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## Assessment of the effect of mothers education on infant's feeding practices

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### Abstract

A cross sectional study on 250 preschool children (2-5years) along with their mothers was undertaken among Girwah tehsil of Udaipur city. The study aimed to assess the impact of mother's educational status on prevailing infant feeding practices and immunization status. Results revealed that education have significant impact on mother's ability to take care their children as education develops rational thinking ability that help to nurture children in an appropriate way. In present study maximum of graduate (and post graduate mothers adopted appropriate infant feeding practices such as feeding colostrums, initiation of breast feed within a hour from birth, exclusive breastfeed till 6 months, weaning from 6 months and breast feeding till the age of 18- 24 months etc and completely immunize their children.

**Keywords:** Infant Feeding, Practices, Preschool children, Immunization, Malnutrition, Mothers education status

### Introduction

Good nutrition during early years forms the basic foundation of health, particular for good growth development, survival and maintenance of health through life. The crucial child health and development is directly proportional to the maternal health and nutrition during pregnancy and the nutrition received from the mother, after the birth from breast milk. After coming out from mother's body it has to survive in this world as an individual, that time his nutrition requirements has to be taken care individually. Inappropriate feeding during early years of life or we can say faulty feeding during infancy period can reflects as malnutrition in later life. Early feeding or Infant feeding comprises of exclusive breastfeeding for six months followed by sequential addition of semisolid and solid foods to complement (not replace) breast milk, till the child is gradually able to eat normal family food (Gupte S., ed., 2012)<sup>[1]</sup>. All infants should be fed exclusively on breast milk from birth to six months of age, and thereafter, while receiving appropriate and adequate complementary foods, breastfeeding should continue for up to two years of age or beyond. There are biological and social factors which affects the exclusive breastfeeding and its duration. Biological barriers include sore nipples or mother's perception of producing inadequate milk. Whereas social barriers includes employment, length of maternity leave, inadequate breastfeeding knowledge, lack of familial and societal support and lack of guidance and encouragement from health care professionals. Every time an innocent child suffers the curse of malnutrition; the responsibility goes to the mother, the family and to the community due to their faulty or no knowledge regarding the harmful effects of prelacteal feeding, benefits of exclusive breast feeding and initiation of proper weaning at the correct time. Mother's education can determined child growth and health (Willey *et al.* 2009)<sup>[2]</sup> as it has greater impact on nutritional status of children (Liaquat *et al.*, 2006; Hien and Kam, 2008)<sup>[3]</sup> <sup>[4]</sup>. It is well known that in both developed (Hediger, *et al.*, 2000)<sup>[5]</sup> and non-developed countries (Adair, *et al.*, 1993), breastfeeding provides adequate and appropriate nutrients for infant's growth and development (Dewey, *et al.*, 1995)<sup>[6]</sup>, reduction in infant mortality and morbidity (Booth, 2001), protects infants against infections and promotes their survival (Ramachandran, 2004). Common vaccine preventable diseases and faulty feeding practices culminating into malnutrition are associated with profound growth retardation. At present every 6th second a child dies or becomes disabled from a disease which could have been prevented by immunization of the child (WHO, 2016)<sup>[9]</sup>.

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Although efforts have been made since long, yet infant feeding practices are far from satisfactory in many countries (Anand R.K., 2002) [11]. There seems to have been very little improvement in the knowledge and practices of mothers on common child health matters over the years inspite of the many years of girls education in the country (Ibrahim H. A., 2010) [12]. Mother is the primary care taker of child, so her knowledge and practices have strong influence on child's health, hence the study has been planned to see the impact of mother's education status on infant feeding practices such as; prelecteal feeding, colostrums feeding, initiation of breast feed after birth, exclusive breast feeding, weaning and time of stopping breast feed etc.

**Materials and Methods**

- Structured questionnaire: Self developed, keeping in view the information to be collected for the study.
- Immunization card (Mamta card) developed by Women and child development ministry & Health and family welfare ministry with the help of NIPCCID and UNICEFF.

**Methodology**

- **Type of study:** Cross sectional study
- **Locale:** Girwah tehsil, Udaipur city
- **Period of study:** Feb 2015 to Aril 2016.
- **Study population:** 250 Preschool children

**Procedure:** 250 Preschool children with their mothers were selected purposively from 10 villages of Girwah tehsil (Baleecha, Bargaon, Bedla, Bedwas, Loyra, Saweena khera, Sukher, Sisarma, Teetardi, Umarda) with the equal representation from each village by using door to door contact and snow ball sampling method. Mother of the preschool children was interviewed using structured questionnaire and information related to infant feeding, immunization status and mother's educational status was collected. Impact of mother's education on prevailing infant feeding practices was assessed using chi square test.

**Results and discussion**

Characteristic	Mother's Education							Total Number (%)	P value
	Illiterate	Primary school	Higher Primary	Higher Secondary	Graduate	Post graduate	Diploma		
<b>Immunization</b>	<b>Number (%)</b>	<b>Number (%)</b>	<b>Number (%)</b>	<b>Number (%)</b>	<b>Number (%)</b>	<b>Number (%)</b>	<b>Number (%)</b>	<b>Number (%)</b>	
Complete	5(2)	34(13.6)	18(7.2)	11(4.4)	83(33.2)	58(23.2)	1(0.4)	210(84)	0.000*
Partial	4(1.6)	19(7.6)	4(1.6)	5(2)	2(0.8)	2(0.8)	0	36(14.4)	
Don't have card	2(0.8)	2(0.8)	0	0	0	0	0	4(1.6)	
<b>Prelecteal feed</b>									
Yes	7(2.8)	25(10)	18(7.2)	12(4.8)	21(8.4)	18(7.2)	1(0.4)	102(40.8)	.000*
No	4(1.6)	30(12)	4(1.6)	4(1.6)	64(25.6)	42(16.8)	0(0)	148(59.2)	
<b>Give colostrums</b>									
Yes	9(3.6)	51(20.4)	17(6.8)	14(5.6)	84(33.6)	60(24)	1(0.4)	236(94.4)	0.001*
No	2(0.8)	4(1.6)	5(2)	2(0.8)	1(0.4)	0	0	14(5.6)	
<b>Initiation of Breast feed after birth(hr)</b>									
0-1	9(3.6)	32(12.8)	5(2)	2(0.8)	44(17.6)	31(12.4)	0	123(49.2)	0.000*
2-5	2(0.8)	12(4.8)	7(2.8)	6(2.4)	32(12.8)	14(5.6)	1(0.4)	74(29.6)	
>5	0	11(4.4)	10(4)	8(3.2)	9(3.6)	15(6)	0	53(21.2)	
<b>Exclusive breast feed</b>									
Yes	8(3.2)	33(13.2)	10(4)	8(3.2)	68(27.2)	48(19.2)	0	175(70)	.002*
No	3(1.2)	22(8.8)	12(4.8)	8(3.2)	17(6.8)	12(4.8)	1(0.4)	75(30)	
<b>Exclusive breast feed duration (months)</b>									
0-3	0	14(5.6)	4(1.6)	2(0.8)	10(4)	4(1.6)	0(0)	34(13.6)	0.000*
3-6	0	7(2.8)	4(1.6)	4(1.6)	56(22.4)	38(15.2)	0(0)	109(43.6)	
6-8	7(2.8)	7(2.8)	2(0.8)	0(0)	0(0)	4(1.6)	0(0)	20(8)	
>8	1(0.4)	5(2)	0(0)	2(0.8)	2(0.8)	2(0.8)	0(0)	12(4.8)	
<b>Weaning(months)</b>									
<4	0(0)	2(0.8)	9(3.6)	5(2)	11(4.4)	6(2.4)	0(0)	33(13.2)	0.000*
4-6	2(0.8)	7(2.8)	8(3.2)	2(0.8)	55(22)	40(16)	0(0)	114(45.6)	
6-8	6(2.4)	8(3.2)	2(0.8)	3(1.2)	17(6.8)	7(2.8)	1(0.4)	44(17.6)	
8-10	1(0.4)	20(8)	1(0.4)	4(1.6)	2(0.8)	7(2.8)	0(0)	35(14)	
>10	2(0.8)	18(7.2)	2(0.8)	2(0.8)	0(0)	0(0)	0(0)	24(9.6)	
<b>Stop breast feed(months)</b>									
Continue	6(2.4)	18(7.2)	5(2)	4(1.6)	7(2.8)	5(2)	0(0)	45(18)	0.000*
0-6	2(0.8)	2(0.8)	2(0.8)	2(0.8)	0(0)	6(1.4)	0(0)	14(5.6)	
6-12	0(0)	4(1.6)	0(0)	1(0.4)	8(3.2)	2(0.8)	0(0)	15(6)	
12-18	0(0)	9(3.6)	1(0.4)	2(0.8)	50(20)	37(14.8)	1(0.4)	100(40)	
18-24	3(1.2)	10(4)	14(5.6)	5(2)	20(8)	3(1.2)	0(0)	55(22)	
>24	0(0)	12(4.8)	0(0)	2(0.8)	0(0)	7(2.8)	0(0)	21(8.4)	
<b>Breast feed during mothers illness</b>									

Characteristic	Mother's Education							Total	P value
	Illiterate	Primary school	Higher Primary	Higher Secondary	Graduate	Post graduate	Diploma		
Immunization	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	
Continue normally	11(4.4)	53(21.2)	22(8.8)	14(5.6)	81(32.4)	55(22)	1(0.4)	237(94.8)	0.05
Less normal	0(0)	0(0)	0(0)	2(0.8)	3(1.2)	0(0)	0(0)	5(2)	
Discontinue	0(0)	2(0.8)	0(0)	0(0)	1(0.4)	5(2)	0(0)	8(3.2)	

Mother is the primary care taker of child, so her knowledge and practices have strong influence on child's health. In the study mother's education status was found to be significantly correlated with child's immunization status and infant feeding practices such as pre-feeding, colostrums feeding, initiation of breast feed after birth, exclusive breast feeding, weaning and time of stopping breast feed etc. Breast feeding during mother's illness was significantly not found to be related with mother's education status.

As presented above, Mostly graduate (33.2%) and post graduate (23.2%) mothers completely immunized their children in comparison to illiterate (2%), primary school (13.6%), higher primary (7.2%), higher secondary(4.4%) educated mothers. whereas 1.6% illiterate and primary school graduate mothers didn't have mamta card( immunization card).

Prelacteal feed was not given by 16.8% post graduate, 25.6 % graduate, 3.2 % higher primary and secondary, 12% primary school educated and 1.6 % illiterate mothers. Whereas 10 % primary school educated, 8.4 % graduate, 7.2 % post graduate and higher primary, 4.8 % higher secondary educated, 0.4 % diploma holders and 2.8% illiterate mothers have given prelacteal feeds to their infants. Maximum of mothers (94.4%) feed colostrums to their children besides that 1.6 % primary, 2% higher primary, 0.8 % higher secondary educated and 0.8% illiterate didn't feed colostrums to their child.

A total of 49.2 % mothers breast feed their child within 1 hour from birth, among them 12.4% were post graduate, 17.6 % were graduate, 0.8 % higher secondary, 2% were higher primary, 12.8 % were primary pass and 3.6 % were illiterate. Among 29.6 % mothers who breast feed their child within 2-5 hours from birth, mostly were graduate(12.8%), post graduate(5.6%), primary (4.8%), higher primary(2.8%), higher secondary( 2.4%), diploma holder(0.4%) and 0.8 % were illiterate. Remaining 21.2% mother's breast feed their child after more than 5 hours from birth. Maximum of them were post graduate (6%), Graduate (3.6%), higher secondary (3.2%), higher primary (4%) and primary (4.4%) educated.

The desirable duration of exclusive breast feed is upto 6 months from birth, in present study maximum of mothers (43.6%) exclusively breastfeed their child till 3-6 months. Among them 15.2 % were post graduate, 22.4% were graduate, 1.6 % were higher secondary, 1.6%were higher primary and 2.8 % were primary educated mothers. None of the illiterate exclusively feed their children till desired duration. Among 80 % mothers who exclusively feed their child till the age of 6-8 months, 2.8 % mothers were illiterate, 2.8% were primary pass, 0.8% was higher primary pass and 1.6 % was post graduate.

Maximum of mothers (45.6%) started weaning their child at the desirable weaning time that is 4-6 months of age, among them maximum were graduate (22%) and post graduate (16%). Whereas 15.2% primary school pass mothers started weaning their children after 8 months or more. Mother with high education level has knowledge on correct timing of complementary feeding compared to mothers from low education level (Aggarwal *et al.*, 2008)<sup>[10]</sup>.

Maximum of graduate (20%) and post graduate mothers (14.8%) stop breast feed their child after the age of 12-18 months. Among 22 % mothers who have breast feed their child till the age of 18-24 months, maximum were graduate (8%), higher primary pass (5.6%), primary (4%), post graduate (1.2%) and 1.2% were illiterate. Among 94.8% mothers who continue breast feeding during illness large percentage were post graduate (22%), graduate (32.4%) and primary pass (21.2%). Although no significant relation between mothers education and breast feeding during mother's illness was found.

### Conclusion

From the above findings we can easily conclude that education have significant impact on mother's ability to take care their children as education develops rational thinking ability that help to nurture children in an appropriate way. Supporting this fact in present study maximum of graduate and post graduate mothers adopted appropriate infant feeding practices such as feeding colostrums, initiation of breast feed within a hour from birth, exclusive breastfeed till 6 months, weaning from 6 months and breast feeding till the age of 18-24 months etc and completely immunize their children. However it doesn't mean that mothers with high education level had healthy children only. Besides that mothers with low education level can also take care of her child if she is aware about healthy child rearing practices, as in present study many primary school pass mothers also adopted appropriate feeding practices and completely immunize their children although their percentage was less in comparison to graduate and post graduate mothers.

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