Research Paper

Volume : 3 | Issue : 9 | September 2014 • ISSN No 2277 - 8179

Rural and urban mother's knowledge and expressed practices regarding supplementary feeding of children (six to twenty months) and its impact on growth parameters

Nursing

KEYWORDS : Supplementary feeding, growth parameters, weaning.

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ABSTRACT

A study to assess and compare rural and urban mother's knowledge and expressed practices regarding supplementary feeding of children (six – twenty months) and its impact on growth parameters in selected district of Haryana. By using a purposive sampling method, 60 rural mothers and 60 urban mothers were selected for the study in rural area (Bhuddia) and urban area (Ambala cantt). About 33% of mothers in urban were in the age group of 21-25 years and 26-30 years and about 33% of mothers in rural area were in the age group of 21-25 years, 41.6% were secondary, Graduation and above in urban area and 33% were illiterate and secondary in rural area. The findings revealed that the mean knowledge score of urban mothers was higher than the mean knowledge score of rural mothers and the mean expressed practice score (14.48) of urban mothers was higher than the mean practice score (12.68) of rural mothers. Based on the findings, it is recommended that there is a need to conduct a planned teaching programme on knowledge, attitude and practices of urban and rural mothers on supplementary feeding.

Introduction

Breast milk is the best and safest .It is important that baby should be given extra foods as well as breast milk at the right age in sufficient amount to enable them to grow and stay healthy. Weaning is practiced from the ancient period**1**. According to Indian tradition the ceremony of 'Annaprasanam' (feeding the baby first time) is performed at time of giving first food to the baby**2**. Generally the first food is cooked food. This can be prepared from porridge, wheat, rice, maize or ragi flour.

Weaning has crucial role in the child development.

In Indian context even the most basic of human rights from which all other rights of flow the right to survival itself cannot be taken for granted of the 13 million " under five children" die annually world wide most to do so from readily preventable causes**3**. Approximately 4.2 million die in India alone.

Mother's knowledge related to feeding of babies also reflects the nutritional status of the child4. Children completely depend on mothers for their nutrition. Breast-feeding, and other dietary practices adapted by her reflect the nutritional status of the child**5**. Breast-fed infants and children grow normally during the first six months of their life, and show slow growth during the transitional period of weaning because they do not get enough nutritious foods.

India, with 152 deaths for every 1000 live births, ranks 39th among countries with high under fives mortality rates and sadly is not expected to reach the United Nations target of 70 per 1000 by 2000 AD. Almost half of the total no of deaths in India occur in 0 – 4 years of age. The common cause of under five mortality in developing countries is malnutrition which results from incorrect feeding practices of the children**6.**

Malnutrition among children is directly to socio economic condition of the family and mother's knowledge on child nutrition. Because how a mother feeds or treats the child is affected by the extent of the mother's knowledge about child rearing. Mothers have been nurturing there children. Since the beginning of the human race but many of them are unaware about child nutrition in terms of its different aspects**8**. It is generally agreed that the problem of PEM can only be solved by educating rural and urban communities on effective utilization of inexpensive locally available foods, within economic reach7

Many researchers agree that socio economic and environmental conditions, together with feeding practices, are important determinants of nutritional status in developing countries. Inadequate quantity and poor quality of food result in growth faltering, which is exacerbated by the high prevalence of fever and diarrhoeal diseases. Inappropriate feeding patterns may also contribute to child malnutrition**9**.

Objectives

1. To assess and compare the knowledge as well as expressed practices of the rural and urban mother's of children aged six to twenty months regarding supplementary feeding
2. To determine and assess the impact of knowledge and expressed practices regarding supplementary feeding on selected growth parameters (weight, height, midarm circumference

Materials and methods

Settingandsubjects:

A survey approach with comparative correlational design was adopted .The study was conducted at selected districts of Haryana (Ambala Cantt and Bhuddia). Hence the study population included the 60 urban mothers and 60 rural mothers who had children between six – twenty months by using a purposive sampling technique, a total 120 mothers (60 rural and 60 urban) in

selected areas who gave consent to participate in the study was included as study subjects. On those mothers were included in the study who met the criteria and who showed their willingness to participate in it. The conceptual framework adopted for the study was based on Rosenstoch' Becker's health belief model.

Dependent variable: Growth parameters

Independent variable:

1. Knowledge of the rural and urban mothers regarding supplementary feeding.
2. Expressed Practices of the rural and urban mothers regarding supplementary feeding.
3. Supplementary feeding.

Instruments: Data were gathered with the help of a structured knowledge questionnaire and expressed practices checklist by a interview schedule. The demographic profile sheet and a pre – tested 25 items 'Questionnaire' were administered to the subjects for assessing knowledge regarding supplementary feeding. The supplementary feeding practices were assessed from the same person by filling the expressed practice checklist.

Section I: Structured knowledge questionnaire of mothers regarding supplementary foods, weaning and do's and don'ts of weaning. It consists of 25 multiple choice items covering following content areas like weaning, supplementary foods and do's and don'ts of weaning. Each correct answer was given a score of 1 and wrong answers a score of '0'. A total possible score was 25. Section II Expressed Practice checklist to assess mothers ex-

pressed practices regarding supplementary feeding. It consists of 15 items i.e. is breast feeding, supplementary feeding and weaning. Each correct answer was given a score of 1 and wrong answer a score of '0'. Total possible score is 15. The questions were either of multiple choices/ in yes/No response. Section: III Deals with the growth parameters of babies such as weight, height and mid arm circumference. A descriptive and correlational statistics was applied to the collected data.

The content validity of the tools was established by seven experts from the field of pediatric nursing and maternal and child health nursing, nutritionist and community health nursing Among the validators one expert is paediatrician who is teaching and practicing for a long time in the field of pediatrics, one is nutritionist. The structured knowledge questionnaire and expressed practice checklist were administered to 15 mothers having children six to twenty months. The reliability co-efficient for the structured knowledge questionnaire was calculated by using the Kuder Richardson -20 (KR – 20) it was found to be 0.67 and the reliability co – efficient of expressed practice checklist was found to be 0.74 by Kuder Richardson – 20 formula. Thus the tool was found to be reliable.

Procedure: After obtaining formal permission from the higher authority of urban area Municipal Commissioner and village Sarpanch the pilot study was conducted from 16 to 28th November in the rural area (Mullana) and urban (Ambala cantt), to find out the feasibility of conducting the study and to decide the plan of statistical analysis.

10 mothers of children (six to twenty months) were selected from rural and urban area, using Purposive sampling technique. The average time taken by the subjects to complete the Structured knowledge questionnaire and expressed practice checklist was 35–40minutes. The analysis of the pilot study was done in accordance with the objectives of the study. Findings of pilot study revealed that it was feasible to conduct the study and criterion measures were found to be effective. The plan of statistical analysis too was determined first. To obtain a free and frank response the purpose of the study was explained and the subjects were assured about the confidentiality of there response. Mothers gave their consent to participate in the study was included as study subjects.

Results (Sample characteristics)

- Ø In urban area twenty out of 60 subjects (33.3%) were in the age group of 21 – 25 years and 26 – 30 years and in rural area twenty out of 60 subjects (33.3%) were in the age group of 18 – 20 years.
- Ø In urban area thirty out of 60 subjects (50%) were Hindus. Where as in rural area thirty five out of 60 subjects (58.3%) were Sikhs
- Ø In urban area twenty five out of 60 subjects (41.6%) had got secondary education and graduation. Where as in rural area twenty out of 60 subjects were illiterate (33.3%) and (33.3%) with secondary education.
- Ø Majority of subjects in urban area (83.3%) were housewives. Where as in rural area majority (91.6%) were housewives.
- Ø In urban area thirty out of 60 subjects (50%) was belonged to the family income of rupees more than 4000. where as in rural area twenty five out of 60 subjects (41.6%) were belonged to the family income of rupees less than 2000.
- Ø In urban area thirty out of 60 subjects (50%) was belonged to the extended family. Where as in rural area twenty five out of 60 subjects (41.6%) were belonged to the joint family and nuclear family.
- Ø In urban area twenty five out of 60 subjects (41.6%) was having one and two child. Where as in rural area thirty out of 60 mothers of infants (50%) were having more than three children.

TABLE 1

Mean median, standard deviation of knowledge score of rural and urban mothers with children (six to twenty months) on structured knowledge questionnaire.

N =120

	Mean	Median	SD
Knowledge (Rural) (n=60)	18.13	17.00	3.64
Knowledge (Urban) (n=60)	22.35	23.00	1.78

Maximum score is 25

The data presented in table 1 indicate that the mean knowledge score (22.35) of urban mothers was higher than the mean knowledge score (18.13) of rural mothers. It shows that urban mothers have more knowledge as compared to rural mothers regarding supplementary feeding.

Table 2

Area wise mean, mean percentage of knowledge Score obtained by rural mothers and urban mothers

N =120

Areas		Max score	Mean score	Mean% score
Rural (n=60)	Supplementary feeding.	18	12.44	61.60
	Weaning ,do's And don'ts of Weaning.	7	5.16	73.69
Urban (n=60)	Supplementary Feeding.	18	13.28	69.11
	Weaning ,do's And don'ts of Weaning	7	5.17	73.81

Data given in table 2 among rural mothers the lowest mean percentages of knowledge score (61.60) is in the area of supplementary foods. This indicates maximum knowledge deficit existed in this area. The lowest knowledge deficit was in the area related to 'Do's and don'ts of weaning' (73.69%). Therefore the rural mothers possess basic knowledge in above mentioned areas regarding supplementary feeding.

Further, findings reveal that among urban mothers the lowest mean percentages of knowledge score (69.11) are in the area of Supplementary foods. This indicates maximum knowledge deficit existed in this area of supplementary foods. The lowest knowledge deficit (73.81%) was in the area related to 'Do's and don'ts of weaning. Therefore the urban mothers have good knowledge than rural mothers in above mentioned areas regarding supplementary feeding.

TABLE 3

Mean median, standard deviation of expressed practice score of rural and urban mothers with children (six to twenty months) on expressed practice checklist.

N =120

	Mean	Median	SD
Practice score (rural) (n=60)	12.68	12.00	1.55
Practice score (urban) (n=60)	14.48	15.00	0.60

Table 3 indicate that the the mean expressed practice score (14.48) of urban mothers was higher than the mean expressed

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practice score (12.68) of rural mothers. The findings also reveal that the standard deviation of expressed practice score (1.55) of rural mothers is more than standard deviation of expressed practice score (0.60) of urban mothers regarding supplementary feeding. It shows that urban mothers have good expressed practices as compared to rural mothers regarding supplementary feeding.

TABLE. 4
Area wise mean, mean percentage of expressed practice score obtained by rural mothers and urban mothers

N =120

Areas		Max score	Mean score	Mean% score
Rural (n=60)	Breast feeding.	9	6.33	70.37
	Supplementary Feeding	3	2.30	76.67
	Weaning	3	2.42	80.56
Urban (n=60)	Breast feeding	9	6.90	76.67
	Supplementary Feeding.	3	2.97	98.89
	Weaning	3	2.93	97.78

It is evident from table 4that among rural mothers the lowest mean percentage of expressed practice score (70.37%) was in the area of breast feeding, indicates the highest practice deficit, followed by supplementary feeding (76.67%), the lowest deficit was in the area related to weaning (80.56%). Therefore the rural mothers possess basic expressed feeding practices in above mentioned areas regarding supplementary feeding.

Further, findings in table 4 reveals that among urban mothers the lowest mean percentage of expressed practice scores (76.67%) was in the area of breast feeding, indicates the maximum practice deficit in this area followed by weaning (97.78%). The lowest deficit was in the area related to "supplementary feeding' (98.89%). Therefore the urban mothers have good expressed practices as compared to rural mothers in above mentioned areas regarding supplementary feeding.

TABLE 5
Co – relation between knowledge score and expressed practice score obtained by rural mothers and urban mothers.

N = 120

	knowledge score Mean	SD	Practice score Mean SD		r
Rural	18.13	3.64	12.68	1.55	0.062 NS
Urban	22.35	1.78	14.48	0.60	.37*

r (118) ≥ 0.195 significant at 0.05 level.
*** Significant at 0.05 level**
NS: Not significant

The findings in the table 5 shows that the coefficient of correlation between knowledge score and expressed practice score obtained by rural mothers is 0.062, suggesting a very low correlation between knowledge score and expressed practice score obtained by rural mothers. The computed r value (0.062) indicates that the positive correlation between knowledge score and expressed practice score obtained by rural mothers is not significant at .05 level.

Further, findings in table 4 shows that the coefficient of correlation between knowledge score and expressed practice score obtained by urban mothers is .37 indicating a significant positive relationship between the knowledge score and expressed practice scores of urban mothers at .05 level of significance. The findings suggest that there is marked relationship between the knowledge score and expressed practice score of urban mothers regarding supplementary feeding. This suggests that urban mothers have more knowledge as well as better practices as compared to rural mothers regarding supplementary feeding.

TABLE 6
Chi square showing association between selected growth parameters and the knowledge scores of urban mothers of infants on supplementary feeding.

N=60

S. no	Anthropo-metric variables	Category	Below Median	Above Median	Chi square value
1.	Weight	Below normal	5	5	1.802 NS
		Normal	19	24	
		Above normal	5	2	
2.	Height	Below normal	15	12	1.769 NS
		Normal	14	18	
		Above normal	0	1	
3.	Midarmcircumference	Below normal	8	3	4.734 NS
		Normal	14	23	
		Above normal	7	5	

Chi-square (2)> 5.99 at .05 level
NS: Not significant.

Data given in Table 6 shows the computed chi-square values between selected growth parameters (weight, height and midarmcircumference) and the knowledge scores of (Urban) mothers of infants of urban area on supplementary feeding were not found to be statistically significant at .05 level of significance. Therefore, the knowledge scores of urban mothers of infants regarding supplementary feeding doesn't have any impact on selected growth parameters. This shows knowledge of urban mothers is independent of any impact on growth parameters of children.

Table 7
Chi square showing association between selected growth parameters and the expressed practice scores of urban mothers of infants on supplementary feeding.

N = 60

S. No	Anthropo-metric variables	Category	Below Median	Above median	Chi square value
1. Weight		Below normal	5	5	6.974*
		Normal	23	20	
		Above normal	0	7	
2. Height		Below normal	10	17	3.062NS
		Normal	18	14	
		Above normal	0	1	

3.	Midarmcircumference	Below normal	4	7	0.916NS
		Normal	19	18	
		Above normal	5	7	

Chi-square (2)> 5.99 at .05 level
*** Significant at 0.05 level**
NS: Not Significant

Further, findings in Table 7 shows the computed chi-square values between selected growth parameters (Height and midarmcircumference) and the expressed practice scores of (Urban) mothers of infants of urban area on supplementary feeding were not found to be statistically significant at .05 level of significance. No significant association was found between expressed practice scores and anthropometric variable of children (Height and midarm circumference) > 5.99 at .05 level whereas weight is statistically significant at .05 significance level. It can be concluded that the expressed practice scores of urban mothers regarding supplementary feeding doesn't have impact on selected growth parameters (Height and midarm circumference). Where as the expressed practice scores of urban mothers have facilitated children to gain weight.

Table 8
Chi square showing association between selected growth parameters and the knowledge scores of rural mothers of infants on supplementary feeding
N=60

S. No	Anthropometric variables	Category	Below Median	Above Median	Chi square value
1.	Weight	Below normal Normal Above normal	6 13 4	6 26 5	1.246 NS
2.	Height	Below normal Normal Above normal	7 16 0	7 16 14	11.351*
3.	Midarmcircumference	Below normal Normal Above normal	9 10 4	7 9 21	9.091*

Chi-square (2)> 5.99 at .05 level
*** Significant at 0.05 level**
NS: Not Significant

Data given in Table 8 shows the computed chi-square values between selected growth parameters (Height and midarmcircumference) and the knowledge scores of rural mothers of infants on supplementary feeding were statistically significant at .05 level of significance. It denotes the association between knowledge scores and anthropometric variable of children (Height and midarm circumference) whereas weight is not statistically significant at .05 significance level. Therefore, the knowledge scores of rural mothers regarding supplementary feeding have impact on selected growth parameters (Height and midarm circumference) and not on weight.

Table 9
Chi square showing association between selected growth parameters and the expressed practice scores of rural mothers of infants on supplementary feeding

N =60

S. No	Anthropometric variables	Category	Below Median	Above Median	Chi square value
1.	Weight	Below normal Normal Above normal	3 10 1	9 29 8	0.886NS
2.	Height	Below normal Normal Above normal	1 10 3	13 22 11	3.201NS
3.	Midarmcircumference	Below normal Normal Above normal	3 5 6	13 14 19	.289NS

Chi-square (2)> 5.99 at .05 level
NS: Not significant

Further findings in Table 9 shows the computed chi-square values between selected growth parameters (weight, height and midarmcircumference) and the expressed practice scores of (Rural) mothers of infants of rural area on supplementary feeding were not found to be statistically significant at .05 level of significance. No significant association was found between expressed practice scores and anthropometric variables of children like weight, height and midarm circumference)> at .05 level. Therefore, the expressed practice scores of rural mothers of infants regarding supplementary doesn't have any impact on selected growth parameters. It can be concluded that the expressed practice scores of rural mothers is independent of weight, height and midarmcircumference

Discussion

In the present study, the knowledge scores of urban mothers of infants regarding supplementary doesn't have any impact on selected growth parameters. It can be concluded that the knowledge scores of urban mothers is independent of weight, height and midarmcircumference. The expressed practice scores of urban mothers regarding supplementary feeding doesn't have impact on selected growth parameters (Height and midarm circumference). The knowledge scores of rural mothers regarding supplementary feeding have impact on selected growth parameters (Height and midarm circumference) not on weight the expressed practice scores of rural mothers is independent of weight, height and midarmcircumference. Where as **K. J Rosamma** reported slightly different results there exist a positive relationship between feeding practices and present weight (r=0.161), height (r=0.122), mid arm circumference (r=0.074) and chest circumference (r=0.086) of the sample study group. No significant association was found between feeding practices and anthropometric variables of children like age, gender, birth weight, present weight ,height, mid arm circumference and chest circumference at p<0.05 level.

Conclusion:

- Urban mothers have more knowledge as compared to rural mothers regarding supplementary feeding..
- The rural mothers possess basic knowledge in above mentioned areas regarding supplementary feeding.
- The urban mothers have good knowledge than rural mothers in above mentioned areas regarding supplementary feeding.
- Urban mothers have good expressed practices as compared

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to rural mothers regarding supplementary feeding

- The rural mothers possess basic expressed feeding practices in above mentioned areas regarding supplementary feeding.
- The urban mothers have good expressed practices as compared to rural mothers in above mentioned areas regarding supplementary feeding.

REFERENCE

1. Abdul Sayed ZT, Latham MC, Roe DA. Prolonged breast feeding without the introduction of supplementary feeding. J Trap Pediatric. 2005 Feb; 41(1):2933.Available PMID: 7723126. | | 2. Abdulraheem R, Binns C.W. The infant feeding practices of mothers in the Maldives. Public Health Nutr. 2007 may; 10 (5): 502-507. | | 3. Auld GW, Morris M: Infant/toddler feeding practices of adolescent mothers: Ethnic differences and intergenerational involvement. Fam Cons Sci Res J 23:118–134, 2004. | | 4. Appoh LY, Krekling S: Maternal nutritional knowledge and child nutritional status in the volta region of Ghana. Matern Child Nutr 2006 April, 1 (2):100-1 | | 5. Barton s. Infant feeding practices of low income rural mothers in U.S.A .Nutr Health J 2001; (3-4): 93-97. | | 6. Bekle A, Bhat, Berhane Y. Supplementary feeding practice in urban mothers .Am J Clin Nutr (2006); 59 – 62 | | 7. Brown KH, Dewey KG, Allen LH: Complementary feeding of young children in developing countries: a review of current scientific knowledge. Geneva WHO/NUT 98.1, 2006. | | 8. Chirmulay D, Nisal R. Nutritional status of tribal under five children inAhemadnagar District, Maharastra in relation to weaning/ supplementary feeding practices.Indian Pediatric. 2005 Feb; 30(2):215-22. Available from PMID: 8375884 | | 9. Chakrabarty S, Bharath P. Nutritional Status of KamarTribal children in Chhattisgarh. Indian Pediatric J r. Apr; vol.74(4): 381-4, 2007 |