

A Study of prevailing Child rearing practices for children aged up to 60 months In Lucknow District

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ABSTRACT

Objectives: This study has been designed to calculate the prevalence of malnutrition and it's association with various epidemio- logical determinants in a given interventional area.

Methodology: It is a community based cross sectional study. House to house survey was conducted and necessary data was collected by interviewing mothers and other care takers. Anthropometric measurements and clinical examination were done to assess the nutritional status of the of the under-five age group children.

Participants: 300 children of age group 0-5 years selected by systematic sampling method.

Statistical Analysis: Simple proportion, ² test.

Result: Our study based that the feeding practices in the blow five years children are strongly affected by factors like parent education, provision of antenatal care, place of delivery and prevailing socio cultural beliefs but not on socioeconomic status. In addition, these practices do affect the growth parameters of a the child

Key Words: Under five children, breast feeding, top feeding, semi-urban area.

INTRODUCTION

Over 200 million children in progressive countries in the world under the age of five year are malnourished. Malnutrition contributes to more than 10 million under five year deaths in progressive countries each year. Malnourished children often suffer reduction of precious mental capacities. They fall ill more often. If they adapt, they may grow up with lasting mental or physical disabilities. Mother is the most important role in a baby's life for both its physical as well as its psychosocial care and growth. The mother-infant relationship is the most vital formative relationship for the child. From the very first moments of life, a baby begins interacting with its mother. Thus, mother's health, her education, her beliefs and attitude regarding child rearing are important milestones on the road of child's health right from in utero period. Child development is a gradual unfolding of biologically determined characteristics and traits that arises as the child learns from experiences. In developing

countries, more than 200 million children under five years fail to reach their potential in cognitive and social development due to poverty, poor health, nutrition, and deficit care. Other factors that compromise overall development during pregnancy and after birth are mother and father behavioral, dietary deficiencies, severe infections, exclusive breastfeeding, inadequate feeding practices and lack of stimulation. Therefore, this paper examines factors affecting early childhood growth and development and categorizing them in five main contributing factors in Bhutan with placing more focus on first 1000 days. In addition, it identifies the possible interventions to enhance child growth and development. Also, faulty breast-feeding and complementary feeding practices have their roots in socioeconomic and educational status of the parents, their cultural beliefs, number and spacing of siblings and the employment status of the mother. Improved breast feeding practices and reduction of artificial feeding could save an estimated 1.5 million children a year.

MATERIAL and METHODS:

The present study was carried out in Petlad town, a semiurban area of lucknow district, Uttar Pradesh state, for a period of 9 months. A sample size was calculated using the formula $n = t^2 p q / d^2$ ($t=1.96$). On basis of a pilot study done on 50 under five children in the same town, p was taken as 0.36 and q as $0.94(1-p)$. Allowable error d was taken as 25% of p . Sample size thus yielded was 370. Considering 15% non-response, 40 was added to 370 to make the total sample size 400. Petlad town has population of 64,000 and consists of nine wards. To have equal representation of all socioeconomic groups, three wards, namely Bakhshi ka talab Kurshi road and Itaunja, out of nine were selected randomly using lottery method so that a sample of 200 children can be drawn from each ward. With the help of intern doctors and medical social workers, all the under five children were house-wise line indexed. Their number in these wards turned out to be 784, 912 and 638. Considering sampling interval as seven, 200 children were selected from each ward by systematic sampling method to achieve a total sample of 200 under five year children.

Mother of each child included in the study was subjected to personal interview in her own house followed by clinical examination and anthropometric measurements of the child. Housing condition, water supply and sanitary practices were looked for, to grade environmental condition of family as satisfactory or poor. The information thus collected was recorded on a pretested schedule. The three indices of nutritional status namely, weight for age, height for age, and weight for height were expressed in standard deviation units from the median for the international reference populations as per WHO standards⁴. Children who are more than 2 SD below the reference median of weight for age index are considered below weight. Those who are more than 2SD under the reference median in terms of height for age are considered short for their age or stunted. Similarly, those who are more than 2SD below the median of the reference population in terms of weight for height are considered wasted. The data collected was subjected to proportions, percentage and χ^2 test.

Results and Discussion

Table -1: Nutritional status of under five children by back ground characteristics

Variable	Height for age % below - 2 SD		Weight for age % below - 2 SD		Wt. for height % below -2 SD		
	No.	%	No.	%	No.	%	
1. Receipt of Colostrum:							
Yes	240	84	35	110	54.5	58	31.0
No							
Total	303	134	44.22	161	60.3	79	33.0
Statistical values	$\chi^2 = 7.07; df=1; p < 0.001$		$\chi^2 = 12.98; df=1; p < 0.001$		$\chi^2 = 2.272; df=1; p > 0.05$		
2. Exclusive breast feeding (> 4 months)							
Yes	250	90	110	115	46.6	52	
No	93	45	48.3	44	64.7	16	
Total	311	131	45.0	148	50.9	68	
Statistical values	$\chi^2 = 0.14; df=1; p > 0.05$		$\chi^2 = 6.807; df=1; p < 0.01$		$\chi^2 = 0.001; df=1; p < 0.05$		
3. Age at which complementary feeding started:							
4-6 months	243	57	19.6	52	36.6	19	
7-9 months	90	65	72.7	66	66.7	32	
10-12 months	13	10	76.9	18	69.2	11	
>12 months	05	04	80.0	04	8.0	02	
Total	273	124	45.4	133	48.7	64	
Statistical values	$\chi^2 = 80.95; df=3; p < 0.001$		$\chi^2 = 26.51; df=3; p > 0.05$		$\chi^2 = 19.67; df=3; p < 0.001$		

Table-2: Exclusive breast-feeding in relation to back ground characteristics

Variable	No.	Exclusive breast-feeding			
		YES		NO	
		No.	%	No.	%
1. Mother's education :					
Illiterate	49	31	63.2	9	31.7
Just literate	35	26	74.2	5	19.1
Primary	23	27	85.1	7	25.9
Middle	42	37	88	12	32.4
Higher secondary	60	59	98.3	11	18.6
Graduate	62	36	58.0	23	63.8
Post graduate	02	02	50.0	01	50.0
Total	273	218	73.8	68	34.5
2= 9.354 ; df=6; p >0.05					
2. Socio-economic status :					
Class I	112	85	75.5	09	25.5
Class II	30	24	80.0	24	22.4
Class III	80	63	78.7	20	26.3
Class IV	58	44	75.8	14	22.2
Class V	04	02	50.0	01	50.0
Total	284	218	72	68	29.4
2= 0.994 ; df=4; p <0.05					
3. Antenatal care received :					
Yes	217	163	75.1	54	24.9
No	74	60	81.1	14	18.9
Total	291	223	76.6	68	23.4
2= 1.104 ; df=4; p >0.05					
4. Place of birth					
Home	80	64	80.0	14	20.0
Hospital	221	167	75.6	54	24.4
Total	291	223	76.6	68	23.4
2= 0.95 ; df=1; p <0.05					
5. Mother's age at birth (years) :					
17-21	69	59	85.5	11	18.6
22-26	160	126	78.7	36	28.9
27-31	49	32	65.3	17	11.5
32-36	11	6	54.7	3	2.1
37-41	2	0	0.0	2	0.5
Total	291	223	71.6	69	30.4
2= 11.263 ; df=4; p <0.05					

Table-3: Exclusive breast feeding in relation to back ground characteristics

Variables		Time of initiation of breast feeding (hours after birth)							
		< 1		1-6		6-12		>12	
N		No.	%	No.	%	No.	%	No.	%
1. Mother's Education* :									
Illiterate	40	6	15.1	24	48.0	6	12.2	15	30.7
Just literate	30	5	16.6	18	56.2	4	12.5	5	15.6
Primary	35	8	22.8	13	38.2	2	5.8	11	32.3
Middle	52	20	38.4	14	34.0	4	9.7	8	19.5
Higher secondary	69	15	21.7	27	38.0	19	26.7	8	11.2
Graduate	70	26	35.7	37	52.1	5	7.0	8	11.2
Post graduate	4	1	50.0	1	50.0	0	0.0	0	0.0
Total	300	71	23.3	133	44.3	40	13.3	55	18.3
$\chi^2=40.381$; $df=18$; $p <0.01$									
2. Socio-economic status**:									
Class I	43	15	34.8	10	23.3	4	12.1	6	
Class II	110	20	18.18	57	51.8	14	12.2	21	
Class III	85	21	24.7	40	47	11	12.5	14	
Class IV	60	15	25	25	41	11	17.4	14	
Class V	2	0	0.0	2	100.0	0	0.0	0	
Total	300	71	23.7	133	44.3	40	13.3	55	
$\chi^2=7.534$; $df=12$; $p >0.05$									
3. Antenatal care received:									
Yes	220	57	26.1	97	43.6	34	15.3	33	
No	76	11	16.6	37	47.4	6	7.6	22	
Total	300	71	23.7	133	44.3	40	13.3	55	
$\chi^2=10.482$; $df=3$; $p <0.05$									
4. Place of birth:									
Home	706		8.2	17	24.3	17	23.3	33	
Hospital	23065		28.2	54	23.8	38	16.7	34	15

									0
Total	300	71	23.7	133	44.3	40	13.3	55	18.3
$\chi^2=44.21$; $df = 3$; $p < 0.001$									
5. Mother's age at birth (years):									
17-20	68	13	19.1	35	51.4	10	14.0	11	
21-25	169	39	23	73	43.1	24	14.4	32	
26-30	50	15	30.3	18	36.2	5	9.8	12	
31-35	11	4	36.0	5	45.5	1	10.0	0	
35-45	02	0	0.0	2	100.0	0	0.0	0	
Total	300	71	23.7	133	44.3	40	13.3	55	
$\chi^2=10.332$; $df= 12$; $p > 0.05$									

Table-4: Receipt of colostrum in relation to back ground characteristics

Variables	No.	Colostrum received			
		Yes		No	
		No.	%	No.	%
1. Mother's Education :					
Illiterate	40	17	34.6	32	65.3
Just literate	38	23	71.8	9	28.1
Primary	30	22	64.7	12	35.2
Middle	43	35	85.4	6	4.6
Higher secondary	71	60	84.5	11	15.4
Graduate	71	70	98.5	1	1.4
Post graduate	2	02	100.0	0	0.0
Total	300	229	76.3	71	23.7
$\chi^2 = 74.493$; $df= 6$; $p < 0.001$					
2. Socio-economic status					
Class I	33	26	78.7	7	21.2
Class II	114	93	81.5	21	18.4
Class III	88	65	73.8	23	26.1
Class IV	63	43	68.2	20	31.7
Class V	2	2	100.0	0	0.0
Total	300	229	76.3	71	23.7
$\chi^2 = 5.040$; $df= 4$; $p > 0.05$					
3. Antenatal care received					
Yes	222	187	84.2	35	15.7
No	78	42	53.8	36	46.1

Total	300	229	76.3	71	23.7
$\chi^2 = 29.504; df=1; p<0.001$					
4. Place of birth					
Home	73	41	56.1	32	43.8
Hospital	227	188	82.8	39	17.1
Total	300	229	76.3	71	23.7
$\chi^2 = 21.724; df= 1; p<0.001$					
5. Mother's age at birth (years)					
17-21	71	49	69.0	22	30.9
22-26	166	130	78.3	36	21.6
27-31	51	39	76.4	12	23.5
32-36	10	9	90.0	1	10.0
37-41	2	2	100.0	0	0.0
Total	300	229	76.3	71	23.7
$\chi^2 = 4.120; df=4; p>0.05$					

Table -5: Time of initiation of complementary feeding in relation to back ground characteristics

Variables	No.	Time of initiation of complementary feeding (months after birth)											
		Not started		1 – 4		5 – 8		9 – 12		13 – 16		17 – 20	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1. Mother's Education :													
Illiterate	49	3	6.1	0	0.0	29	59.1	14	28.5	0	0.0	3	6.1
Just literate	32	2	6.2	2	6.2	18	56.2	10	31.2	0	0.0	0	0.0
Primary	34	3	8.8	2	5.8	21	61.7	6	17.6	10	2.9	1	2.9
Middle	41	3	7.3	3	7.3	28	68.2	7	17.6	0	0.0	0	0.0
Higher secondary	71	5	7.0	3	4.2	58	81.6	5	7.0	0	0.0	0	0.0
Graduate	71	7	9.8	4	5.6	59	83.0	1	1.4	0	0.0	0	0.0
Post graduate	2	0	0.0	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0
Total	300	23	7.7	14	4.9	215	71.7	43	14.3	1	0.3	4	1.3
$\chi^2 = 54.351; df=30; p<0.01$													
2. Socio-economic status													
Class I	33	3	9.0	1	3.0	20	60.6	9	27.2	0	0.0	0	0.0
Class II	14	13	11.4	5	4.3	82	71.9	13	11.4	0	0.0	1	0.8
Class III	88	5	5.6	2	2.2	69	78.4	10	11.3	0	0.0	2	2.2
Class IV	63	2	3.1	6	9.5	42	66.6	11	17.4	1	1.5	1	1.5
Class V	2	0	0.0	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0
Total	300	23	7.7	14	4.7	215	71.7	43	14.3	1	0.3	4	1.3
$\chi^2 = 21.376; df=20; p>0.05$													
3. Antenatal care received													
Yes	222	19	8.5	13	5.8	170	76.5	19	8.5	0	0.0	1	0.4
No	78	4	5.1	1	1.2	45	57.6	24	30.7	1	1.2	3	3.8
Total	300	23	7.7	14	4.7	215	71.7	43	14.3	1	0.3	4	1.3
$\chi^2 = 34.049; df=5; p<0.001$													
4. Place of birth													
Home	73	6	8.2	2	2.7	48	65.7	15	20.9	0	0.0	2	2.7
Hospital	227	17	7.4	12	5.2	167	73.5	28	12.3	1	0.4	2	0.8
Total	300	23	7.7	14	4.7	215	71.7	43	14.3	1	0.3	4	1.3
$\chi^2 = 5.269; df=5; p>0.05$													

5.Mother's age at birth (years)													
15-20	78	7	5.8	3	5.2	45	77.6	13	17.3	0	0.0	1	1.3
21-26	160	15	4.8	7	3.8	121	81.6	21	13.6	1	0.9	2	1.6
27-30	55	3	2.9	1	4.9	40	56.4	7	11.7	0	0.2	0	0.0
31-35	15	0	9.0	0	1.0	9	80.0	1	12.0	0	0.0	0	0.0
39-45	5	0	0.0	0	0.0	1	50.0	1	53.0	0	0.0	0	0.0
Total	313												
$\chi^2 = 7.617; df=20; p>0.05$													

The practices of breast feeding prevailing in the community play a crucial role in deciding the health of a child because of many reasons. This study gave us a sample opportunity to know about these practices prevailing in the area. Our study check out that 81(23.7%) children born were put on breast feed with in first hour of life that is the most ideal practice. In 134 (43.7%) children, it was initiated within 1-6 hours and rest within 7-12 hours or more. Our figures of initiation of breast feeding with in first hour of the birth are higher than the state and national rates i.e. 10.1% and 15.8% respectively. showed that the practice of not putting the infant to breast within first 12 hours widely prevalent in cities like Calcutta (47.6%) and Madras (23.8%) but less in Bombay (3.4%). Findings in study done by Agarwal M.¹⁰ in low income Indian urban mothers were almost similar, where 5 to 10% mothers initiated breast feeding on 1st day while 15 – 30% mothers initiated breast feeding on 2nd day and 64 – 71 % on 3rd day. As regards colostrum feeding, we found that 229 (76.3%) children were fed colostrum (Table-1). This figure also exceeds the state and national figures⁶ which stand at 61.1% and 62.8% respectively. Study by Bhardwaj N⁹ and Agarwal M.¹⁰ showed lower rates on colostrum feeding (11.8% and 5% respectively). This suggests presence of greater awareness among women regarding colostrum. All three indices were better in subjects receiving colostrum. Exclusive breast feedings were better on some parameters. Age factor introducing complementary feeding significantly influenced marital status in terms of weight for age and height for height (Table-1). As per WHO recommendations, a child should be breast-fed exclusively up to the age of 4-6 months. In our study, out of 291 children who were 4 months and above, 223(76.6%) children received exclusive breast-feeding. In spite of considering infants who received breast milk only up to the age of 3 months as exclusively breast fed, our figures are higher than the ones reported by NFHS⁶, UNICEF² and by Agarwal M.¹⁰ in her study in Indian urban mothers. While 20% infants in Bombay, 13.4% in Calcutta and 8.5%

in Madras were exclusively breast fed in a study by Bakshi ka talab.⁸ This difference can be attributed to higher awareness created by means of health education and counseling of mothers provided in the hospitals where the children were delivered. It is a common belief even in literate mothers of higher socio-economic status that only mother's milk is not sufficient for young infants. This, along with lack of knowledge regarding correct feeding practices, may be the reason why 68(23.4%) children were not exclusively breast-fed in our study. Top feeding was initiated in 70(23.3%) children with in first 1-4months of their life whereas 223 (76.7%) children were not given any top feeding. In a similar study conducted by Kumar S.¹¹, in 33% of urban poor children, top feeding was introduced with in first three months of life. This variation in the rate of top feeding between our study and S. Kumar's study may be due to difference in the socioeconomic status of the two study populations. Cow's milk was the most frequent type of milk used for top feeding and was given to 44 (62.9%) children out of whom 2/3rd received it in undiluted form. 242 (80.7%) children were put on complementary feeding between the age of 4 months; the most common food being rice and daal. As discussed earlier, the feeding practices contribute sizably to the health of a child. So, we tried to get sight of the mother's perceptions regarding these practices because their blemished concepts related to child feeding will result in poor nutrition of the child. In our study, out of 269 mothers, 207 (76.9%) knew about colostrum. But only 99 (47.8%) had the cognizance regarding the anti-infective property of colostrum. On interrogation, it was revealed that the sources of this information were the doctors, ANMs and trained birth attendants who conducted their delivery. In a study conducted by Grover to primary health center lucknow, 52% of mothers considered colostrum harmful to baby. 134 (49.8%) mothers were of the opinion that the child should be exclusively breast fed for more than 6 months. While, 67(24.9%) mothers said that exclusive breast-feeding should be given up to four months of life. Only 121 (44.9%) mothers knew the ideal age of giving complementary feeds. The upbringing of child including the nutrition is surrounded by a wide range of customs and beliefs prevailing in the community. So many taboos as regards child feeding are deeply rooted in our society. Certain food articles are considered "hot", some "cold" and some "harmful" to the child. When asked about their concepts regarding such food-related taboos, mothers of 72 (24.0%) children considered jaggery as "hot" for the child. Some considered spicy food, papaya, eggs, mangoes etc. "hot" for the child, thus, precluding it from getting these nutritious kinds. Regarding "cold" foods, banana was thought to be "cold" for child by mothers of 103 (34.3%) children. While some mothers considered curd/butter milk, ice-

creams and fruits like guava, “cold” for the child. Such taboos deprive the child of essential nutrients contained in such foods. Spicy and fried foods, eggs, tea/coffee, non-vegetarian foods were considered by some as “harmful” to the child. Exclusive breast-feeding was found to be associated with mother’s age at birth but not with parents’ education, socioeconomic status or antenatal care received by mothers (Table-2). The reason may be the prevailing socio-cultural practices that are followed by the families irrespective of educational and socioeconomic status. Positive association of mother’s education and antenatal care received by mothers with time of initiation of breast feeding (Table-3) suggest that proper message passed by health care workers to the mothers during antenatal visits can help in early initiation of breast feeding. Similarly, mothers will be more willing to feed colostrum to their babies when they are counseled properly during antenatal checkups and after delivery as shown by association of colostrum feeding with mother’s education, antenatal care received and place of birth (Table-4).

Timely complementary feeding plays an important role in sound growth and development of a child. In our study, educated mothers were more receptive to the message of proper feeding passed to them during antenatal visits as suggested by association of time of initiation with mother’s education and antenatal care received (Table-5). Thus antenatal care turned out to be most significant factor in child’s health as far as feeding practices are concerned.

Conclusion

Mother is principal fostering figure for the child. Her perceptions regarding feeding practices directly influence the health of the child. False beliefs and myths attached to child’s feeding deeply rooted in all strata of community, need to be replaced by sound and scientific messages. Health care providers at all levels can play major role in doing this so as to lay a strong foundation of physical, mental and social health in the first five precious years of child’s life. Choices made and actions taken on behalf of children during this critical period affect not only how a child develops but also how a country progresses

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