



A Study of Factors affecting the Knowledge and Awareness about Effective Breastfeeding

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ABSTRACT

Aim: To study the knowledge and awareness about breastfeeding in women attending a tertiary care medical center, and correlate it with sociodemographic factors.

Materials and methods: A total of 331 participants were selected and interviewed with a prevalidated questionnaire. Their answers about essentiality and advantages of breastfeeding were evaluated as "wrong," "don't know," and "correct." Spearman's correlation coefficient graph was used to analyze the association of their answers with different sociodemographic factors.

Results: Over 80% participants had correct knowledge about early initiation of breastfeeding within 1 hour, exclusive breastfeeding for 6 months, and importance of colostrums in normally delivered babies; 58% showed lack of knowledge about hazards of prelacteals and initiation of breastfeeding after cesarean section. Advantages of breastfeeding for mothers were known to only 60 to 65% of participants. Our study did not establish any positive or negative correlation between age, parity, education, address, place of delivery, and information providers with knowledge about breastfeeding.

Conclusion: In this study, urban living, higher education, multiparity (i/v/o breastfeeding experience), and hospital delivery of women did not show positive correlation with higher degree of knowledge and awareness about breastfeeding, thus highlighting the need for specifically designed and focused training for the antenatal and postnatal women as well as the society.

Clinical significance: There is an urgent need for prompt and active action to be taken at health care system, community, and policy levels for strategic planning of different programs to improve effective breastfeeding rates. These plans should focus on clearing social myths and taboos and in accordance with local needs of the women.

Keywords: Awareness, Breastfeeding knowledge, Education relationship, Information provide.

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INTRODUCTION

Breastfeeding is a natural gift to every mammalian and it starts at the birth and continues for a species for a specified time. In 19th century, a higher infant mortality rate due to artificial feeding was a public health problem and it was addressed by encouraging breastfeeding and pasteurization of cow's milk. In early 20th century, commercial companies found a market for artificial formula feeds. As a result, by mid-20th century, breastfeeding trend declined and so entire generation of doctors and women grew without knowing or experiencing breastfeeding as a natural way to feed babies.

The World Health Assembly, in 2012, in its resolution 65.6 endorsed a Comprehensive Implementation Plan on maternal, infant, and young children nutrition which specified six global nutrition targets for 2025. The fifth target among them is: Increase rate of exclusive breastfeeding in the first 6 months of life up to 50%.⁵ India's statistics in 2015, from the United Nations International Children's Emergency Fund¹ data, are showing early initiation of breastfeeding within 1 hour in 45% neonates and exclusive breastfeeding rate as 65%. The neonatal mortality rates are 28 per 1,000 live births and under 5 mortality rates between 45 and 50 per 1,000 live births which are significantly high. The World Health Organization (WHO)² has guided specifically the countries that are at or near 50% exclusive breastfeeding targets, to continue to strive for improvement, because of considerably high health and economic benefits of breastfeeding.

Inadequate rates of breastfeeding are due to poor knowledge about proper breastfeeding techniques and advantages of breastfeeding among women, their partners, families, health care providers, and policymakers.² We, as obstetricians, are important part of the WHO mission 2025. Because of counseling of mothers during pregnancy, immediately after child birth and during the postnatal visits, it has shown significant positive effects on improving the breastfeeding rates. So, we decided to undertake this research study to identify the basic knowledge level and barriers and facilitators for successful breastfeeding and thus we can use these data to

design contextualized intervention policies to improve breastfeeding rates among our society.

MATERIALS AND METHODS

Study type: Survey based correlational cross-sectional study.

Study period: 2015 to January 2016. Ethical committee approval was taken before conducting the study.

Study participants: Women attending the outpatient department (OPD) clinic of MGM Medical College and Hospital, Aurangabad, for various reasons.

Sample size: 331 women.

Participant selection: Participants were selected by convenient sampling after introducing the study to them and explaining to them the benefits of participating in this study.

Data collection: The participants, after written consent, were interviewed in a private room in the OPD campus of obstetrics/gynecology department for about 10 to 15 minutes with a prevalidated questionnaire. Participant's confidentiality was respected.

Questionnaire design: The questionnaire consisted of multiple-choice questions to gather data about sociodemographic variables like age, parity, educational status, residence, place of delivery, and information provider. The other part of the questionnaire included questions to test the essential knowledge about breastfeeding and its advantages. The answers were analyzed as "wrong," "don't know," and "correct." The themes of the questions were as follows:

1. Initiation of breastfeeding within ½ to 1 hour after child birth
2. Initiation of breastfeeding within 2 hours of cesarean section
3. Use of different prelacteals and its hazards
4. Health benefits of colostrums
5. Exclusive breastfeeding for first 6 months of life
6. Breastfeeding advantage in infants from recurrent infections
7. Breastfeeding health benefits for the mother
8. Breastfeeding in HIV-positive mothers
9. Contraception and breastfeeding
10. Breastfeeding benefits in protection from breast cancers

As the information gathered in question number 8 was of a specialized condition, it was omitted from the statistical analysis in this study. Though it was not a part of the study, researchers made an attempt to educate the participants about the correct knowledge regarding breastfeeding by counseling and providing them a list of correct answers for their reference.

Statistical Analysis

Spearman correlation coefficient is used to assess the strength and direction of association between two ranked variables. A perfect, monotonically increasing relationship between two variables would result in Spearman correlation coefficient of 1 while a perfect monotonically decreasing relationship would result in Spearman correlation coefficient of -1 (for no ties). In this article, the demographic parameters for subjects are divided into two levels (0 and 1), where 0 corresponds to a parameter value which would correspond to underprivileged subjects which would potentially lead to lack of knowledge about breastfeeding while 1 corresponds to a parameter value which would correspond to privileged subjects which would potentially lead to knowledge about breastfeeding. For example, education has two levels, where 0 corresponds to subjects having high school or lower education while 1 corresponds to subjects having at least college education. A new parameter called overall score is defined as sum of individual parameter values for every subject. Higher the overall score, more privileged the subject is. Once the overall score is calculated for each subject, the subjects are ranked according to the overall score. Their responses are assigned scores in the following manner: Wrong: 1, Don't know: 2, Correct: 3. Spearman correlation is used to assess if higher overall score or higher individual parameter values result in higher scores for the responses and *vice versa*. In other words, the goal is to see if more "privileged" subjects according to our definition are likely to give more correct answers on breastfeeding related questions. A higher correlation coefficient (>0.7) would indicate strong correlation between the privileged status and knowledge about breastfeeding, while a correlation coefficient close to 0 would indicate no relationship between the privileged status and knowledge about breastfeeding. The correlations with response score are analyzed for individual parameter scores as well as overall score.

RESULTS

The sociodemographic profile like age, education, parity, information provider, place of delivery, and address were considered; 18% of the participants were nulliparous and 13% were of age less than 20 years. Higher level of education was received by 64.9% of women participating in this study. Our hospital being a tertiary care center catering to a large area including rural and urban, along with 68.9% of urban women, 31% women were from rural areas. Majority of women (82%) had hospital deliveries, but the information providers were the nonmedical persons in 67.6% women (Table 1).

Table 1: Sociodemographic profile of participants

| Name | Category | Number | Percentage |
|----------------------|-----------------|--------|------------|
| Age | <20 | 46 | 13.8 |
| | >20 | 285 | 86.2 |
| Parity | Nullipara | 61 | 18.4 |
| | Multipara | 270 | 81.5 |
| Address | Rural | 103 | 31.1 |
| | Urban | 228 | 68.8 |
| Education | Up to secondary | 215 | 64.9 |
| | Higher | 116 | 35.0 |
| Delivery place | Home | 57 | 17.2 |
| | Hospital | 274 | 82.7 |
| Information provider | Nonmedical | 214 | 64.6 |
| | Medical | 117 | 35.34 |

Being a tertiary care center, the participants were belonging to rural areas and with less education also

Table 3: Advantages of breastfeeding

| Parameters analyzed | Correct | Wrong | Don't know |
|---------------------------------|-------------|------------|-------------|
| Protection of baby from illness | 256 (77.3%) | 33 (10%) | 42 (12.7%) |
| Maintenance of figure | 213 (64.4%) | 44 (13.3%) | 74 (22.4%) |
| Protection from breast cancer | 190 (57.4%) | 38 (11.5%) | 103 (31.1%) |
| Contraception and breastfeeding | 217 (65.6%) | 51 (15.4%) | 63 (19%) |

Maternal advantages of breastfeeding are less known to women as compared with advantages for baby

Fairly correct knowledge (80–90%) was observed about the facts like early initiation of breastfeeding, exclusive breastfeeding, and importance of colostrums. Around 55 to 65% women were unaware about the maternal benefits of breastfeeding and 67.9% even do not have knowledge that breastfeeding protects the baby from infections through active and passive immunity. There is lot of confusion whether to give prelacteals or not and 58% agreed that they do not know the facts about hazards of giving prelacteals. Wrong concepts were predominant that is around 54%, regarding initiation of breastfeeding after caesarean section which is one of the leading causes of breastfeeding failures in patients delivered by cesarean sections (Tables 2 and 3).

Spearman's correlation coefficient (Graph 1) is almost 0 with variables like address and information provider, thus denying any association between them and knowledge about breastfeeding. In case of variables like parity and contraceptive benefits, the correlation coefficient is shifted toward positive association but still not significant and commentable showing poor association. Education and use of prelacteals are negatively related to the knowledge as shown by Spearman's coefficient of -0.04 . Even if we consider the overall combined scores, there is no strong association between knowledge of breastfeeding with all the six variables.

Table 2: Essential knowledge about breastfeeding

| Parameters analyzed | Correct | Wrong | Don't know |
|--|-------------|------------|-------------|
| Initiation of breastfeeding after vaginal delivery | 266 (80.4%) | 42 (12.7%) | 23 (6.9%) |
| Initiation of breastfeeding after LSCS | 81 (24.5%) | 182 (55%) | 68 (20.5%) |
| Prelacteals (hazards) | 124 (37.5%) | 13 (3.9%) | 194 (58.6%) |
| Importance of colostrums | 301 (90.9%) | 6 (1.8%) | 24 (7.3%) |
| Exclusive breastfeeding for 6 months | 295 (89.1%) | 17 (5.1%) | 18 (5.4%) |

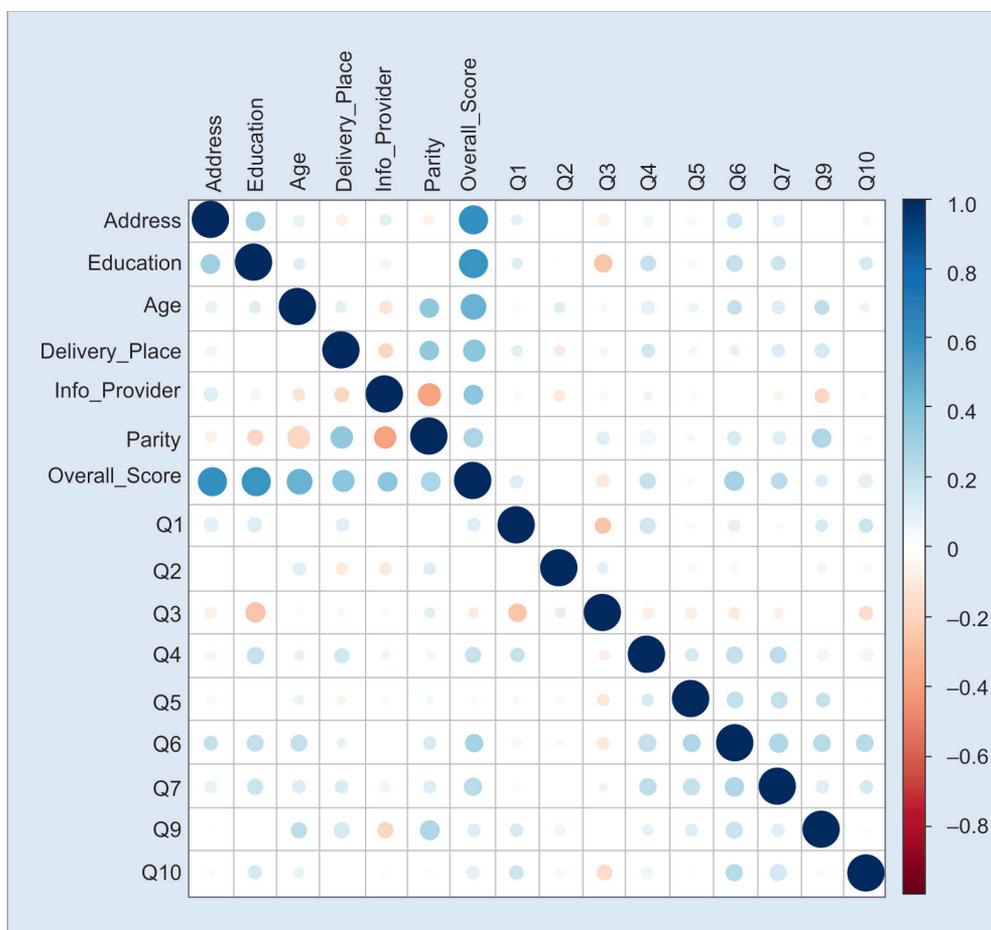
Awareness regarding essential knowledge is satisfactory, but far less than the goal of 100%. Wrong concepts are prevailing about initiation of breastfeeding after cesarean section; LSCS: Lower segment cesarean section

DISCUSSION

Previously published world data show that there is wide variation (50–80%) in essential knowledge about breastfeeding in the public. Early initiation of breastfeeding within 1 hour of birth which is the first important step toward successful breastfeeding is known to 53% in a study by Noor et al,³ as compared with 80.3% participants in this study. This difference may be because the study conducted by Dr Sofia Noor had participants from slum areas which are unserved and underserved pockets in urban areas. Similar variation is found in knowledge about duration of exclusive breastfeeding for 6 months: 16.9% in a study by Syed et al⁴ from UAE, 28% by Noor et al,³ and 88.8% in our study.

There is good awareness about importance of colostrum in the society, i.e., up to 80 to 90% (82%,⁵ 99%,⁶ 83.8%,⁷ and 88% in our study). The knowledge about whether to give prelacteals or not and hazards of giving prelacteals are not known to 55% women from our study. Similar study carried out by Jha et al⁷ in Kakatia Medical College, Warangal Telangana, India, found that there is positive association between level of formal education and not giving prelacteals. Breastfeeding protecting the baby from infection is known to 67% women from our study. Also 60 to 65% are aware about its protective cover in preventing breast cancer and its action as a contraceptive. Similar results are observed in a few other studies across the world.^{4,8,9}

Family members and friends happen to be first information providers about breastfeeding. Younger women usually consult the senior female members in the family and thus the information providers are mainly nonmedical persons. This fact is observed by Mogre et al¹⁰ from Africa, Syed et al⁴ from UAE, and even in our study, i.e., 67.6% women agreed that their mothers, grandmothers, and other relatives have been the information providers



Graph 1: Correlation between tested variables. No strong positive or negative correlation is seen between any of the variables tested

for them. Mogre et al¹⁰ have therefore, suggested that there should be active teaching learning programs conducted by the medical and paramedical workers for this important group of first information providers who are consulted by prospective young mothers about breastfeeding.

To dissipate correct knowledge in the society, the elder generations also need to be included. This fact has been strengthened by a study done by Pandey et al,⁹ when they studied awareness about breastfeeding in two generations of Indian women. When we considered age and parity as variables to correlate with the correct answers, the Spearman's coefficient was very weak. In contrast to this, Obilade et al,¹¹ who conducted a study in two semi-urban areas of Lagos state of Nigeria, found that the number of children and educational levels were statistically significant among the study populations who feel that breastfeeding is essential for the baby.

It is expected that previous experience with breastfeeding in multiparas should improve their knowledge and attitude. Mogre et al¹⁰ have found that the likelihood of breastfeeding the child improves with increase in parity, but the Spearman's correlation coefficient in our study is showing neither any positive nor any negative association.

Formal education always improves the knowledge levels and the women are exposed to a wide range of communication systems, information access, and literature. This fact is revealed in many studies.^{5,12} On the contrary, attitude toward breastfeeding may worsen with literacy as stated by Tan KL⁸ in the study, "Knowledge, Attitude and Practice of Breastfeeding in Klang, Malaysia" as women then search for different alternatives and options. Acharya et al¹² from Nepal studied the effect of educational status on early initiation of breastfeeding by analysis of three consecutive (2001, 2006, and 2011) demographic and health surveys, and found a significant correlation between them. But the authors have suggested that improving educational levels is a long-term goal and we should not wait till then. We should start searching for alternative educational and supportive initiatives like prenatal education. In our study, we could not find such association between formal education and knowledge.

Haroon et al,¹³ in their systematic review, have concluded that special breastfeeding education and/or support increase(s) exclusive breastfeeding rates and decreases no breastfeeding rates at birth, less than 1 year, and 1 to 5 months. This indicates that only formal educa-

tion is not going to improve the knowledge and attitude toward breastfeeding.

A wide range of variation is observed when we compare different variables like age, parity, education, place of delivery, and information provider with breastfeeding knowledge across the world, because in different communities, different myths exist around breastfeeding. The status of women and their roles in different fields are also varied across the world and so are their needs. The social taboos attached with breastfeeding need to be addressed individually and also education and awareness must be imparted to community as a whole. The literacy rates will definitely affect the results of our efforts to achieve the WHO global goals, but simultaneous efforts will be needed at personal levels for the women, their partners, and other family members.

LIMITATIONS OF THE STUDY

The cross-sectional nature of this study makes it difficult to establish causality and can interpret only the association. As the study was health center-based mainly including the antenatal and postnatal women, it may not be representative of the situation in the entire community. Thus, the nature of the study is just a snapshot. It is therefore, imperative to conduct a longitudinal and community-based study to explore the knowledge about breastfeeding practices.

CONCLUSION

This study indicates that so-called “privileged” women according to our definition do not necessarily have higher degree of awareness and knowledge about breastfeeding. In other words, mere urban living, higher education, multiparity, hospital delivery, etc., are not sufficient to educate women about breastfeeding and there is need for a separate specific training focused on this subject.

There has to be a community-based strategic plan to impart knowledge about advantages and essentials of breastfeeding. The health care providers and the community workers together should identify the information needs and different skill sets required for successful breastfeeding practices in the society, so that training programs can be arranged and dissipation of information can be done through communication channels.

CLINICAL SIGNIFICANCE

Our study gives an insight into search for factors other than age, parity, education, and social background that affect practice of breastfeeding. It will be of help to strategy planners to formulate policies and programs at community and health care levels. After completing this study, we have started concentrating on one-to-one

counseling for antenatal and postnatal patients along with their accompanying relatives.

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