

Assessment of Awareness Regarding the Advantages of Lactation Among Nursing Mothers in Lahore

Barira Azfar^{1*}, Muhammad Arif Khan¹, Ammar Ahmad Khan¹, Shaista Jabeen¹, Wajeeha Sultana¹, Aqsa Shafeeq¹, Mehtab Zahid¹, Fariha Azhar¹

¹University Institute of Diet and Nutritional Sciences FAHS, University of Lahore, Lahore, Pakistan

^{1*}bariaazfar0092@gmail.com

Abstract:

Breastfeeding is a basic human activity, vital to infant and maternal health and of immense economic value to households and societies. Among South Asian countries, Pakistan has the lowest rate of exclusive lactation.

Objective:

To assess the awareness regarding the advantages of lactation among nursing mothers in Lahore.

Methods:

A cross-sectional study was conducted at Al-Khidmat Teaching Hospital, Mansoorah, Lahore and completed within 9 months using the convenient sampling technique. The data were collected through pre-tested questionnaire from 374 nursing mothers. Data were analyzed using SPSS version 21.0. Frequencies were calculated, Pearson's chi-square test was applied.

Results:

Out of 374 respondents included in the study, 92.8% were aware of the benefits of lactation. The mean age of the respondents was 28.89±4.69 years. Majority of the respondents (77.5%) belonged to the middle class. Analysis revealed a significant association between maternal education, socioeconomic status, number of children and awareness of females regarding benefits of lactation.

Conclusions:

Majority of the mothers had knowledge about the benefits of lactation for the baby and the mother. Mothers got this information mainly from their relatives. Moreover, a strong association was found between the maternal education and awareness about the advantages of breast feeding among the participants; graduated mothers were more knowledgeable than the illiterate ones.

Key words:

Lactation, awareness, advantages of breast feeding, nursing mothers.

Introduction:

Lactation is a basic human activity, vital to infant and

maternal health and of immense economic value to households and societies. According to World Health Organization (WHO) breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infant whereas lactation is the synthesis, and secretion of milk which is also an integral part of the reproductive process with important implications for the health of mother. Furthermore, WHO and United Nations Children's Fund (UNICEF) recommends that infant should be exclusively fed up to first 6 months of life and continuing to breast feed for up to 2 years of life combined with safe, age-appropriate feeding of solid, semi-solid and soft foods to achieve optimal growth, development and health.¹ Lactating within first hour of life can reduce neonatal mortality rate by 31%, worldwide.² In South Asia, only 24-26% of babies in Pakistan, Bangladesh and India are breastfed within the first hour of life.³ According to UNICEF, only 39% of infants are exclusively breastfed for first six months of life and 58% of 20-30 months old infant benefit from continued breastfeeding in developing countries.⁴ Lactation has many potential benefits for the neonate as well as the mother. The composition of human milk is uniquely suited to the infant, both in its nutritional composition and in the non-nutritive bioactive factors that promote survival and healthy development. In 100ml of human milk the proportion of nutrients is; lactose (7.4g), proteins (1.1g), fat (3.4g), energy (65 kcals) and minerals (0.1g).⁵ Colostrum which is a yellowish sticky fluid produced at the end of pregnancy till a few days after birth, is rich in antibodies and prevents the infant from infectious diseases.⁶ Lactation also enhances sensory and cognitive development and is one the most cost effective ways to reduce infant morbidity and mortality from diarrheal disease, respiratory disease and other infections. Later in life, breast-feeding

brings continuing benefits in terms of lower rates of obesity and reduced risk of chronic diseases such as hypertension and other cardiovascular diseases.⁷ Studies have showed that breast fed babies are more intelligent, have enhanced academic performance and they become smarter than formula fed babies, also diarrheal disease is three to four times more likely to occur in formula fed infants than in breastfed ones. Infant formula milk is for special dietary use solely as a food for infants by reason of its simulation of human milk or its suitability as a complete or partial substitute for human milk but it is costly, not as efficiently utilized as human milk, some babies have problem tolerating some nutrients and its nutritional content depends on proper preparation.^{8,9,10,11} Lactation also offers health advantages for the nursing mother, including an earlier return to pre-pregnancy weight, reduced risk of post-menopausal osteoporosis, type 2 diabetes mellitus, breast cancer and ovarian cancer and helps to space pregnancies.^{7,12} It is very important to assess whether the nursing mothers are aware of the advantages of lactation as it will have a great impact on their child's growth and development if they continue feeding till two years of age. Awareness is basically a state or condition of being aware; having knowledge or consciousness.¹³ A number of factors influence mother's practice such as ethnicity, maternal age, maternal employment, maternal education, socioeconomic status, infant health issues, maternal health, parity, method of delivery, and cultural practices.¹⁴

A study conducted in 2017 by Warillea EB et al. in South Sudan stated that 43.5% mothers were aged between 21-25 years and 48.2% had primary education. 55.5% had 2-4 children. 76.8% mothers had knowledge about advantages of lactation and initiated it within the first hour after delivery. Important factors associated with exclusive breastfeeding were the number of children and maternal education.¹⁵ Aisha R et al. performed a study which showed that 65% mothers got information about benefits of colostrum from relatives, friends and media while 35% were informed by health professionals whereas 39% respondents were unaware of its advantages. Only 9% of the respondents were aware of its importance in enhancing growth and development of the infant and

preventing it from infectious diseases while 6% were aware that it is very nutritious for the neonate. 35% of the mothers believed it to be harmful for the neonate. Many respondents were illiterate and belonged to rural areas.¹⁶ In 2017, results of a study executed by Archer LE et al. showed that 67% mothers knew that lactation strengthens the love bond between the mother and the infant. Some also knew about its benefits for the mother that it helps to regain pre-pregnancy weight rapidly and reduces the risk of diabetes. Other advantages were known only by few mothers.¹⁷ Kamath SP et al. conducted a study in Southern India in 2016 and concluded that 96.3% mothers were aware that mother's milk is healthier than the formula milk. Whereas, 61.1% mothers knew that it is more economical. However, mothers lacked awareness about the nutritional composition of breast milk and its importance in enhancing the infant's immune system and preventing occurrence of infectious diseases.¹⁸ In Iran, Haqiqhi M et al. observed that out of 201 mothers aged between 18 to 45 years, 80% were housewives. 46% respondents were either graduates or post-graduates. 19.4% of the respondents were well aware of the advantages of lactation while 69.2% had very little awareness. There was a significant relationship ($P < 0.05$) between maternal education and knowledge about benefits of lactation.¹⁹ Majority of mothers had inadequate knowledge and attitude towards breast feeding. Age, education, occupation, economic status, religion and type of family were found to be significant associates of their knowledge & attitude as revealed by the results of a study done by Girish S et al.²⁰

The current study aimed to identify whether nursing mothers were aware of the advantages of lactation or they practice it as a cultural norm. This will help to develop appropriate educational material to create awareness among mothers about the importance of continuing lactation till the infant is two years of age to ensure optimal health of the infant as well as the mother.

Methods:

A descriptive cross-sectional study was conducted at the outpatient department of Al-khidmat teaching hospital Mansoorah, Lahore, over a period of nine months. A total of 374 nursing mothers were selected in the study using convenient sampling technique.

Mothers who were not lactating their child or mother suffering from any chronic illness were excluded from the study. Data were collected using a pre-tested, questionnaire and weight of the mother and infant was measured using OMRON HN289 digital scale to the closest measure of 0.1 kg for optimum accuracy in accordance with the WHO standards. Data were analyzed using statistical package for social sciences (SPSS) version 22.0. Frequencies were calculated and Pearson chi-square test was applied to evaluate the association of maternal education, socioeconomic status and the number of children with the knowledge of benefits of lactation among the nursing mothers. P value less than 0.05 was considered to be significant.

Results:

The average age of mothers included in the study was 28.89 years, with minimum age being 18 years and maximum 45 years, respectively.

Table 1 represents the education of the 374 nursing mothers. Among those 34% were graduates, 25.1% were post-graduates, 23.3% were either matric passed or below and 17.6% were illiterate.

Education	Frequency	Percent
Illiterate	66	17.6
Matric or below	87	23.3
Inter or graduate	127	34.0
Post-graduate	94	25.1
Total	374	100.0

Table 1: Education of Mother

Table 2 represents the relationship between education of the 374 respondents and their knowledge about lactation. 92.8% respondents had knowledge about benefits of lactation, while 7.2% respondents were unaware of it. Of the 92.8% respondents having awareness, 32.9% were either inter passed or graduates while 14% were illiterate. Whereas, out of 7.2% respondents who were unaware, 3.5% were illiterate while 0.3% were post graduates.

		Knowledge about the benefits of Lactation		Total	p-value
		Yes	No		
Education	Illiterate	53 (14%)	13 (3.5%)	66 (17.6%)	0.000
	Matric or below	78 (20.9%)	9 (2.4%)	87 (23.3%)	
	Inter or graduate	123 (32.9%)	4 (1.1%)	127 (34%)	
	Post-graduate	93 (24.9%)	1(0.3%)	94 (25%)	
	Total	347 (92.8%)	27 (7.2%)	374 (100%)	

Table 2: Association between education and awareness about the benefits of lactation

Table 3 represents the relationship between education of the 374 respondents and their awareness about breastfeeding duration. 0.3% of respondents believed that infants should be fed till 4 months of age, 2.7% believed that it should be continued till the infant is six months old, 10.4% and 86.6% of the total respondents believed that lactation should be continued till the infant is twelve months old and twenty four months

old, respectively. Of the 86.6% respondents, 28.9% were either inter passed or graduates while 15.2% were illiterate.

		Duration of Breastfeeding				Total	p-value
		0-4 Months	0-6 Months	0-12 Months	0-24 Months		
Education	Illiterate	1 (0.3%)	3 (0.8%)	5 (1.3%)	57 (15.2%)	66 (17.6%)	0.396
	Matric or below	0 (0%)	2 (0.5%)	12 (3.2%)	73 (19.5%)	87 (23.3%)	
	Inter or graduate	0 (0%)	4 (1.1%)	15 (4%)	108 (28.9%)	127 (34%)	
	Post-graduate	0 (0%)	1 (0.3%)	7 (1.9%)	86 (23%)	94 (25.1%)	
Total		1 (0.3%)	10 (2.7%)	39 (10.4%)	324 (86.6%)	374 (100%)	

Table 3: Association between education and opinion about duration of lactation

Table 4 represents the relationship between education of the 374 respondents and their awareness about exclusive breastfeeding for first 6 months of life. 83.7% of the respondents were aware of it, out of which, 27.2% were

inter passed or graduates while 16.3% were illiterate. Whereas, 16.3% respondents were unaware of it, out of which, 6.7% were inter passed or graduates while 1.3% were illiterate.

		Opinion about exclusive breastfeeding for the first 6 months		Total	p-value
		Yes	No		
Education	Illiterate	61 (16.3%)	5 (1.3%)	66 (17.6%)	0.102
	Matric or below	75 (20.1%)	12 (3.2%)	87 (23.3%)	
	Inter or graduate	102 (27.2%)	25 (6.7%)	127 (34%)	
	Post-graduate	75 (20.1%)	19 (5.1%)	94 (25.1%)	
Total		313 (83.7%)	61 (16.3%)	374 (100%)	

Table 4: Association between education and awareness about Exclusive breastfeeding for first 6 months

Table 5 Indicates the relationship between the socioeconomic status of the 374 respondents and their knowledge about benefits of lactation. 92.8% respondents had knowledge about benefits of lactation while 7.2% respondents were unaware of it.

Of the 92.8% respondents having awareness, 74.9% belong to the middle class while 2.4% belong to the upper class. Whereas, out of 7.2% respondents who were unaware, 4.5% belonged to the lower class while 2.7% belonged to the middle class.

		Knowledge about benefits of lactation		Total	p-value
		Yes	No		
Socioeconomic Status	Lower Class	58 (15.5%)	17 (4.5%)	75 (20%)	0.000
	Middle Class	280 (74.9%)	10 (2.7%)	290 (77.5%)	
	Upper Class	9 (2.4%)	0 (0%)	9 (2.4%)	
Total		347 (92.8%)	27 (7.2%)	374 (100%)	

Table 5: Association between socioeconomic status and awareness about the benefits of lactation

Discussion:

This study revealed that a larger percentage of women (92.8%) had awareness regarding the advantages of lactation as compared to the study conducted previously by Warillea EB which showed that 76.8% respondents were aware of the benefits of breastfeeding. This indicates that the level of awareness has increased among mothers over the years.¹⁵ Also, the major source of information regarding benefits of colostrum (21.1%) and exclusive breastfeeding (38.5%) as well as the overall benefits of lactation (47.9%) for the infant and the mother were the relatives. These findings are similar to that of Aisha R *et al.*¹⁶ A study conducted by Archer LE *et al.* suggested that 67% of the mothers knew breastfeeding strengthens the love bond between the baby and mother which has elevated now as suggested by the current study (98.7%). Mothers were also aware that it helps regain pre-pregnancy weight more rapidly (89%) as well as prevent them from type 2 diabetes. These findings are identical to that of the current study.¹⁷ The knowledge of mothers about mother's milk being the most cost-effective method of feeding was low previously as analyzed by Kamath SP *et al.* Whereas, now it has improved to 97.1% as evaluated by this study.¹⁸ This study exhibited that maternal education level had significant association with awareness regarding the advantages of lactation among mothers, which is backed by the findings of Haqhihi M *et al.*¹⁹ Girish S *et al.* found that the socioeconomic status of the family had statistically significant relationship to the knowledge of mothers about the benefits of lactation which was similar to findings of this study.²⁰

Conclusions:

Majority of the mothers had knowledge about the benefits of lactation for the baby and the mother. Mothers got this information mainly from their relatives. The significance of lactation in maintaining health of the infant and mother were largely known by the mothers belonging to the middle class families. Moreover, a strong association was found between the maternal education and awareness about the advantages of breastfeeding among the participants; graduated mothers were more knowledgeable than the illiterate ones. Strategies for improving the knowledge and practice of mothers regarding breastfeeding till the infant is two years of age, are required.

References:

- 1- World Health Organization, 2016. Exclusive breast feeding. Cited on November 25, 2016. Available at: <http://>.
- 2- Lee A, Davies P, Mackerra D, Stanton R. EAT FOR HEALTH Infant Feeding Guidelines Information for health workers. Australia National Health and Medical Research Council. 2012.
- 3- The state of the world's breastfeeding report card. Initiation of breastfeeding within 1 hour. New Delhi: International Baby Food Action Network Asia, 2012. Cited on November 25, 2016. Available at: <http://www.worldbreastfeedingtrends.org/reportcard/RC-IB.pdf>.
- 4- United Nations Children's Fund, 2015. Nutrition. Cited on November 25, 2016. Available at: http://www.unicef.org/nutrition/index_24824.html
- 5- Park K. Park's textbook of preventive and social medicine. Ed 23rd. Jabalpur India: M/s Banarsidas Bhanot; 2015: 630.
- 6- World health organization, 2016. Breastfeeding. Cited on November 25, 2016. Retrieved from: <http://www.who.int/topics/breastfeeding/en/>.
- 7- Hurst N. Breastfeeding. Manual of Neonatal Care, 7th ed. Lippincott Williams & Williams 2012:263-8.
- 8- Lucas A, Morley R, Cole TS, Lister G, Payne LC. Breast milk and subsequent IQ in children bore pattern, The Lancet Journal 2013; 33(9):261-4.
- 9- Ten steps to successful breastfeeding Baby-friendly hospital initiative, 2012. Benefits of Breastfeeding for the Infant. Cited on November 28, 2016. Available at: <http://www.tensteps.org/benefits-of-breastfeeding-for-the-infant.shtml#preventsdiarrhoea>.
- 10- Food and Drug Administration. Food Advisory Committee meeting on infant formula. Available from U R L : http://www.fda.gov/ohrms/dockets/ac/02/briefing/3852b1_01.htm.
- 11- American Pregnancy Association promoting pregnancy wellness, 2017. Cited on July 12, 2017. Available at: <http://americanpregnancy.org/breastfeeding/breastfeeding-andbottle-feeding/2017>.

- 12- Kramer MS, Kakuma R. The optimal duration of exclusive breastfeeding. In *Protecting infants through human milk* 2004 (pp. 63-77). Springer, Boston, MA.
- 13- Dictionary.com. Awareness, 2016. Cited on November 28, 2016. Available at: <http://www.dictionary.com/browse/awareness>.
- 14- Vijayalakshmi P, Susheela T, Mythili D. Knowledge, attitudes, and breast feeding practices of postnatal mothers: A cross sectional survey. *International journal of health sciences*. 2015 Oct;9(4):364.
- 15- Warille EB, Onyango FE, Osano B. Knowledge and practice of exclusive breastfeeding among women with children aged between 9 and 12 months in Al-Sabah Children Hospital, Juba, South Sudan. *South Sudan Medical Journal*. 2017;10(1):12-6.
- 16- Aisha R, Batool F, Sultana S. Knowledge, Attitude and Practices about Colostrum Feeding among Pregnant Women in Military Hospital Rawalpindi of Pakistan. *Open Journal of Nursing*. 2016 Apr 19;6(04):309.
- 17- Archer LE, Dunne TF, Lock LJ, Price LA, Ahmed Z. Breastfeeding in Samoa: A Study to Explore Women's Knowledge and the Factors which Influence Infant Feeding Practices. *Hawai'i Journal of Medicine & Public Health* 2017; 78: 1.
- 18- Kamath SP, Garg D, Khan M, Jain A, Baliga BS. Perceptions and Practices regarding Breastfeeding among Postnatal Women at a District Tertiary Referral Government Hospital in Southern India. *Scientifica*. 2016;2016.
- 19- Haghighi M, Varzandeh R. Maternal Knowledge and Attitude toward Exclusive Breastfeeding in Six Months after Birth in Shiraz, Iran. *International Journal of Pediatrics*. 2016;4(11):3759-67.
- 20- Girish S, Gandhimathi M. Primipara Mother's Knowledge, Attitude and Practice of Breastfeeding. *International Journal of Advanced Nursing Science and Practice*. 2015 Jun 10;2(1):pp-41.