutritional requirements' to 89 percent in the area 'general aspects'. The area duration of breastfeeding had a mean percentage of 44.43 percent, with the least in the area of nutritional requirements (18%). Only 58 percent of the women knew that the duration of exclusive breastfeeding is six months. The knowledge of the women was independent of age, religion, education, occupation, type of family and monthly income. Determining the existing knowledge on breastfeeding will provide a basis for developing effective health education programmes.

Breastfeeding is the unique source of nutrition that plays an important role in the growth, development and survival of infants, and has always been the ideal feeding practice that suits the physiological and psychological needs of the infant (Gupta et al, 2006). It has been estimated that optimal breastfeeding of children under two years of age has the potential to prevent 1.4 million deaths in children under five years of age, in the developing world annually (Black et al, 2008). There is extensive evidence regarding the short-term and long-term benefits of breastfeeding, particularly the reduction of morbidity and mortality due to infections.

Therefore it is essential to encourage the practice of breastfeeding. The World Health Organisation has recommended exclusive breastfeeding for the first six months of life, with supplemental breastfeeding, continuing for two years and longer, along with nutritionally adequate complementary foods (WHO, 2007).

*The authors are: 1. Professor, Maternal and Child Health Nursing Department, College of Nursing, King Saud University, Riyadh, Kingdom of Saudi Arabia. *BSc Nursing Students, Yenepoya Nursing College, Yenepoya University, Deralakatte, Mangalore (at the time of writing this article).*

Despite the established benefits, reports show that globally only 38 percent the infants 0-6 months are exclusively breast fed. Increasing the rate of exclusive breastfeeding in the first six months, up to at least 50 percent, features among the six global targets 2025.

In order to practice successful breastfeeding it is essential that the pregnant women know its importance. Several studies on knowledge and attitude regarding breastfeeding were conducted among antenatal and postnatal women (Chaturvedi & Banait, 2000; Ekambaram et al, 2010). The knowledge of breastfeeding is adequate in some population, reports have shown lack of knowledge in women and poor initiation of breastfeeding in some areas in the country.

Objectives

This study therefore aimed to determine the knowledge of women regarding breastfeeding as measured by a structured knowledge questionnaire and to find if an association existed between knowledge on breastfeeding and socio-demographic variables.

Material and Methods

A descriptive cross-sectional survey design was implemented. Fifty primigravidae who were either attending the antenatal outpatient department or were admitted in a tertiary care hospital in Mangalore city, India were selected using convenience sampling technique. Those primigravidae between 32 and 40 weeks of gestation, who had no obstetrical complications, and were willing to participate in the study were included, while the multigravidae were excluded from the study.

Development of the Breastfeeding Knowledge Questionnaire (BKQ): Knowledge was measured using a researcher-developed BKQ. The percentage of agreement among the five experts who validated the tool was calculated on the basis of which, one item was modified. It was later translated from English to the local language Kannada; back translation was done to establish language validity. It was pre-tested on five antenatal women, after which, reliability, was established ($n=20$) using split half technique and Spearman Brown Prophecy formula, which yielded an $r=0.90$. The BKQ had 20 multiple choice questions in seven content areas: general aspects, exclusive breastfeeding, colostrums, duration, technique, advantages, and nutritional requirement. Each question had four options that carried a score of one for the correct answer and zero for the wrong answer. In addition, there were six demographic questions on age, religion, occupation, type of family and the monthly income.

Ethical consideration: The study received ethical clearance from the Ethics Committee, of the University. After seeking administrative permission from the hospital, the purpose of the study was explained to the women and they were assured anonymity and confidentiality. Informed consent was taken.

Data Collection and analysis: Data collection was done in May 2012. Data were analysed using SPSS 16.0. Frequency and percentage were computed for socio- demographic profile. Mean, median, range, mean percentage and standard deviation was computed for knowledge items, and chi-square was computed to determine association between the knowledge and the socio- demographic variables.

Results

Socio-demographic profile: It was found that maximum percentage of women were in the age group of 17-19 years (42%), and housewives (46%). Majority belonged to Muslim religion (54%), and had completed primary edu-

cation (56%). With regard to the family income, maximum percentage (40%) had monthly income of Rs. 4,000 to 8,000.

Knowledge Scores: The overall mean knowledge score was 12. The median was also 12. The range of scores was from 8-16 and the standard deviation was ± 1.68 . The overall mean percentage knowledge score was 60. As shown in Fig 1, it varied from 18% to 89% in different content areas, with the least in 'nutritional requirements', and the maximum in 'general aspects'.

Top 10 Correct Responses: It is evident from Table 1 that all the women (100%) responded correctly to the items: breastfeeding is the best food for the baby; breastfeeding is the best method of feeding, breastfeeding should be continued for as long as the breast milk is available and the outcome of breastfeeding is a healthy baby. It was also found that all the women knew that burping the baby can prevent vomiting after breastfeeding. Majority of the women knew that the colostrum is lemon yellow in colour (84%) and knew its benefits for the baby (72%). The meaning of exclusive breastfeeding and the importance and technique of breastfeeding also ranked among the top ten correct responses of the women.

Analysis of the items that did not rank among the top ten responses revealed that less than half the percentage of women had knowledge in hygienic aspects during breastfeeding (44%) and, positioning of the baby on the breast (48%). Only 38 percent of women had responded correctly to the items on nutrition of the mother, and an equal percentage reported decreased chances of having breast cancer as one of the advantages of breastfeeding. Although 32 percent women knew that colostrum is secreted after delivery, only 26 percent, which is the least per-

Fig 1: Area-wise mean percentage knowledge scores on breastfeeding

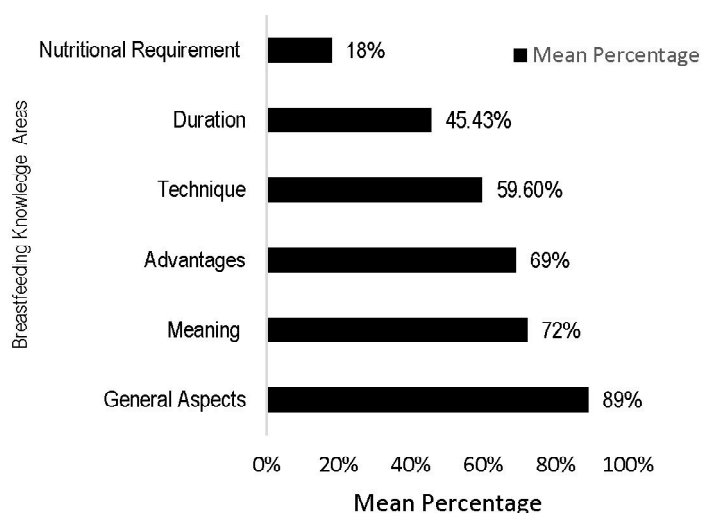


Table 1: Frequency and percentage distribution of top 10 correct responses

S.No.	Responses	Frequency	Percentage
1.	Breastfeed is the best food for the baby	50	100
2.	Breastfeeding is the best method of feeding	50	100
3.	Breastfeeding should be continued as long as breast milk is available	50	100
4.	Prevention of vomiting after breastfeed is by burping the baby	50	100
5.	The outcome of breastfeeding is a healthy baby	50	100
6.	The colour of colostrum is lemon yellow	42	84
7.	Colostrum is needed for the baby to maintain immunity, promote growth and prevent infection	36	72
8.	Exclusive breastfeeding means giving only breast milk	36	72
9.	Importance of burping is that it expels air out	34	68
10.	For burping, the baby should be held upright against the chest	34	68

centage, knew that it is secreted for the first three days following delivery (26%). It is therefore interpreted that the knowledge in these areas are lacking in antenatal women.

Other findings: Only 58 percent of the women knew that the duration of exclusive breastfeeding is six months. A low percentage (32%) responded correctly to the item 'colostrum is secreted soon after delivery'. In relation to advantages, only 38 percent responded correctly i.e. the breastfeeding reduces the chances for breast cancer in the mother. A similar percentage of women knew that it is essential for the mothers to take extra iron and calcium when breastfeeding.

Association between knowledge on breastfeeding and selected socio-demographic variables: The knowledge scores classified as above median and below median were subjected to chi-square test in order to test the hypothesis. There will be a significant association between the level of knowledge of antenatal mothers regarding breastfeeding and selected socio-demographic variables that is age, religion, education, occupation, type of family and monthly income. It was found that the knowledge on breastfeeding was independent of all socio-demographic variables.

Discussion

This study demonstrated that the overall mean percentage of knowledge score was 60, with the mean percentage ranging from 18- 89 percent in the various content areas of breastfeeding. It is a matter for concern that the mean percentage was as low as 18 percent in the area 'nutritional requirement' in the women who were surveyed. Low knowledge in this area can be detrimental to the health of the women, if they do not consume sufficient nutrition. This is evident from the findings of Garg et al (2010), in a

north Indian study where 33.5 percent of women did not increase their diet during pregnancy. The low scores obtained in the areas 'duration' and 'technique' in this study, may point out that there may be difficulties in sustaining breastfeeding.

One important recommendation given by the World Health Organisation is that breastfeeding should start immediately after delivery of the baby and that the infant should be exclusively breast fed for six months thereafter. In this study, although 72 percent knew that exclusive breastfeeding meant giving only breast milk, only 58

percent knew the correct duration. Contrary to this, Shetty & Shetty (2014), found that 71 percent women in the same geographical area knew the duration of exclusive breastfeeding. However, an international study, reported that women had deficient knowledge of breastfeeding. They perceived that it is good to give water to the baby after every breastfeed (Mbwane et al, 2013).

This study also found that all women (100%) knew that breast feed is the best food for the baby, it is the best method of feeding and that it leads to healthy outcome of the baby. Tan et al (2008) found that 74.8 percent of antenatal women knew that breast feed is the best food. Contrary to these findings, Ekambaram et al (2010) reported low knowledge regarding breastfeeding benefits the mothers. Although they knew that breastfeeding leads to a healthy baby, only 38 percent were aware of its advantage to the mother in terms of decreasing the risk of breast cancer. The gaps in the knowledge provides an opportunity for health personnel to promote education in this area, specifically due to the high prevalence of breast cancer in our country.

Importance of colostrum especially in terms of its unique properties and nutritional benefits is well documented (WHO, 2007). This study revealed that majority (72%) of the women knew the benefits of colostrum, similar to other studies in India where the knowledge ranged from 75-90 percent (Subbiah, 2003; Tiwari & Singh, 2007). Among the rural population, it was found that only 35.6 percent of women were unaware of the importance of colostrums (Garg et al, 2010). It is essential for health professionals to impart knowledge to women in areas of deficit, and encourage them to have good practices regarding breastfeeding.

This study found that the breastfeeding knowledge

was independent of all socio- demographic variables: age, religion, education, occupation, type of family and monthly income. Similar results have been reported in a study in India (Shetty & Shetty, 2014). The small sample size limit the generalisability of the study findings.

Conclusion

This study revealed a deficit in knowledge in some content areas of breastfeeding. These content areas need to be considered during the development of breastfeeding educational material. Breastfeeding education should start early in the antenatal period as it is fundamental to the success of exclusive breastfeeding.

References

1. Black RE, Allen LH, Bhutta ZA, Aculfield LE, de Onis M, Ezatti M, Mathers C, Rivera J. Maternal and child under nutrition: global and regional exposures and health consequences. *Lancet* 2008; 371: 243-60
2. Cai, X, Wardlaw T, Brown DW. Global Trends in exclusive breastfeeding. *International Breastfeeding Journal* 2012; 7:12 doi:10.1186/1746-4358-7-12
3. Chaturvedi P, Banait N. Knowledge and attitude regarding breastfeeding in mothers attending antenatal clinics. *Indian Journal of Pediatrics* 2000; 67: 259-62
4. Ekambaram M, Bhat VB, Asif M, Ahamed P. Knowledge, attitude and practice of breastfeeding among postnatal mothers. *Current Pediatric Research* 2010; 14(2): 119-24
5. Garg R, Deepti SS, Padda A, Singh T. Breastfeeding knowledge and practices among rural women of Punjab, India: A community based study. *Breastfeeding Medicine* 2010, 5(6): 303-07
6. Gupta A, Arora V, Bhatt B. The State of World's Breastfeeding: India Report card International Baby Food Action Network (IBFAN), 2006; Asia Pacific, India.
7. <http://www.ncdchild.org/News/World-Health-Organization-Global-Health-Targets-for-2025>.
8. Mbwana HA, Conlon C, von Hurst P. Exclusive breastfeeding: Mothers' awareness and healthcare providers' practices during antenatal visits in Mvomero, Tanzania. *International Journal of Nutrition and Metabolism* 2013; 5(3): 40-49
9. Shetty SB, Shetty SK. KAP study of factors promoting breastfeeding in nursing mothers and pregnant women. *Nitte University Journal of Health Science* 2013; 3(3): 34-37
10. Shirima R, Greiner T, Kylberg E, Gebre-Medhin M. Exclusive breast-feeding is rarely practised in rural and urban. *Public Health Nutrition* 2000; 4:147-154.
11. Subbiah N. A study to assess the knowledge, attitude, practice and problems of postnatal mothers regarding breastfeeding. *Nursing Journal of India* 2003; 94(8): 177-79
12. Tan AE, Choog WK, Leong PY, Ng WM, Yong SL. Knowledge, attitudes and sources of information on breastfeeding among pregnant mothers. *Medicine and Health* 2008; 3(1): 30-37
13. Tiwari V, Singh A. Knowledge, attitude and practice regarding breastfeeding in an urban area of Fazidabad District (UP). *Indian Journal of Preventive and Social Medicine* 2007; 38(1): 18-22
14. World Health Organization: Planning guide for the national implementation of the Global strategy for infant and young child feeding. Geneva. 2007

हिन्दी रचनाएं आमंत्रित हैं

मासिक टी एन ए आई बुलेटिन के हिंदी खंड में प्रकाशन के लिए लघु रचनाओं का स्वागत है। प्रस्तुत की गई सामग्री नर्सिंग व्यवसाय, स्वास्थ्य शिक्षा से संबद्ध हो। आप इसमें अपने रोचक संस्मरण तथा अनुभव भी भेज सकते हैं। प्रकाशन के विचारार्थ सामग्री सकारात्मक सोच से परिपूर्ण होनी चाहिए। स्पष्ट लिखी या टाइप की गई रचनाएं संपादक के नाम भेजी जाएं।

— संपादक

Economic Plan for Acquiring TNAI Membership

With a view to make the TNAI Membership more attractive, the TNAI Council (vide Minutes No. EC/CL/2015/4) have decided to offer an attractive alternative Membership plan which is more simplified and economic for students.

A student opting for the new Membership Plan has to pay just a lump sum Rs. 2,000/- (inclusive of SNA subscription for 4 years, Scholarship Fund and SNA to TNAI Membership fee) and he/ she shall become a full TNAI Member automatically after completion of the course, thus saving substantially and avoiding to pay annual fee every year.

Under the existing rules, at the time of becoming SNAI Member the student pays Rs. 150/- per year plus Rs. 50/- (towards Scholarship Fund) for 1st year, and Rs. 150/- yearly for 2nd, 3rd and 4th years. Again, after completion of the course he/ she is required to pay the TNAI Membership Fee of Rs. 2,200/- to become SNA to TNAI Member.

The new Membership Plan shall be applicable from the academic year 2016-17 although the existing rules for SNA membership shall also remain valid. The Institutions are free to choose either of the Membership plans.

Secretary-General, TNAI