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Kap Questionnaire to Assess Maternal Attitude towards Feeding Practices - A Cross-Sectional Study

Niharika Gahlod, Arun Sajjanar, Deepak Viswanath, Sneha Khekade, Miranda George and Manveen Kaur Lamba*

Department of Pedodontics and Preventive Dentistry, Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, India

Abstract

Introduction: Breast milk provides complete nutrition to the newborn at the same time it develops the emotional bond for love and care for mother. Despite of knowing the health benefits, the breast feeding practice is declining globally. Many women do not breastfeed or start it late. Optimal source of nutrition is the breast milk for the infant but when breast milk is not available, iron-fortified infant formula is an appropriate alternative for the infant's first year of life. Infant formula is a food which purports to be or is represented for special dietary use solely as a food for infants by reason of its simulation of human milk or its suitability as a complete or partial substitute for human milk. The first dental visit of the child should be scheduled as soon as the first teeth erupts or if not, on his first birthday.

Aim and Objectives: To assess the maternal attitude towards the feeding practices, the awareness among mothers regarding the feeding practices, the maternal education and awareness towards oral hygiene measures, the knowledge and attitude regarding the first dental visit of the child.

Methodology: A cross-sectional study was conducted in playschools. The age group included is $2^{1/2}$ to $3^{1/2}$ years. A questionnaire was given to the mothers of the children in playschool which included multiple choice questions with both close ended and open ended questions. The questionnaire was framed in English and Hindi. The questionnaire included the questions regarding the breast feeding, bottle feeding and combined feeding practices, infant milk formula, solids and semi-solid food, awareness regarding growth and development of child and first dental visit. The evaluation of results was done based on questionnaire filled by mothers and subjected to suitable statistical analysis.

Results: In our study, we have assessed the awareness and maternal attitude towards the feeding practices. Combined breastfeeding practice was most commonly used that is breast feeding and bottle feeding. More than 60% of the mothers did not clean the child's mouth after feeding them. Very few of them were aware about the fact that there is need of cleaning mouth after every feed. Maximum mothers disagree to the fact that their children practice any of the oral habits, and if practiced it was mostly thumb sucking habit. But they were not aware of the fact that it causes harm to the dentition. Most of mothers did not visit the dentist with their child. They are not aware about the specialty dentist to visit.

Conclusion: According to our study, mothers preferred bottle feeding practice over breastfeeding. Most of them were not aware of the fact that the oral cavity needs to be cleaned after every feed. Weaning commenced at the age of $2^{1/2}$ years. Infant formula feed was started after the age of 6 months. Mothers agreed that it is important to monitor growth of the child during any form of feeding. Most of them did not visit dental clinic before. Therefore, there is need for maternal awareness and education regarding the feeding practices in India. There should also be campaign for the oral hygiene awareness to avoid any problems in future.

Keywords: Maternal attitude; Feeding practices; Breastfeeding; Infant milk formula; First dental visit

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Correspondence:
Niharika Gahlod, Department of Pedodontics and Preventive Dentistry, Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, Wanadongri, Nagpur, India, Tel: 9096868462;
E-mail: niharika.gahlod@gmail.com

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Introduction

Good nutrition is essential to the rapid growth and development that occurs during a baby's first year [1]. Breast milk provides complete nutrition to the newborn at the same time it develops the emotional bond for love and care for mother. Despite of knowing the health benefits, the breast feeding practice is declining globally. Many women do not breastfeed or start it late.

There are various factors which affect the breast feeding practice in India that includes socioeconomic status, maternal education and awareness, family background, nuclear or joint family [2]. The World Health Organization (WHO) and American academy of pediatrics has recommended exclusive breastfeeding as ideal nutrition for children in initial growth for first 6 months [3]. The child's life in first two years provides a critical window of opportunity to ensure growth and development through optimum Infant and Young Child Feeding (IYCF) practices. Optimal breastfeeding practices, includes breastfeeding initially within one hour of birth and Exclusive Breast Feeding (EBF) for about six months continued up to two years and beyond [4]. In India, breastfeeding is universal and various cultural practices are associated with breastfeeding and lactation. It revolves around the concept of ritual purity. Despite of all advantages, it has remained neglected in India [5]. Mothers were seemed less overwhelmed when they can use a familiar item to offer a supplement to their babies. When babies are fed using method of bottle feeding, they use the same deep jaw-dropping sucks which they used for breastfeeding. Babies need supplementation due to difficulty in breast feeding. Therefore, they must be fed by alternative feeding methods like bottle feeding because they are separated from mothers who have returned to employment [6]. The human breast milk is unique as it is suited to the infant's main source of nutrition contains immunoglobulin such as IgA, IgG and has specific anti inflammatory properties. Breast milk contains some bio-active components that are resistant to digestive processes and these enhances infant's immune systems as well as conferring unique health advantages to the feeding mothers [7]. Optimal source of nutrition is the breast milk for the infant but when breast milk is not available, iron-fortified infant formula is an appropriate alternative for the infant's first year of life. Infant formula is a food which purports to be or is represented for special dietary use solely as a food for infants by reason of its simulation of human milk or its suitability as a complete or partial substitute for human milk. The American Academy of Pediatrics (AAP) recommends that iron-fortified cow's milk-based infant formula is the most appropriate milk feeding from birth to 12 months for infants who are not breastfed or who are partially breastfed [8]. The first dental visit is an important milestone in the child's life and a timely visit should be an essential part of the child's general health care. The age of the first dental visit of the child helps in determining the quality of the preventive dental care that the child will receive and, thus, the future oral health of the child. Children report for the first dental visit most commonly only after 6 years and for complaints like pain and dental caries [9]. The first dental visit of the child should be scheduled as soon as the first teeth erupts or if not, on his first birthday.

Aim and Objectives

- To assess the maternal attitude towards the feeding practices.
- To assess the awareness among mothers regarding the feeding practices.
- To assess the maternal education and awareness towards oral hygiene measures.
- To assess the knowledge and attitude regarding the first dental visit of the child.

Methodology

The present study was undertaken following Ethical Clearance from institutional ethical committee, Swargiya Dadsaheb Kalmegh Smruti Dental College & Hospital, Hingna Road, Nagpur. A cross-sectional study was conducted in playschools situated in heart of the city as well as in suburban areas of Nagpur, Maharashtra. The age group which was included is $2^{1/2}$ to $3^{1/2}$ years. A questionnaire was given to the mothers of the children in playschool. The questionnaire included multiple choice questions with both close ended and open ended questions. The questionnaire was framed in both English and Hindi based for the easier understanding for the mothers. The questionnaire included the questions regarding the breast feeding, bottle feeding and combined feeding practices, infant milk formula, solids and semi-solid food, awareness regarding growth and development of child and first dental visit. The evaluation of results was done based on questionnaire filled by mothers and subjected to

Figure 1: Feed on demand.

Figure 2: Cleaning mouth after every feed.

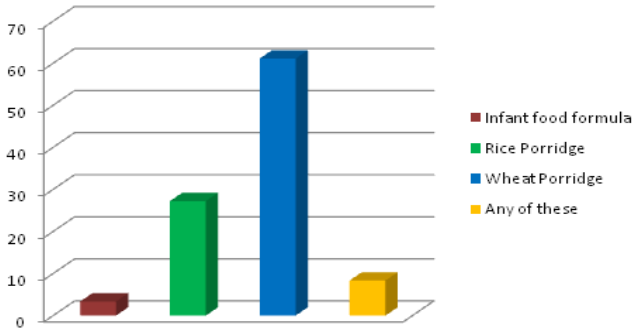

Figure 3: Type of food used for weaning.

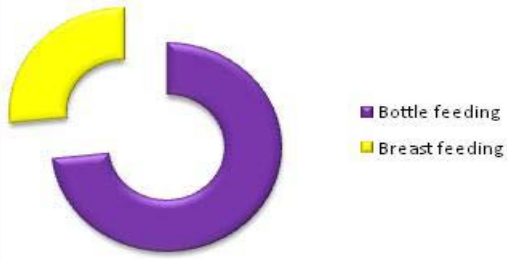

Figure 4: Most preferred method of feeding.

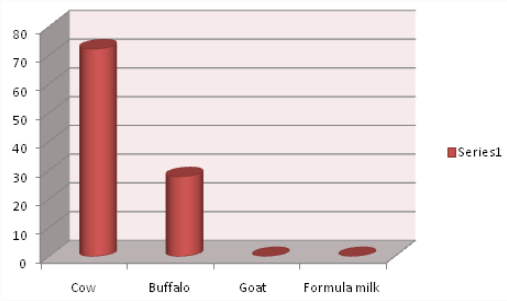

Figure 5: Sources of milk.

Figure 6: Importance of monitoring growth.

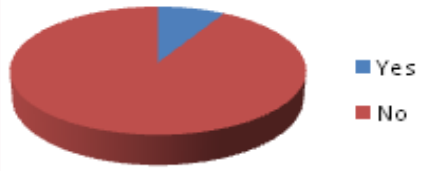

Figure 7: Practice of any oral habit.

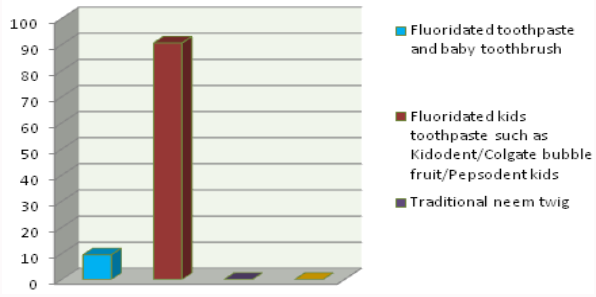

Figure 8: Teeth cleaning aids.

suitable statistical analysis (Figure 1-10).

Results

The questionnaire was taken back after they were filled. Total 200 questionnaires were distributed, out of which 12 were incomplete and 8 were lost (Table 1 and 2). Therefore, total 180 completed questionnaires were obtained. The responses were then calculated based on the most appropriate options regarding awareness of feeding practices (Table 3).

Discussion

In our study, we have assessed the awareness and maternal attitude towards the feeding practices. Combined breastfeeding practice was most commonly used that is breast feeding and bottle feeding. Maximum time the children were breastfed was about 6 months. The

Figure 9: Dental visit.

Figure 10: Preference of Dentist.

Pakistan National Nutrition Survey (NNS) 2011 reported in Sindh province that 51% of mothers initiated breastfeeding within one hour after birth, 67% predominantly maintained breastfeeding, and 9.6% of children were exclusively breastfed up to six months [4]. The prevalence of exclusive breastfeeding for the first six months was 11.4%, based on prospective data since birth [10]. Mothers admitted that they breastfed the child on demand or many times because of crying. The prevalence of exclusive breastfeeding for the first six months was 11.4%, based on prospective data since birth. More than 60% of the mothers did not clean the child's mouth after feeding them. Very few of them were aware about the fact that there is need of cleaning mouth after every feed and wet cotton was most commonly used for the same. The findings of our study reveal that the current IYCF practices are poor and significantly associated with maternal age, maternal illiteracy, unemployment, and poor household wealth status. Thus, emphasis should be given to improve maternal education status and employment for mothers. Moreover, special attention should be given to mothers with poor socioeconomic status to improve IYCF practices [4]. Our results indicate that exclusive breastfeeding rates are well below the recommended levels. Educational interventions providing comprehensive breastfeeding information to mothers and their families can be evaluated to assess its effect on improving infant feeding practices [10]. Weaning was commenced at the age of $2^{1/2}$ years. Mostly rice porridge followed by infant food formula was used for weaning. Maximum mothers did not notice any discoloration of teeth during breastfeeding practices. Bottle feeding was usually practiced more than twice a day. 1 to 2 teaspoons of sugar was always added at every feed. Moderate lukewarm milk was served to the children in feeding bottles. Plastic bottles with disposable liners were commonly used. They were cleaned twice a day. In a study by Kassing et al., [6] Use of a reusable bottle rather than a disposable bag system is preferred. Nipples were usually changed in 2 to 3 months. In case of twins/siblings same feeding bottles were not shared. Many of the mothers were agreed that they have used other artificial sweeteners in the feeding bottle, of which honey was most commonly used. Only few of them replaced the milk with other ingredient in the feeding

Table 1: Results and Data sheet (Section I).

Section Heading	Q. No.	Sub-Questions	Options	Responses	Percent (%)
I	1		a)	0	0
			b)	123	68.33
			c)	18	10
			d)	39	21.66
	2		a)	62	34.44
			b)	92	51.11
			c)	7	3.88
			d)	19	10.55
	3	i)	Yes	127	70.55
			No	53	29.44
		ii)	Yes	0	0
			No	180	100
	4		Yes	168	93.34
			No	12	6.66
		4.1)	a)	118	65.55
			b)	9	5
			c)	41	22.77
			d)	0	0
		4.2	Yes	24	13.33
			No	156	86.66
		4.2 a)	Most frequent	4 times a day	
		4.3)	Yes	64	35.56
			No	116	64.44
		4.3 a)	a)	6	3.33
			b)	58	32.22
			c)	0	0
	5		Yes	20	11.11
			No	160	88.88
	6		a)	18	10
			b)	104	57.77
			c)	52	28.88
			d)	6	3.33
	7		a)	49	27.22
			b)	110	61.11
			c)	15	8.33
			d)	6	3.33
	8		a)	26	14.44
			b)	93	51.66
			c)	41	22.77
			d)	20	11.11
II	1		Yes	26	14.44
			No	154	85.55
	2	A)	a)	0	0
			b)	134	87.02
			c)	0	0
			d)	20	12.19
		B)	a)	10	6.09
			b)	54	32.92
			c)	13	7.92
			d)	77	46.95
		C)	a)	18	11.68
			b)	82	53.24
			c)	11	7.14
			d)	43	27.92
		D)	Yes	2	1.12
			No	178	98.88
		E)	a)	2	100
			b)	0	0
			c)	0	0
			d)	0	0
		F)	a)	0	0
			b)	152	84.44
			c)	28	15.55
			d)	0	0
		G)	a)	57	31.66
			b)	100	55.55
			c)	23	12.77
			d)	0	0
		H)	a)	68	37.77
			b)	112	62.22
			c)	0	0
			d)	0	0
		I)	Yes	1	1
			No	179	99
		J)	a)	41	22.77
			b)	139	77.22
			c)	0	0
			d)	0	0
		K)	a)	109	60.55
			b)	60	33.33
			c)	11	6.11
			d)	0	0
		L)	Yes	8	4.44
			No	172	95.55
		L) i)	a)	0	0
			b)	8	4.44
			c)	0	0
			d)	0	0
		M)	a)	0	0
			b)	0	0
			c)	16	8.88
			d)	164	91.11
		N)	Yes	0	0
			No	180	100
III	1		Most common answer	6 times in a day	
	2		a)	132	73.34
			b)	48	26.66
	3		a)	0	0
			b)	180	100
			c)	0	0
			d)	0	0
	4		a)	130	72.22
			b)	50	27.78
			c)	0	0
			d)	0	0
IV	1		a)	130	72.22
			b)	50	27.78
			c)	0	0
			d)	0	0
	2		a)	54	30
			b)	57	31.66
			c)	42	23.33
			d)	27	15
	2		a)	98	54.44
			b)	75	41.66
			c)	7	3.88
			d)	0	0
	3	A)	Most frequent answer	2-3 scoops	
		B)	a)	137	76.11
			b)	0	0
			c)	5	2.77
			d)	38	21.11
	4		Most frequent answer	1-2 scoops	
	5		Most frequent answer	3 times a day	
	6		Most frequent answer	6 months	
V	1		Yes	180	100
			No	0	0
	2		Most frequent answer	3 times a day	
	3		Most frequent answer	6 months	

bottle, usually by the plain water. Similar to the breastfeeding practices they did not notice any discoloration of teeth during bottle feeding practices. In context of combined feeding practices, the children were breastfed about 6 times a day. Out of the two, bottle feeding practice was most preferred. Milk was commonly procured from Cow or Buffalo. The easily available brands of milk pack were used. In most of the cases formula feed was started at the age of 6 months. It was about 4 to 6 times, the formula feed was given which required around 2 to 3 scoops that is mostly round in shape of milk powder. Children were fed 2-3 times in a day with solid/semisolid food. Most of the mothers agreed that it is important to monitor the growth of the baby in any form of feeding. Many of the mothers will be worried,

Table 2: Results and Data sheet (Section II).

Section Heading	Q. No.	Sub-Questions	Options	Responses	Percent (%)
I	1		Yes	143	79.45
			No	37	20.55
	2	A	Yes	180	100
			No	0	0
		B	Yes	2	1.1
			No	178	98.89
		C	Yes	180	100
			No	0	0
II	1		Yes	0	0
			No	180	100
	2		a)	136	75.55
			b)	44	24.45
III			Most frequent answer	About right	

Table 3: Results and Data sheet (Section III).

Section Heading	Q.No.	Sub-Questions	Options	Responses	Percent (%)
I	1		Yes	15	8.34
			No	165	91.66
		A	a)	7	46.66
			b)	1	6.66
			c)	0	0
			d)	7	46.65
		B	Yes	2	1.11
			No	178	98.89
		C	a)	0	0
			b)	2	100
			c)	0	0
			d)	0	0
	2		a)	17	9.44
			b)	163	90.55
			c)	0	0
			d)	0	0
	3		a)	22	12.22
			b)	158	87.78
			c)	0	0
			d)	0	0
	4		a)	161	89.45
			b)	19	10.55
			c)	0	0
			d)	0	0
	5		Yes	20	11.12
			No	160	88.88
	6		a)	23	12.77
			b)	95	52.77
			c)	33	18.33
			d)	29	16.11

if their baby loses weight or gains too much weight. According to maximum mothers their child's weight is about right. The children are usually satisfied by drinking too much milk. Maximum mothers disagree to the fact that their children practice any of the oral habits, and if practiced it was mostly thumb sucking habit. But they were not aware of the fact that it causes harm to the dentition. According to them, if such things happen, they would first visit a Pediatrician or General dentist. The teeth of children are cleaned using fluoridated kids toothpaste. They usually brush once in a day. Most of mothers did not visit the dentist with their child. When they decide to visit the dentist, they mostly prefer the dentist in nearby area or a well-known dentist in the vicinity. They are not aware about the specialty dentist to visit.

Conclusion

According to our study, mothers preferred bottle feeding practice over breastfeeding. Most of them were not aware of the fact that the oral cavity needs to be cleaned after every feed. Weaning commenced at the age of $2^{1/2}$ years. Infant formula feed was started after the age of 6 months. Mothers agreed that it is important to monitor growth of the child during any form of feeding. Most of them did not visit dental clinic before. Therefore, there is need for maternal awareness and education regarding the feeding practices in India. There should also be campaign for the oral hygiene awareness to avoid any problems in future.

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