

Breastfeeding Knowledge among Antenatal Mothers: A Cross-Sectional Study in a Rural Area of West Bengal

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I. Introduction

Breastfeeding is the best gift to a baby from his mother, it not only supplies nutrition but also protects the baby from the very onset of life to his adulthood since it is evident optimal breastfeeding helps in nurturing a healthy child and a healthy adult in future. Promotion of breastfeeding is a global priority and WHO advocates exclusive breastfeeding for first six months, which does not allow any other liquid even water unless medically indicated.¹

More than 15% of child death can be averted in India only by optimum breastfeeding.² Sub optimal breastfeeding especially non-exclusive breastfeeding in the first six months of life results in 10% of under-five disease burden.³ UNICEF advocates optimal breastfeeding in 1st six months of age as having the single greatest potential impact on child survival of all preventive interventions and can save 1.4 million under five deaths in developing world.³ In developing countries non beneficial infants are more vulnerable to die within first one month of birth compared to their optimal breastfed counterparts.^{4,5} However, many mothers are unable to practice exclusive breastfeeding due to many reasons namely lack of confidence in mothers to breast feed, breast pain or soreness, lack of encouragement from healthcare providers or family members.⁶ Studies conducted in Singapore revealed antenatal breastfeeding education and post natal lactation support significantly improves exclusive breastfeeding up to six months of age.⁷

In India, both in private and Government health sectors antenatal mothers come for Immunization, IFA, ANC checkups but counseling for breastfeeding is an issue which is conveniently neglected or overlooked. This period is best to impart knowledge about breastfeeding to future mothers as they are more receptive at this phase. With this backdrop a study was undertaken among antenatal mothers in a antenatal clinic of two rural health centers of Singur Block, West Bengal with the following Objectives

- Assessment of knowledge in different aspects of breastfeeding among antenatal mothers attending an antenatal clinic.
- Finding relation between socio-demographic factors and knowledge of breastfeeding.

II. Methodology

A cross sectional observational study was conducted in two Union Health Centers of Singur block of West Bengal under the purview of All India Institute of Hygiene and Public Health. Study period was two months, April-May, 2012. All the registered antenatal mothers attending the Antenatal Clinic and who gave consent to participate in the study were interviewed with pretested, predesigned, structured schedule prepared by expert committee of All India Institute of Hygiene and Public Health, Community Medicine Department. The schedule was prepared with 15 close ended questions directed to assess awareness and knowledge of mothers about breastfeeding. Maximum attainable score was 37 while minimum was 0. this question was pilot tested in 20 antenatal mothers in another health centre, reliability and validity of questionnaire was ascertained with test retest reliability (Pearson's correlation) and cronbach's alpha respectively. Approval from Institutional Ethics Committee of AIHH&PH was obtained before proceeding to main study. The study's subject's socio economic status was classified by modified B. G. Prasad scale (2004).⁸ Altogether 83 antenatal mothers were interviewed during study period. Score were divided in two groups poor (≤ 19 score) and good (> 19 score) based on median score attained and analyzed statistically with SPSS 19.0

III. Results

Table 1: Socio-demographic and some Pregnancy related Characteristics of the Antenatal Mothers

Variables		Frequency	Percentage
Gravida	Primi	33	39.8
	Multi	50	60.2
Age of mother(in Years)	<18	7	8.4
	18-25	57	68.7
	25-30	16	19.3
	>30	3	3.6
Age of marriage(in Years)	<18	57	68.7
	18-25	26	31.3
Age of 1 st pregnancy(in	<19	25	30.1

Years)	19-25	57	68.7
	25-30	1	1.2
Literacy status	Illiterate	15	18.1
	Primary	35	42.2
	Middle	21	25.3
	Secondary	10	12.0
	Higher secondary and above	2	2.4
Religion	Hindu	61	73.5
	Muslim	22	26.5
Occupation	Housewife	79	95.2
	Working	4	4.8
Type of family	Nuclear	31	37.3
	Joint	52	62.7
Husband's literacy status	Illiterate	9	10.8
	Primary	30	36.1
	Middle	32	38.6
	Secondary	12	14.5
	Higher secondary and above	0	0
Prasad's SE scale	Lower	0	0
	Upper lower	32	38.6
	Lower middle	41	49.4
	Upper middle	10	12
	Upper	0	0

Table1: Majority of study population were multigravida (60.2%) and 68.7% of them are in age group 18-25 years. Majority (68.7%) of them were married before attainment of 18 years and became pregnant(30.1%)when they were less than 19 years.18% of antenatal mothers and 10% of the husbands were illiterate. Majority of them were Hindus and only 4.8% of the mothers were earning. About 49.4% of study population belonged to lower middle class according to Prasad's Socio Economic scale.

Table 2: Breastfeeding knowledge and awareness among antenatal mothers. (n=83)

Questions	Response	Frequency	Percentage
Aware of benefits of breastfeeding.	Yes	80	96.4
	No	3	3.6
Beneficiary of breastfeeding.	Child	69	83.2
	Mother	0	0
	Both	10	12
	Don't know	4	4.8
Benefits of breastfeeding to mothers.	Prevent certain disease	3	3.6
	Contraception	2	2.4
	Don't know	78	94.0
Benefits of breastfeeding to child.	Growth development	41	49.4
	Disease prevention	18	21.7
	Growth development and Disease prevention	14	16.9
	Don't know	10	12.0
Benefits of Colostrum to baby.	Immunity	22	26.5
	Growth and development	30	36.1
	Both	7	8.4
	Don't know	24	28.1
Knowledge about Initiation of breastfeeding after normal delivery.	<1hr	31	37.3
	1-24 hours	43	51.8
	>24 hours	2	2.4
	Don't know	7	8.4
Knowledge about Initiation of breastfeeding after caesarian section.	<4hr	17	20.5
	4-24 hours	43	51.8
	>24 hours	13	15.7
	Don't know	10	12.0
Knowledge of feeding to baby for 1 st six months.	Only breast milk	53	63.9
	Breast milk and water	20	24.1
	Breast milk and other liquid	10	12.0
Knowledge about continuation of breastfeeding during illness.	Yes	66	79.5
	No	9	10.8
	Don't know	8	9.6

Table 2: While assessing knowledge and awareness of breastfeeding among mothers majority (96.4%) believed breastfeeding was beneficial, especially for children (growth and development and prevention of infection).57.8% (48)mothers had knowledge about offering breast milk as first food child while the remaining opined that honey, water, sweet etc may be offered to the babies just after birth.

Majority of antenatal mothers 84.3% opined that colostrum should be given to baby immediately after birth and their knowledge about benefits of colostrum to baby was fair. Their knowledge about correct time of initiation of breastfeeding after delivery was poor.

Majority of mothers (63.9%) had knowledge that only breast milk should be offered during the first six months of the baby and 71.1% had knowledge about correct age (6months) of starting complementary feeding. Most of the antenatal mothers were aware that breastfeeding could be continued for more than two years with other foods (71.1%) and it could be continued during illness (79.5%). While enquiring correct interval of feeding majority answered they would feed the child when the child is hungry

Table 3: Source of Information about child feeding (n=83).

Advice for feeding from	Frequency	Percentage	Mean score
Health worker	2	2.4	25
Elderly family member	26	31.3	16.6
Health worker and family member	32	38.6	19.6
Previous experience	15	18.1	19.7
Health worker and family member, Previous experience	8	9.6	22.4

Majority of antenatal mothers (38.6%) received information on breastfeeding from two sources namely health workers and family members (p value=0.007), while 31.3% of family members received information from elderly family members only and 2.4% received information only from health workers

Table 4: Determinants of breastfeeding knowledge and awareness.

Variable		Knowledge and Awareness		OR	CI	AOR	CI
		Poor	Good				
Age (in years)	≤20	14	8	2.06	0.76-5.63	1.16	0.23-5.98
	>20	28	33				
Age of marriage (in years)	≤18	33	24	2.60	0.99-6.81	1.69	0.29-9.87
	>18	9	17				
Age of 1 st pregnancy (in years)	≤20	31	23	2.21	0.88-5.56	1.25	0.17-9.25
	>20	11	18				
Religion	Muslim	16	6	3.59	1.24-10.43*	1.96	0.55-7.05
	Hindu	26	35				
Per Capita Income (in rupees)	≤1000	16	5	4.43	1.44-13.63*	3.29	0.84-12.88
	>1000	26	36				
Type of family	Nuclear	18	13	1.62	0.66-3.96	1.43	0.52-3.89
	Joint	24	28				
Literacy	Illiterate	10	5	2.25	0.69-7.28	1.17	0.28-4.86
	Literate	32	36				
Husband's Literacy	Illiterate	4	5	0.76	0.19-3.05	0.49	0.09-2.53
	Literate	38	36				
Nature of work	House wife	39	40	0.33	0.03-3.26	.40	0.02-5.75
	Working	3	1				
Gravida	Primi	17	16	1.06	0.44-2.56	1.23	0.31-4.88
	Multi	25	25				

Among different probable determinants of poor breastfeeding knowledge only low per capita income and religion found to be significant in bivariate analysis. But in multivariate regression they lost their significance.(Naglekor R square=0.209)

IV. Discussion

Breastfeeding is best gift for child from mother, it is safe, adequate to fulfill nutrition in early life, energies immunity, protects from diseases.

Socio demographic factors:

A tertiary center based study conducted among postnatal mothers by pediatric department revealed 67% of mothers were housewives, hailed from joint family, 42% of them were Primi Para and majority belonged to poor economic status.⁸ Similarly in this study majority of antenatal mothers were housewives and from joint families. Among them 39.8% were primi para and nearly half of them belonged to lower middle socioeconomic status.

Knowledge and awareness of breastfeeding:

This study revealed good knowledge regarding benefits of breastfeeding, especially for child. Among mothers in rural community of Papua New Gini 87.9% believed breastfeeding is good and 48% believed it is healthy for child, while 38% believed it helps for child growth. 63% responded breastfeeding helps in mothers by reducing breast tightness and pain, 17% believed it is bad for mother due to weight loss.⁹ Similarly in Shanghai, China 99% expectant mothers knew benefits of breastfeeding for baby but 22% mothers did not think breastfeeding has any benefit for mothers.¹⁰ 57.8% of mothers had appropriate knowledge, breast milk is the first food. They knew first thick yellow milk should be offered to child (84.3%), it has beneficial effects, similarly in South India 56% of respondents knew that Colostrum need to be given to child,⁸ In rural community of Chandigarh, baseline knowledge about benefits of breastfeeding was 70% and 71.9% agreed to give Colostrum to their child.¹¹ In our study knowledge about initiation of breastfeeding declined sharply, only 37.3% answered that breastfeeding must be initiated within one hour of normal delivery and within 4 hours in case of Caesarian section (20.5%) In Puducherry, majority of mothers (92%) knew breastfeeding should be initiated within one hour only but 36% actually practiced, major reason for non practicing was sick newborn.⁸ Knowledge about initiation was fairly good 69.3% in Chandigarh.¹¹ Chandigarh nursing mothers were interviewed but in this study antenatal mothers in different stages of pregnancy were interviewed, hence their knowledge were different in two studies, but in a study by Mukhopadhyay in rural Bengal revealed a different picture only 16.5% of mothers were allowed to breastfeed within 1 hour of delivery and 47.9% breastfed their child after 24 hours. In majority of cases colostrums was discarded in fear of harm to baby and prelacteals were offered to cleanse system¹², researcher termed these malpractices as 'ritual pollution'.

It was good to find awareness about exclusive breastfeeding among antenatal mothers and their knowledge about continuation of breastfeeding during illness. In China 91% were intended to breastfeed and 67% of were intended for exclusive breastfeeding¹⁰ In Bangladesh BDHS-11 revealed proportion of exclusive breastfeeding for six months was 64.1% while 88.9% of children aged 20-23 months were still receiving breastfeeding along with other home available foods.¹³

Determinants of breastfeeding knowledge:

This study unveiled a positive relation with low per capita income in family (OR=4.43, 1.44-13.63) and Muslim religion (OR=3.59, 1.24-10.43) with poor score in bivariate but it lost its significance in multivariate analysis when role of confounders were negated, in an Australian study mothers with high grade of education has better awareness of WHO recommended exclusive breastfeeding (ARR=1.48, 1.08-1.94).¹⁴ In China, awareness of breastfeeding guidelines (OR=2.66, 1.08-3.78) and no intention to return to work within 6 months after delivery (OR=1.89, 1.03-3.47) were associated with intention for breastfeeding.¹⁰ In South India positive association was found between breastfeeding and maternal education and high per capita income.⁸

Source of breastfeeding knowledge:

Nearly one third of antenatal mothers received information about breastfeeding from elderly members of family and 38.3% received information from family members as well as health workers. In a study in Tanzania though 94% of women were intended to breastfeed their knowledge was limited as 94% had never received any antenatal counseling for breastfeeding, 61% had received some knowledge from elderly family members like (mother, grandmother, mother in law). 37.5% of them believed glucose water must be given to baby immediately after birth¹⁵ similarly in Puducherry 48% of postnatal mothers received information on breastfeeding in antenatal period, 17% from health care workers.⁸ In another study from Puducherry revealed only 21% of booked mother received information on breastfeeding during antenatal visit.¹⁶

Limitations:

This study has many limitations: it was done only with only 83 samples and samples were not randomly selected hence findings of the study could not be generalized to whole rural population of West Bengal, study had cross sectional design hence no causal relationship could not be elicited. Further studies are needed to explore whether awareness and intention of breastfeeding can be translated to future breastfeeding practice.

V. Conclusion

Benefits of breastfeeding was known to majority but correct duration, intervals, initiation were lacking. It is good that 64.3% expectant mothers were intended to breastfeed. ASHAs and ANMs should play major role to emphasize health benefits and recommended duration of breastfeeding in prenatal advice to expectant mothers and encourage them to comply with guidelines of exclusive breastfeeding. They should address queries regarding problems of breastfeeding timely and appropriately.

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