

## Neglect of Exclusive Breast Feeding Practice: A Cause of Concern among Lactating Mothers in Garhwal Region of Uttarakhand, India

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Received: 02-01-2023 / Revised: 11-02-2023 / Accepted: 01-03-2023

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Conflict of interest: Nil

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### Abstract

**Background:** The correct knowledge, attitude and practice of breast feeding has proven to reduce illness and deaths in children. So, this study aimed to find the same among women in a hilly region of Uttarakhand.

**Material and Methods:** This cross sectional study was done in women attending the immunization clinic at a tertiary care centre. Consecutive sampling was done to interview 1000 women by administering a semi-structured questionnaire. Data entry was done in MS Excel 2013 and data analysis was done using STATA 17 software.

**Results:** In this study, a substantial percentage of participants (27%) did not follow exclusive breast feeding practices. Among the women who initiated breast feeding, most of them did it within the recommended duration of an hour of birth (73.4%). Most common reason for delay in initiation of breast feeding was lower segment caesarean section. Alarming finding of the study was most participants (81.7%) thought that breast feeding should be stopped after six months of age and also if the child falls ill. Higher birth order of the child was significantly associated with appropriate breast feeding practice among lactating mothers.

**Conclusion:** More focus should be laid on counselling of lactating women who are primi-gravida and had lower segment caesarean section regarding appropriate breast feeding practices.

**Keywords:** Breastfeeding, Colostrum, tertiary care, Uttarakhand.

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### Introduction

According to united nations international children's emergency fund (UNICEF), breastfeeding, initiated within the first hour of birth, provided exclusively for six

months, and continued up to two years or beyond with the provision of safe and appropriate complementary foods, is one of the most powerful practices for promoting child survival and wellbeing. [1]

According to world health organisation (who), breast milk is safe and contains antibodies which help fight against many childhood illnesses. It meets the infant's energy needs and provides all the nutrients needed for the first months of life and hence considered as an ideal food. Breastfed children are less likely to be overweight or obese and less prone to chronic diseases like diabetes mellitus later in life and score better on intelligence tests. Also, mothers who breastfeed have a reduced risk of ovarian and breast cancers. More than 8,20,000 children could be saved annually if all children of 0-23 months were sufficiently and correctly breastfed. However, only 40% of infants who are less than six months of age are exclusively breast fed. [2]

The knowledge, attitude and practice of breast feeding among lactating mothers varies and may depend on a lot of factors like educational status, socio-economic status, age, number of children already borne, working status, cultural values and belief systems including traditions, etc. So, it is essential to factor in the effect of these variables. Very few studies are available about the knowledge, attitude and practice of breast feeding among lactating mothers of Uttarakhand. Therefore, it was felt necessary to conduct a study in this region to assess the knowledge, attitude and practices with regard to breast feeding among lactating mothers and also to identify the barriers to breast feeding among lactating mothers.

### Material & Methods

**Study Design:** This is a cross-sectional, the immunization clinic functions on three days a week and vaccinates on an average of 30 beneficiaries per working day with vaccines prescribed under the national immunization schedule.

**Study Setting:** This is a hospital based study conducted at the immunization clinic, Hemwati Nandan Bahuguna (HNB) Base Hospital, Srikot, Uttarakhand, India

**Study Participants:** Women with at least one child under two years of age and attending immunization clinic at hnb base hospital.

**Inclusion Criteria:** Women who have at least one child under two years of age.

**Exclusion Criteria:** Participants who were not willing to provide written informed consent and who could not comprehend interview questions.

### Variables:

**Dependent Variables:** Maternal knowledge, attitude and practice of breast feeding. Independent variables: maternal age, education, etc.

**Data Sources:** A semi-structured interview schedule was administered and data regarding socio-demographic characteristics, obstetric history, breast feeding history and knowledge, attitude and practices of breast feeding was collected. Written informed consent was taken from the participants prior to the interview. Privacy was maintained during the study by interviewing the caretakers in an isolated room and confidentiality was maintained. Any additional queries, if present were addressed after the interview.

**Sample Size:** All participants meeting the inclusion criteria during the six months duration of data collection were included in the study.

**Statistical Analysis:** The completed questionnaire was checked for completeness and consistency and coded. Data entry was done using ms excel 2013. The univariate association between the breast feeding practices and the independent variables were analysed with chi-square test/fischer's exact test for proportions and p value of <0.05 was considered as significant, data analysis was performed using Statistical Package for Social Sciences (SPSS) Version 20.0 Software (SPSS Inc., Chicago IL).

### Results

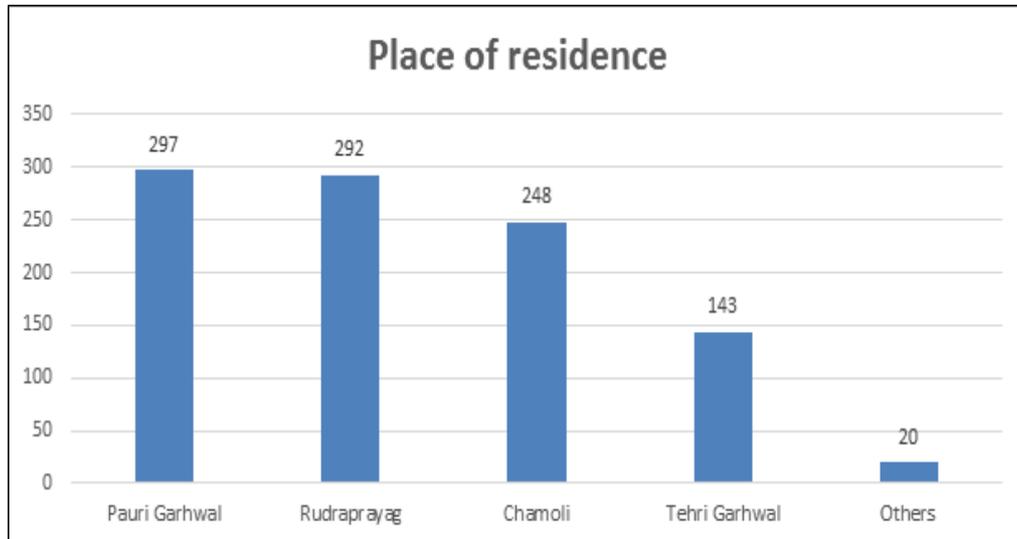
The mean age of the study participants was 25.8 years. Majority of the participants (32.9%) were educated up to higher

secondary/intermediate followed by graduation and post-graduation. (Table-1).

**Table 1: Distribution of Participants by Socio-Demographic Characteristics**

S. No.	Variable	Results	
1	Age (In Years)- Mean (±SD)	25.8(3.83) Range: 18 – 40 Years	
2	Education N (%)	Illiterate	16 (1.6)
		Primary School	16 (1.6)
		Middle School	74 (7.4)
		High School	136 (13.6)
		Higher Secondary/ Intermediate	329 (32.9)
		Graduate	278 (27.8)
	Post-Graduate/Professional	151 (15.1)	

Participants Included In The Study Resided In Four Districts Of Uttarakhand As Shown In Figure-1.



**Figure 1: Distribution of Participants According To Place of Residence**

Majority of the study participants were Primi-gravida (59.5). Mode of delivery was normal vaginal in majority of the participants (67.2).(Table – 2)

**Table 2: Obstetric History of the Study Participants**

S. No.	Variable	N (%)	
1	Birth Order of The Child	1	595 (59.5)
		2	324 (32.4)
		3	77 (7.7)
		4	4 (0.4)
2	Mode of Delivery	Normal Vaginal	672 (67.2)
		LSCS	378 (37.8)
3	Gender of the Child	Male	521 (52.1)
		Female	479 (47.9)

\*LSCS – Lower Segment Caesarean Section

Majority of the participants initiated breast feeding within the first hour of birth (73.4%). The most common reason for the delay in breastfeeding initiation was lower segment caesarean section of the participants (n=171). Breast feeding was done by majority of the participants (73%)

followed by lactogen/formula feeding and cow milk. In participants who initiated lactogen feeding, majority of them employed katori spoon-feeding method, whereas bottle feeding was used mostly when cow milk was given. (Table – 3)

**Table 3: Breast Feeding History Of Study Participants**

S. No.	Variable		N (%)	
1	Time of Initiation of First Feed	≤ 1 Hour	734 (73.4)	
		>1 Hour	266 (26.6)	
2	Range of Time of Initiation of First Feed		< 1 To 72 Hours	
3	Reasons for Delay in Initiation of First Feed (N=268)	LSCS	171 (63.8)	
		Primi-Gravida (Difficulty in Feed)	70 (26.1)	
		Adoption	2 (0.7)	
		Twins	1 (0.4)	
		Reasons Could Not Be Elicited	24 (9.0)	
4	Mode of Feeding	Breast Feed	730 (73)	
		Lactogen/Formula Feed	258 (25.8)	
		Cow Milk	12 (1.2)	
5	Method of Feeding	Lactogen (N = 258)	Bottle Feeding	85 (32.9)
		Cow Milk (N = 12)	Katori Spoon Feeding	173 (67.1)
			Bottle Feeding	9 (75.0)
		Katori Spoon Feeding	3 (25.0)	

In the present study, majority of the participants (79.8%) were aware of appropriate practices of child feeding as importance of colostrum, exclusive breast feeding and its effect on child's health, protection against various diseases and carcinomas by breast milk, about posture of mother during feeding, methods of increasing breast milk production, importance of eye contact and awakening child during feeding. Majority of the participants (81.4%) are of the opinion that breast feeding increases bonding between

mother and child and it prevents diseases in children. When enquired about weaning practices, 81.7% participants responded that breast feeding should be stopped when the child attains 6 months of age and 81.6% participants responded that breast feeding should be stopped if the child suffers from any illness. About 54% participants feel that alternate feeding practices can be adopted. About 68.3% participants feel that breast milk is easily digested by the child. (Table-4).

**Table 4: Knowledge, Attitude And Practices Of Study Participants Regarding Breast Feeding And Its Benefits**

S. No.	Variable	Response	N (%)
1	Knowledge about colostrum	Yes	798 (79.8)
		No	202 (20.2)
2	Knowledge about exclusive breast feeding	Yes	798 (79.8)
		No	202 (20.2)
3	Benefits of ebf on child's health	Yes	798 (79.8)
		No	202 (20.2)

4	Practice alternate feed	Yes	540 (54)
		No	460 (46)
5	Knowledge on increasing breast milk production	Yes	797 (79.7)
		No	203 (20.3)
6	Posture of mother during feeding needs to berelaxed	Yes	798 (79.8)
		No	202 (20.2)
7	Eye Contact Needs to Be Made During Breast Feeding	Yes	798 (79.8)
		No	202 (20.2)
8	Child needs to be awakened during breast feeding	Yes	798 (79.8)
		No	202 (20.2)
9	Breast feeding increases bonding between mother and child	Yes	814 (81.4)
		No	186 (18.6)
10	Breast feeding prevents diseases	Yes	815 (81.5)
		No	185 (18.5)
11	Breast feeding needs to be stopped if child suffers from any illness	Yes	816 (81.6)
		No	184 (18.4)
12	Breast feeding needs to be stopped after child attains 6 months of age	Yes	817 (81.7)
		No	183 (18.3)
13	Breast milk is easily digested by child	Yes	683 (68.3)
		No	317 (31.7)
14	Breast milk protects child against diseases	Yes	798 (79.8)
		No	202 (20.2)
15	Breast milk protects child against carcinomas	Yes	799 (79.9)
		No	201 (20.1)

Bi-Variate Logistic Regression Was Done To Assess The Association Between Knowledge Of Study Participants Regarding Exclusive Breast Feeding And Selected Socio-Demographic Characteristics. Age And Mean Years Of Education Were Taken As Continuous Variables. Birth Order And Gender Of The

Child Were Categorised As Given In Table-5. Variables With P –Value <0.25 Were Assessed With Multi – Variate Logistic Regression Model. It Was Seen That As The Birth Order Of The Child Was Increasing, Participants Had Significantly Higher Positive Knowledge Regarding Exclusive Breast Feeding. (Table-5)

**Table 5: Association of Knowledge Regarding Exclusive Breast Feeding and Selected Socio-Demographic Characteristics of Study Participants**

S. N.	Variable	Knowledge Of Exclusive Breast Feeding		Unadjusted Odds Ratio 95% CI (P-Value)	Adjusted Odds Ratio 95% CI (P-Value)
		Yes N= 798 (79.8%)	No N=202 (20.2%)		
1	Age	-	-	1.01 0.97 1.06(0.49)	-
2	Mean years of education	-	-	0.89 0.80 1.02(0.09)	0.93 0.82 1.06(0.27)

3	Birth order of the child	1 (N=595, 59.5%)	448	147	2.0 1.45 – 2.88 ( $<0.05$ )	2.1 1.49 – 2.93 ( $<0.05$ )
		$\geq 2$ (N= 405, 40.5%)	350	55		
4	Gender of the child	Male (N=522, 52.2%)	416	106	0.99 0.74 – 1.36 (0.93)	-
		Female (N=478, 47.8%)	382	96		

### Discussion

In The Present Study, Only Three Fourth Of The Participants Initiated Breast Feeding Within An Hour Of Birth. Similar Finding Was Seen In A Study In Aurangabad, Wherein 60.5% Of Women Started Breast Feeding Within 2 Hours. Main Reason For Delay In Breastfeeding Was Caesarean Section, As Seen In Few Other Studies Also. [3,4,5] Globally, 3 In 5 Babies Are Not Breastfed Within First Hour Of Birth Even Today. [6] A Systematic Review Conducted By Agency For Healthcare Research And Quality Concluded That The Rates Of Breastfeeding Initiation And Duration Improved With Breastfeeding Supportive Practices And With The Increase In Knowledge Of Mothers Regarding Its Benefits. [7] Hence, Appropriate Counselling Should Be Given To Pregnant Women During Routine Ante Natal Care Visits.

In This Study, Only 73% Participants Practiced Breast Feeding And The Remaining Adopted Either Lactogen Feed/Cow's Milk. In A Study Conducted In Netherlands Also, 73% Of The Mothers Practised Breastfeeding At Birth. [8]

In The Present Study, Majority Of The Participants (80%) Were Aware Of Importance Of Colostrum And Its Effect On Child's Health. Similar Findings Were Seen In Studies Done By Vijayalakshmi P Et Al [9] Andkrishnendu M Et Al, [10] Wherein Majority Of The Mothers Felt

That Colostrum Is Important To Maintain Immunity Of The Baby.

More Than 80% Participants Felt That Breast Feeding Should Be Stopped When The Child Attains Six Months Of Age And Also If The Child Suffers From Any Illness, Which Is A Very Alarming Finding. Similar Concerning Findings Were Seen In A Study Done In Rural Kerala [10] Where Half Of The Mothers Felt That Breastfeeding Should Be Stopped In Case The Child Suffers From Diarrheal Episodes. In A Study Done In Jammu [11] Also, The Participants Felt That Breast Feeding Should Be Stopped When The Child Attains Six Months Of Age. However, On The Flip Side, Mothers Also Said That Breast-Feeding Should Be Continued During Times Of Illness Which Is A Positive Attitude.

In The Present Study, Majority Of The Participants Agreed That Breast Milk Is Easier To Absorb And Digest Than Formula Milk And That Breastfeeding Helps Bonding Of The Mother And Child. Similar Findings Were Seen In A Study From Fiji. [12]

In This Study, Majority Of The Mothers Felt That Breast Feeding Protects The Child From Various Diseases. A Study On The Evolution Of Immune Functions Of The Mammary Glands And Protection Of Infants Suggests The Presence Of Various Antimicrobials, Anti-Inflammatory Agents And Immunomodulators Which Play A

Pivotal Role In Developing The Immune System Of The Child Thus Protecting The Child From Various Diseases. [13] Also A Systematic Review Confirmed The Decreased Frequency Of Various Acute And Chronic Pediatric Disorders In Breastfed Infants. [14]

Better Breastfeeding Practice Was Seen Among Mothers With Increasing Birth Order In Our Study. Studies Done In United Arab Emirates [15] And Fiji [12] Also Found That Breast Feeding Practice Was Positively Correlated With The Number Of Children Or The Birth Order. [16]

### Conclusion:

Majority Of The Participants Had Good Knowledge About Breastfeeding Practices. However, In Our Study It Was Seen That Focus Needs To Be Laid Upon Imparting Appropriate Knowledge About Feeding Practices Among Lactating Mothers Who Were Primi-Gravida, Had Lower Segment Caesarean Section, Had Twins And Were Uneducated. Counselling Of The Mothers Should Be Routinely Done During Ante-Natal Care Visits To Enforce The Need Of Timely Initiation And Continuation Of Exclusive Breast Feeding.

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