

# **A STUDY ON COMPLEMENTARY FEEDING PRACTICES IN JAMMU, KASHMIR AND LADAKH REGIONS**

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## **ABSTRACT**

The appropriate time for the initiation of semi-solids is 6 months and/or early and delayed initiation can prove deleterious. The introduction of semi-solids before six months of age puts infants at risk of malnutrition because other foods are nutritionally inferior to breast milk. This practice can also increase their exposure to pathogens and thus put them at a greater risk of getting infection. Timely complementary feeding rate in present study was 30.9%.

## **INTRODUCTION**

The optimal age of introduction of complementary foods is controversial because of the so called weanlings dilemma (Rowland et al, 1978), whereby delayed initiation of these foods may result in low energy and nutrient intakes and consequent malnutrition, while premature introduction of these foods is often accompanied by increased morbidity and mortality from infections (brown et al, 1989; popkin et al, 1990 and de zoysa et al, 1991).. Because of the considerable increased risk of infection associated with consumption of these foods, a two-month difference in the timing of their introduction could have important implications for global rate of diarrhea and other illnesses

Every year in india, 2.1 million children die before their fifth birthday half of these children die even before they are 28 days old, accounting for one- fourth of global infant deaths. Of the 9.7 million child deaths world wide annually one - third occur in from the time of birth 20-30 percent of babies are underweight even today that makes them vulnerable to infections and diseases. (park k

2007).the global strategy on infant and young child feeding, adopted by world health assembly (wha) recognizes that two thirds of these deaths occur during the first year and is related to inappropriate feeding practices. Malnourished children have delayed milestones and impaired cognitive development, and are likely to be handicapped for life if an innovative approach is not adopted. Thus malnutrition impairs intelligence, strength, energy and productivity.( bpni 2002).the single most effective measure for the prevention of malnutrition and protection against infection in infancy is breast feeding. Who (1981). Within the past four decades there has been a worldwide decline in breastfeeding, due to the rapid expansion of milk technology in industrialized countries, the advertisement and sale of infant formulae and the introduction of the feeding bottle as a symbol of status and affluence okeahialan (1986). The tenth five year plan 2003-07 of government of India has for the first time formulated national and state specific targets to increase the rate of ebf for first 6 months from around 40% to 80%, initiation of breastfeeding within one hour to 50% from 15% and complementary feeding rate for 6-9 months old children to 75% from 33.5%.

## **METHODOLOGY**

For the present study, random sampling was used. Sampling was done with probability proportional to size (PPS). Based on the earlier studies (Gopujkar et al 1984). The infant population was assumed to be four percent of the population as per national census. It was proposed that at-least one percent sample of the infants in the population would be drawn from each center. Out of fourteen districts of Jammu and Kashmir only three districts were selected i.e. Srinagar Jammu and Leh. In this way 680 children from Jammu, 512 children from Kashmir and 101 children from Ladakh regions were selected. **Tools USED.** Pre-tested questionnaire cum interview schedule was used to collect relevant information. All the relevant information from initiation of weaning, person giving information regarding weaning type of weaning food introduced. **Statistical Analysis:** - . Data were entered into a personal

computer and analyzed with the statistical package SPSS/PC+ (SPSS Inc., Chicago, USA). Analysis was done through contingency tables and chi-square test to find the variables that come significant.

## OBSERVATIONS

TABLE1-WEANING PRACTICES

<b>Feeding Practices</b>		<b>Jammu</b>	<b>Kashmir</b>	<b>Ladakh</b>	<b>Total</b>
Initiation of semi-solid food	Early	52 (20.2)	35 (19.5)	62 (76.5)	149 (28.8)
	Timely	70 (27.2)	72 (40.2)	18 (22.2)	160 (30.9)
	Late	135 (52.5)	72 (40.2)	1 (1.3)	208 (40.2)
		94.592 (.000)**			
Type of first semi-solid	Commercial cereal	94 (36.6)	103 (57.5)	16 (19.8)	213 (41.2)
	Home cereal***	158 (61.5)	64 (35.8)	23 (28.4)	304 (58.8)
		73.572 (.000)**			
Reason for introducing semi-solid	Child initiative	40 (15.6)	56 (31.3)	28 (24.6)	124 (24.0)
	Requirement increased	197 (76.7)	99 (58.3)	49 (60.5)	345 (66.7)
	Lack of breast milk	20 (7.8)	24 (13.4)	4 (4.9)	48 (9.3)
		11.535 (.003)*			
Reason for giving commercial cereal	Nutritious	112 (43.6)	72 (40.2)	67 (82.7)	251 (48.5)
	Convenient	79 (30.7)	52 (29.1)	7 (8.6)	138 (26.7)
	Advised	66 (25.7)	43 (24.0)	7 (8.6)	116 (22.4)
	Good earlier experience	--	12 (6.7)	--	12 (2.3)
		40.972 (.000)**			
Information about semi-solid	Doctor	66 (25.7)	43 (24.0)	7 (8.6)	116 (22.4)
	Family member	40 (15.6)	4 (2.2)	24 (29.6)	68 (13.2)
	Self knowledge	151 (58.8)	132 (73.7)	50 (61.7)	333 (64.4)
		6.875 (.032)*			

\*\*\* Jammu: Dhal Pani Ladakh: Roasted Barley paste in salt tea. Kashmir, Locally baked Bread (Chochworu) in salt tea

Table 2-Factors influencing type of first semi solid

Influencing Factors		Jammu		Kashmir		LADAKH	
		Commercial cereal	Home cereal and others	Commercial cereal	Home cereal and others	Commercial cereal	Home cereal and others
Mothers age	< 25	27 (31.8)	58 (68.2)	16 (59.3)	11 (40.7)	6 (25.0)	18 (75.0)
	25 to 30	54 (36.5)	94 (63.5)	62 (55.9)	49 (44.1)	8 (19.0)	34 (81.0)
	> 30	13 (54.2)	11 (45.8)	25 (61.0)	16 (39.0)	2 (13.3)	13 (86.7)
		4.050 (.132)ns		.360 (.835)ns		.820 (.664)ns	
Mother's Literacy Status	Illiterate	17 (24.6)	52 (75.4)	21 (37.5)	35 (62.5)	6 (15.0)	34 (85.0)
	Primarily	19 (38.8)	30 (61.2)	16 (59.3)	11 (40.7)	2 (16.7)	10 (83.3)
	Secondary	31 (34.8)	58 (65.2)	24 (52.2)	22 (47.8)	6 (25.0)	18 (75.0)
	College/ University	27 (54.0)	23 (46.0)	42 (84.0)	8 (16.0)	2 (40.0)	3 (60.0)
		11.002 (.012)*		24.109 (.000)**		2.352 (.530)ns	
Mothers Occupation	House Wife	86 (37.9)	141 (62.1)	65 (53.7)	56 (46.3)	8 (16.7)	40 (83.3)
	Self Employed	2 (20.0)	8 (80.0)	8 (50.0)	8 (50.0)	1 (8.3)	11 (91.7)
	Salaried	6 (30.0)	14 (70.0)	30 (71.4)	12 (28.6)	7 (33.3)	14 (66.7)
		1.725 (.442)ns		4.411 (.110)ns		3.719 (.156)ns	
Socio Economic Status	Upper	9 (34.6)	17 (65.4)	19 (65.5)	10 (34.5)	1 (33.3)	2 (66.7)
	Middle	49 (43.4)	64 (56.6)	54 (65.1)	29 (34.9)	9 (27.3)	24 (72.7)
	Lower	36 (30.5)	82 (69.5)	30 (44.8)	37 (55.2)	6 (13.3)	39 (86.7)
		4.159 (.125)ns		7.144 (.028)*		2.696 (.260)ns	
Sex of child	Male	58 (38.4)	93 (61.6)	61 (57.0)	46 (43.0)	3 (7.0)	40 (93.0)
	Female	36 (34.0)	70 (66.0)	42 (58.3)	30 (41.7)	13 (34.2)	25 (65.8)
		0.531 (.466)ns		0.031 (.861)ns		9.439 (.002)*	

\*\* Association is found highly significant ( $p < 0.01$ ); \* Significant ( $p < 0.05$ ) ns Non-significant  
Note: Figures in parenthesis represents percentage

Complementary foods were introduced among 76.5% of Ladakhi children quite early whereas almost equal number of children from Kashmir 19.5% and Jammu 20.2% were weaned earlier. Late weaning was more prominent in Jammu as 52.5% followed by Kashmir 40.2% and in Ladakh only 1.3% were weaned late. Late weaning was done by higher number of illiterate mothers while high socio economic families were found to wean

children earlier. Commercial cereal foods (CC) used as first semi-solid are also on increase at Jammu 36.6% but worst at Kashmir as 57.5% children were weaned with (CC). However, only 19.8% mothers at Ladakh were using such foods. Highest number of mothers delaying initiation was less than 25 years old in all the three regions. Early initiation was more common among highly educated mothers in all the three regions whereas late initiation was common among illiterate mothers in all the three regions. However with the improvement in education level of the mothers, more percentage of children was found getting timely semi solids.

as for initiation of semi solids by mothers taking up different occupations 40.0% of salaried mothers delayed initiation in jammu; and 31% of salaried mothers delayed initiation in kashmir. in ladakh 33.3% of privately employed and 23.8% of salaried mothers and only 18.8% of housewives introduced semi solids in time.

most of the lower socio-economic mothers 71.2% and 46.3% were practicing delayed initiation in jammu and kashmir regions. 81.8% of middle income group and 75.6% of lower economic group and 33.3% of high income group in ladakh were practicing early initiation. mothers more than 30 years and who were educated were found to be highest users of cm/cc. salaried mothers also used cm/cc in high proportions. highest percentage of cm/cc users were from high socio economic group

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## Discussion

Complementary foods were introduced among 76.5% of ladakhi children quite early whereas almost equal number of children from kashmir 19.5% and jammu 20.2% were weaned earlier. the fao/who expert committee on nutrition has stressed the need for supplementary milk feeds from the age of 4 months onward. (who1998). the world health organization recommended exclusive breast feeding for four to six months (who, 1995), although unicef states that “complementary feeding should be initiated at around six months” (unicef, 1993) early weaning increases the risk of illness because less of the protective factors in breast milk are consumed. it also increases the mothers risk of another pregnancy if breastfeeding is less frequent, further disrupting the breastfeeding fabric. adding complementary foods too soon may take the place of breast milk making it difficult to meet the child’s nutritional needs and result in a diet that is low in nutrients if, watery soups and porridges are used because these are easy for babies to eat

starting complementary foods too late is also a risk because the child does not receive the extra food required to meet his/her growing needs, the child's growth and development slows down or stops, increases risk of malnutrition and deficiencies such as anemia from lack of iron, the malnourished child is at risk of ill health. late weaning was more prominent in jammu as 52.5% followed by kashmir 40.2% and in ladakh only 1.3% were weaned late. nfhs—2 surveys found that only 24% of breastfed children at 5 months of age consume solid or mushy foods. this proportion rises to only 46% at 9 months of age. even at 12 month of age, more than one quarter of breastfed children did not eat any solid or mushy food the day or night before the interview.

the degree to which mothers follow current feeding guidelines when making transition from breast and/ or formula—feeding to complementary foods is influenced by factors like occupation, literacy, socio-economic status, type of family, parity and type of delivery. the result of present study are in compliance with neuling et al (1997), where mothers age or previous experience in infant feeding does not influence how decisions are made about introducing foods to the infants diet. the proportion of cm/cc users was much higher among the higher income groups, but since the poor constitute the vast majority of the population a good number of poorer class were also using commercial foods.

most of the poorer families had resorted to cm/cc on the basis of such belief and considerations as unique nutritious properties. obviously cm/cc enjoyed a prestige value in the eyes of the poor.

walia et al (1987) noted that 88% of educated mothers introduced semi-solids before 6 months of age which corresponds to the present study as in 42.0% of highly educated mothers in jammu, 32.0% in kashmir and 80% in ladakh introduced semi-solids before 6 months. a very high proportion of infants of families with high income and high socio-economic status received commercial cereals. in this study it is confirmed that higher proportion of salaried mothers than housewives used commercial cereals only at kashmir and ladakh. in jammu the proportion of housewives using commercial cereal was more than self employed and salaried mothers. the wider use of commercial foods by mothers irrespective of socio-economic status, education and occupation can be attributed to the fact that these foods do not need cooking and this implies considerable saving on fuel and time, and can therefore be readily offered over and above the family food or breast milk. in infants up to the age of 12 months and belonging to low income rural families at pantnagar, very small quantities of cereals, pulses, biscuits and fruits were reported to be the supplementary foods fed. animal milk diluted to varying degrees was fed as a supplement

by some mothers and as a substitute by a few. unsatisfactory growth performance of even those who received other foods along with breast milk is indicative of the fact that the quantity/quality of supplementary foods (along with other factors) was not sufficient to promote normal growth. (sinha and kumar, 1991). . cereals and other foods, pulses and biscuits were commonly used for infants in jammu and kashmir while in ladakh “barley” sotu (paste) was being used widely. vegetables were not widely used in any region. the vegetables were used only by 35.6% in ladakh 17.5% in jammu and 12.8% in kashmir. expensive non vegetarian foods like eggs, meat and fish were used by a very small number, of infants in jammu where as these foods were given to infants in larger percentages in kashmir and ladakh. the foods other than commercial infant foods were not used singly but always in some combinations. the most common combination was cereals and pulses, cereals and biscuits at jammu, while in kashmir and ladakh most cereals and

### ***Conclusion***

timely complementary feeding rate in present study was 30.9%.against the tenth 5 year plan of 75%complementary feeding rate for 6-9 months old children .commercial cereal foods (cc) used as first semi-solid are on increase at jammu 36.6% but worst at kashmir as 57.5% children were weaned with (cc). an important consideration against the use of commercial foods is their high cost. if these foods are in fact used in the amounts recommended, a substantial part of the income of poor and low income families would go to the purchase of these foods. therefore low-income families buy small quantities and stretch them through over dilution. this practice is abhorable and need serious deprecation.

providing sound and culture-specific nutrition counseling to mothers and recommending the widest possible use of indigenous food stuffs will help ensure that local foods are prepared and fed safely in the home in order to improve the knowledge and thereby have a favorable attitude and practices for better feeding practices, strategy is proposed for:

- i. education of would be mothers regarding use of supplements other than commercial infant foods.
- ii. training of health care workers involved in such practices.

- iii. capacity building, sensitization, monitoring and evaluating the changes among stake holders and target groups.

the solution lies in training on continuous basis of the health functionaries, icds personnel, self help groups, aganwadi workers and tbas regarding appropriate infant feeding practices and carrying out interventions

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