

Knowledge and Practice of Exclusive Breast Feeding among Postnatal Mothers: A Community Based Cross Sectional Study

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Abstract

Background: Breastfeeding is the cornerstone of child survival, nutrition, and development and maternal health. The World Health Organization (WHO) recommends exclusive breastfeeding (EBF) for the first 6 months of life, followed by continued breastfeeding with appropriate complementary foods for up to 2 years or beyond

Materials and Methods: A cross sectional study was carried out in rural areas of Haryana between May 2022 to June 2022. The sample size of the consist of 100 post-natal mothers belongs rural areas of Haryana. The data was collected using structured knowledge questionnaire and practice check list on breast feeding from the post-natal mothers after getting written informed consent. Interview technique was adapted to collect the data from the postnatal mothers, the average time to collect the data was 45 minutes. The investigators maintained the confidentiality of the data and the followed the ethical principles of Helsinki declaration.

Results: The present study results shows majority of post-natal mothers had poor knowledge (60%) and poor practice on breast feeding (70%). There was significant association between knowledge and source of information ($\chi^2 = 23.04$, $p = 0.000$) and there was significant association between practice and previous knowledge regarding breast feeding ($\chi^2 = 12.31$, $p = 0.000$).

Conclusion: The study results shows that there was a lack of knowledge, and poor practices regarding all attributes of breastfeeding among postnatal mothers in infant feeding. Regarding knowledge of breastfeeding, there is very less percentage of postnatal mothers having knowledge about exclusive breastfeeding and there is need for planned teaching intervention on breast feeding for post-natal mothers.

Keywords: Knowledge, Practice, Breast feeding, Post-natal mothers, Rural areas

Date of Submission: 02-01-2023

Date of Acceptance: 15-01-2023

I. Introduction

Breastfeeding is the cornerstone of child survival, nutrition, and development and maternal health. The World Health Organization (WHO) recommends exclusive breastfeeding (EBF) for the first 6 months of life, followed by continued breastfeeding with appropriate complementary foods for up to 2 years or beyond.¹

Breastfeeding as an intervention was identified by the Lancet neonatal survival series that can reduce 55%–87% of all-cause neonatal mortality and morbidity.² Studies have reported that breastfeeding reduces neonatal deaths, particularly due to infections³ such as diarrhea,⁴ neonatal sepsis,⁵ and pneumonia.⁶ Breastfeeding also has long-term benefits in the form of improved intelligent quotient, obesity, diabetes, and hypertension.⁷ All mothers should be supported to initiate breastfeeding as soon as possible after birth, within the 1st h after delivery.⁸

Compared to infants who initiated breastfeeding within 1 h after birth, infants who initiated breastfeeding 2–23 h after birth had a 33% greater risk of neonatal mortality and infants who initiated breastfeeding after 24 h after birth had a 2.19-fold greater risk of neonatal mortality.⁹ Despite various initiatives being taken world over,^{10,11} to improve breastfeeding, it was noted that only 45% of world's newborns

and 42% of newborns in South Asia initiated breastfeeding within 1 h of birth.¹² In India,¹³ only 41.6% of newborns were put to breast within 1 h of birth.

Breastfeeding rates vary among regions in India.¹⁴ Multiple factors such as sociodemographic and obstetric characteristics, availability of health services, and cultural beliefs may have an impact on breastfeeding rates.¹⁵

The present study was undertaken to assess the knowledge and practices of breastfeeding among postnatal mothers in rural areas of Haryana.

II. Materials and Methods

Study Design: A cross sectional study was carried out in rural areas of Haryana between May 2022 to June 2022.

Study Location: Rural areas of Gurugram districts such as Bhorakalan, Kasan, Pataudi villages.

Study Duration: 2 months

Sample size: 100

Sample Size Calculation: The sample size was estimated using open epi software with following input parameters registered deliveries in PHC and CHC of 3 villages = 200, proportion = 10%, Precision = 5%, confidence interval = 95% with these parameters estimated sample size was 83 considering the non response rate of 15% the sample size was increased to 100.

Subjects & selection method: The samples were selected using non probability purposive sample technique.

Instruments: The tool is divided into 3 sections Section A- demographic profile, Section B- Structured knowledge questionnaire, Section C- Practice check list.

Section A- This section consists of items such as age, family income, previous knowledge on breast feeding, source of information, type of family, religion.

Section B: This section consists of 20 items related to knowledge on breast feeding. The reliability of the tool was estimated by using split half technique which was found to be 0.73.

Section C: The section consists of 30 items related to practice of breast feeding among breast feeding mothers. The reliability of the tool was estimated by using inter-rater reliability method and it was found to be 0.81.

Inclusion Criteria:

1. Post natal mothers above 21 years of age.
2. Those who are willing to participate in the study.

Exclusion Criteria:

1. Maternal problems which prevent from breast feeding the child.

Procedure Methodology:

The postnatal mothers identified using birth register maintained at the PHC, CHC respective villages. Home visit was done to assess the knowledge and practice of breast feeding among post-natal mothers. The data was collected using structured knowledge questionnaire and practice check list on breast feeding from the post-natal mothers after getting written informed consent. Interview technique was adapted to collect the data from the postnatal mothers, the average time to collect the data was 45 minutes. The investigators maintained the confidentiality of the data and followed the ethical principles of Helsinki declaration.

Statistical Analysis:

Data entered into Microsoft Excel and analyzed using descriptive statistics like frequency, percentages, Mean and SD and inferential statistics such as chi square test.

III. Results

Table 1 Sample Characteristics

n= 100

Variables		f	%
Age	Mean ± SD	26± 3.1	
Family Monthly income	Rs10,000 &Below	49	49
	Rs 10,001 – Rs 15,000	24	24
	Rs. 15,001 – Rs 20,000	16	16
	Rs 20,001 – Rs 25,000	7	7
	Rs. 25,001 &Above	4	4
Previous knowledge regarding	Yes	58	58

Breast feeding	No	42	42
Source of Information	Literature	12	12
	Health Personnel	28	28
	Friends & Relatives	40	40
	Mass Media	20	20
Type of family	Nuclear	45	45
	Joint	25	25
	Extended	18	18
	Single parent	12	12
Religion	Hindu	62	62
	Muslim	17	17
	Christian	15	15
	Sikhs	6	6

Table 2: Knowledge and practice score of breast feeding among postnatal mothers

Scores	Mean	S.D.
Knowledge	7.72	2.08
Practice	21.45	4.21

Table 2 shows knowledge and practice mean scores of breast feeding among post-natal mothers. The mean knowledge score was 7.72 with S.D. of 2.08 and mean practice score was 21.45 with S.D. of 4.21.

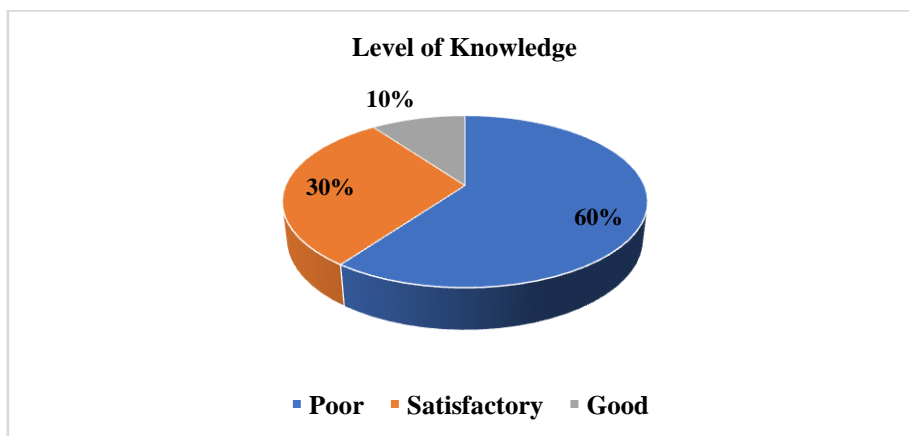


Figure 1: Level of Knowledge on breast feeding among post-natal mothers.

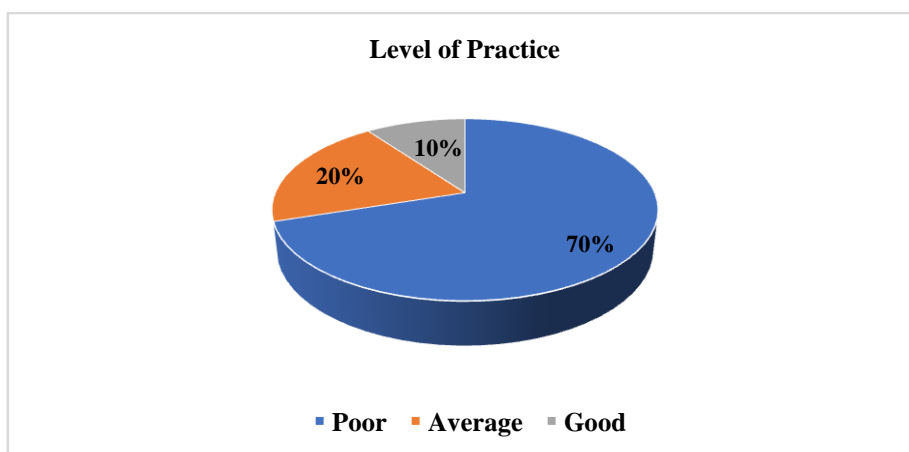


Figure 2: Level of Practice on breast feeding among post-natal mothers.

Table 3: Association between demographic variables and Knowledge on breast feeding.

Demographic Variables		Total	Above Mean (22)	Below Mean (78)	Chi Square Test
Family Monthly income	Rs10,000 &Below	49	7	42	$\chi^2 = 3.776$ D.f. = 4 p=0.437
	Rs 10,001 – Rs 15,000	24	8	16	
	Rs. 15,001 – Rs 20,000	16	4	12	
	Rs 20,001 – Rs 25,000	7	2	5	
	Rs. 25,001 &Above	4	1	3	
Previous knowledge regarding Breast feeding	Yes	58	15	43	$\chi^2 = 1.200$ D.f. = 1 p=0.273
	No	42	7	35	
Source of Information	Literature	12	2	10	$\chi^2 = 23.04$ D.f. = 3 p=0.000*
	Health Personnel	28	15	13	
	Friends & Relatives	40	3	37	
	Mass Media	20	2	18	
Type of family	Nuclear	45	12	33	$\chi^2 = 0.296$ D.f. = 3 p=0.862
	Joint	25	4	21	
	Extended	18	4	14	
	Single parent	12	2	10	
Religion	Hindu	62	12	50	$\chi^2 = 2.138$ D.f. = 3 p=0.544
	Muslim	17	6	11	
	Christian	15	3	12	
	Sikhs	6	1	5	

The data presented in Table 3 portrays association between demographic variables history and knowledge on breast feeding. Pearson Chi-square test was used to calculate the association. There was significant association between knowledge and demographic variables such as source of information ($\chi^2 = 23.04$, p=0.000).

Table 4: Association between demographic variables and Practice on breast feeding.

Demographic Variables		Total	Above Mean (25)	Below Mean (75)	Chi Square Test
Family Monthly income	Rs10,000 &Below	49	9	40	$\chi^2 = 8.086$ D.f. = 4 p=0.088
	Rs 10,001 – Rs 15,000	24	11	13	
	Rs. 15,001 – Rs 20,000	16	2	14	
	Rs 20,001 – Rs 25,000	7	2	5	
	Rs. 25,001 &Above	4	1	3	
Previous knowledge regarding Breast feeding	Yes	58	22	36	$\chi^2 = 12.31$ D.f. = 1 p=0.000*
	No	42	3	39	
Source of Information	Literature	12	6	6	$\chi^2 = 5.028$ D.f. = 3 p=0.169
	Health Personnel	28	5	23	
	Friends & Relatives	40	10	30	
	Mass Media	20	4	16	
Type of family	Nuclear	45	12	33	$\chi^2 = 1.191$ D.f. = 3 p=0.755
	Joint	25	6	19	
	Extended	18	3	15	
	Single parent	12	4	8	
Religion	Hindu	62	17	45	$\chi^2 = 1.105$ D.f. = 3 p=0.775
	Muslim	17	3	14	
	Christian	15	3	12	
	Sikhs	6	2	4	

The data presented in Table 4 portrays association between demographic variables and practice on breast feeding. Pearson Chi-square test was used to calculate the association. There was significant association between practice and demographic variables such as Previous knowledge regarding Breast feeding ($\chi^2 = 12.31$, $p = 0.000$).

IV. Discussion

The present study results show mean age of post natal mothers was 26. The current study findings were supported by study conducted by Kumar & Mundhra¹⁶ who reported majority of post-natal mothers belongs age between 26-30. Majority of them had previous knowledge on breast feeding. Similar study findings were reported by Kamath et al.¹⁷

The present results shows that main source of information about breast feeding among post-natal mothers was friends and relatives. The current study findings were supported by study conducted by Kumar & Mundhra¹⁶ who reported major source of breast feeding for post-natal mothers was friends and relatives.

The present study result shows majority of post-natal mothers had poor knowledge and practice on breast feeding. The current study findings were supported by study conducted by Thomas et al.¹⁸ and Vijayalakshmi et al.¹⁹ they reported poor knowledge and practice on breast feeding among post natal mothers.

V. Conclusion

Our results depict that there is a lack of knowledge, and poor practices regarding all attributes of breastfeeding among postnatal mothers in infant feeding. Regarding knowledge of breastfeeding, there is very less percentage of postnatal mothers having knowledge about exclusive breastfeeding and there is need for planned teaching intervention on breast feeding for post-natal mothers.

Reference

1. World Health Organization. Global Strategy for Infant and Young Child Feeding. Geneva: World Health Organization; 2003. Available from: <http://www.apps.who.int/iris/bitstream/10665/42590/1/9241562218.pdf>.
2. Darmstadt GL, Bhutta ZA, Cousens S, Adam T, Walker N, De Bernis L, et al. Evidence-based, cost-effective interventions: how many newborn babies can we save? *Lancet* 2005;365:977-88.
3. Edmond KM, Kirkwood BR, Amenga-Etego S, Owusu-Agyei S, Hurt LS. Effect of early infant feeding practices on infection-specific neonatal mortality: An investigation of the causal links with observational data from rural Ghana. *Am J Clin Nutr* 2007;86:1126-31.
4. Lamberti LM, Fischer Walker CL, Noiman A, Victora C, Black RE. Breastfeeding and the risk for diarrhea morbidity and mortality. *BMC Public Health*. 2011;11 Suppl 3(Suppl 3):S15.
5. Ashraf RN, Jalil F, Zaman S, Karlberg J, Khan SR, Lindblad BS, et al. Breast feeding and protection against neonatal sepsis in a high risk population. *Arch Dis Childhood* 1991;66:488-90.
6. Lamberti LM, Zakarija-Grković I, Walker CL, Theodoratou E, Nair H, Campbell H, et al. Breastfeeding for reducing the risk of pneumonia morbidity and mortality in children under two: A systematic literature review and meta-analysis. *BMC Public Health* 2013;13 Suppl 3:S18.
7. Horta BL, Victora CG. Long-term Effects of Breastfeeding. A Systematic Review. Geneva: World Health Organization; 2013. Available from: https://www.apps.who.int/iris/bitstream/handle/10665/79198/9789241505307_eng.pdf?sequence=1.
8. World Health Organization. Protecting, Promoting and Supporting Breastfeeding in Facilities Providing Maternity and Newborn Services. Geneva: World Health Organization; 2017. Available from: <https://www.apps.who.int/iris/rest/bitstreams/1091116/>
9. Smith E, Hurt L, Chowdhury R, Sihna B, Fawzi W, Edmond K. Delayed breastfeeding initiation and infant survival: A systematic review and meta-analysis. *PLoS One* 2017;12:e0180722.
10. World Health Organization. Breastfeeding Advocacy Initiative. For the Best Start in Life. Geneva, New York: World Health Organization; 2015. Available from: https://www.apps.who.int/iris/bitstream/handle/10665/152891/who_nmh_nhd_15.1_eng.pdf?sequence=1.
11. World Health Organization. Protecting, Promoting and Supporting Breastfeeding in Facilities Providing Maternity and Newborn Services the Revised Baby-friendly Hospital Initiative. Geneva: World Health Organization; 2018 from <https://apps.who.int/iris/bitstream/handle/10665/272943/9789241513807-eng.pdf?ua=1>.
12. UNICEF. From the First Hour of Life: Making the Case for Improved Infant and Young Child Feeding Everywhere. New York, USA: UNICEF; 2016.
13. International Institute for Population Sciences (IIPS) and ICF. 2017. India Fact sheet. National Family Health Survey (NFHS-4), 2015-16: India. Mumbai: IIPS. Available from: <http://www.rchiips.org/NFHS/pdf/NFHS4/India.pdf>.
14. International Institute for Population Sciences (IIPS) and ICF. 2017. IState Fact sheet Uttarakhand. National Family Health Survey (NFHS-4), 2015-16: India. Mumbai: IIPS. Available from: http://www.rchiips.org/NFHS/pdf/nfhs4/ut_factsheet.pdf
15. Ogbo FA, Dhami MV, Awosemo AO, Olusanya BO, Olusanya J, Osuagwu UL, et al. Regional prevalence and determinants of exclusive breastfeeding in India. *Int Breastfeed J* 2019;14:20.
16. Kumar R, Mundhra R. A cross-sectional study of knowledge, attitude, and practice toward breastfeeding among postnatal mothers delivering at a tertiary care center in Garhwal, India. *Int J App Basic Med Res* 2021;11:64-9.
17. Kamath SP, Garg D, Khan MK, 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.
18. Thomas S, Poornima S, Vinay M. Knowledge, attitudes, and practices of mothers regarding breastfeeding: A cross sectional study in selected rural area of Mandya District, Karnataka. *Natl J Res Community Med* 2017;6:151-7.
19. Vijayalakshmi P, Susheela T, Mythili D. Knowledge, attitudes, and breast feeding practices of postnatal mothers: A cross sectional survey. *Int J Health Sci (Qassim)* 2015;9:364-74.