

A study on feeding practices of mothers of infants and young children

Estudio sobre las prácticas alimentarias de las madres de infantes y niños pequeños

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ABSTRACT

Proper feeding practices of infants and young children surrounding breastfeeding by mothers, weaning, introduction of complementary as well as supplementary food is critical in the child's overall growth, development and health including nutrition. It otherwise leads to malnutrition (undernutrition or obesity). This study was a cross sectional study conducted in Shillong (North East India) and Coimbatore (Southern India). Both cities being diverse in culture, demography, resources and knowledge of feeding practices among mothers of infants and young children provides it a statistical edge over previous research conducted on the topic. Purposive sampling method was used to select 15 young mothers in each of the two regions. Demographic Profile as well as Feeding Practices Monitoring Tool were used to collect the data which was carefully analyzed using Statistical Package for Social Sciences. Findings suggest that nearly half of the mothers were not practicing appropriate complementary feeding, half of them only breastfed their children without proper introduction to weaning making it necessary to create awareness among them on breast feeding and proper age of weaning and introduction of complementary food.

RESUMEN

Las prácticas adecuadas de alimentación de infantes y niños pequeños en torno a la lactancia materna, el destete y la introducción de alimentos complementarios y suplementarios son fundamentales para el crecimiento, el desarrollo y la salud general del niño, incluyendo la nutrición, de lo contrario, se produciría malnutrición (desnutrición u obesidad). Este estudio transversal se llevó a cabo en Shillong (noreste de la India) y Coimbatore (sur de la India). La diversidad cultural, demográfica, de recursos y de conocimientos sobre las prácticas alimentarias de

las madres de lactantes y niños pequeños en ambas ciudades le confiere un valor estadístico superior al de anteriores investigaciones sobre el tema. Se utilizó un método de muestreo intencional para seleccionar a 15 madres jóvenes en cada una de las dos regiones. Se utilizó el perfil demográfico y la herramienta de seguimiento de las prácticas alimentarias para recopilar los datos, que se analizaron minuciosamente con el Paquete Estadístico para las Ciencias Sociales. Los resultados sugieren que casi la mitad de las madres no practicaban una alimentación complementaria adecuada, la mitad de ellas sólo amamantaban a sus hijos sin una introducción adecuada al destete, por lo que es necesario concientizarlas sobre la lactancia materna y la edad adecuada para el destete y la introducción de alimentos complementarios.

INTRODUCTION

Adequate nutrition during early years of life is pivotal for infants and young children to survive, grow and develop into healthy adults who can lead a life that is rewarding and contributes productively to their communities (Hacket *et al.*, 2015). The initiation of breast feeding and the timely introduction of sufficient, safe and appropriate complementary foods in combination with continued breast feeding are of key importance for the growth, development, healthiness and nutrition of infants and children everywhere (Unadkat *et al* 2017). In 2001, the World Health Organization (WHO) specified that mothers worldwide ought to completely breastfeed infants for the child's first 6 months of life for finest growth, development and health. Breastfeeding alone is the ideal nourishment to the baby up to 6 months of age. Weaning begins from the moment supplementary food is introduced and continues until the child is taken off the breast completely. It is the stage when breast milk alone is not sufficient to meet the nutritional requirement of the infant and hence requires supplement of calories and nutrients from other source (Srilakshmi, 2014).

According to Dhama *et al* (2019), complementary feeding is described as the introduction to safe and nutritionally-balanced solid, semi-solid or soft foods in addition to breast milk for children aged between 6–23 months. Weaning foods are complementary in nature- that is, they complement mother's milk (Srivastava *et al*2015). When the mother's milk alone is not sufficient to sustain growth beyond six months; it should be supplemented by suitable food rich in protein and other nutrients. These foods are called supplementary food (Unadkat *et al.*, 2017). Supplementary feeding is defined as the provision of extra food to children or families beyond the normal ration of their home diets (Sguassero *et al.*, 2012). The imbalance between the nutrients the body needs and the nutrient it receives are known as malnutrition. Malnutrition may take the form of either undernutrition or obesity. Every day, on an average more than 2600 children around the world, die under the age of five. Malnutrition contributes to more than half of these deaths (Ghosh, 2020).

MATERIAL AND METHODS

Study design and selection of area:

This study was a cross sectional study conducted in Shillong and Coimbatore. Shillong is the capital city of Meghalaya and Coimbatore is the second largest city in Tamil Nadu making both the place very approachable for the researcher to collect adequate and accurate data.

Selection of sample and sample size:

The participants of the study were young mothers selected based on their willingness to participate in the study and the sample size were 30 (N=30) residing in Shillong (n=15) and Coimbatore (n=15) aged between 18-30 years. Purposive sampling method was used to select the young mothers.

The inclusion criteria were young mothers; the age group of whose children was between 6 months – 23 months. These mothers were selected based on their willingness to do the survey. Mothers whose children were beyond 2 years of age and those who are not willing to take the survey were excluded from the study.

Study tool:

The study comprises of two parts:

Part 1: Demographic profile

The demographic profile includes the following questions: name, age, educational qualification, marital and employment status, number of members in the family, address and monthly average income of the family.

Part 2: Feeding practice monitoring tool

The Feeding Practices Monitoring Tool was designed to help achieve key behaviors related to infants and child feeding on ongoing options. The tool is also designed so that data can be aggregated in real time to assess changes in infants and young child feeding practices at the community level. The tool is based on the latest international guidance on infant and young child feeding and related household practices. It draws on research and international guidance on monitoring and measuring practices related to infant and child feeding.

The tool is intended to be used between a health worker and a mother between the ages of 6 and 23 month. The Tool consists of feeding practice monitoring tool and Questions and Criteria for marking tools.

Statistical Analysis:

The collected data was entered into the Microsoft excel spread sheet. The entered data was analyzed using Statistical Package for Social Sciences.

Ethical Consideration:

The application of the study advocating the need and design was subjected to Institutional Human Ethical Committee and the Ethical clearance approval was obtained from the Institute Ethical Committee and prior consent was taken from the participants for the study.

RESULTS AND DISCUSSIONS

Demographics of respondents

The respondents (n=30) were interviewed randomly from the general population. The selected subjects comprised 15 from Coimbatore and 15 from Shillong. The demographics of the study respondents were presented in the Table I.

TABLE I DEMOGRAPHICS OF RESPONDENTS

Age (Years)	Frequency	Percentage (%)
22-25	07	23
26-30	23	77
Marital status		
Separated	00	0
Married	30	100
Qualification		
SSLC	04	13
HSC	03	10
Under graduate	19	64
Post graduate	04	13
Occupation		
Self employed	02	07
Private sector	06	20

Government service	05	16
Home maker	17	57
Income (in rupees)		
10000 and below	01	03
10001-30000	16	53
30001-50000	10	34
Above 50000	03	10
Number of members in family		
2-5 members	24	80
6-8 members	06	20

According to table I, it is clear that majority of women were at the age group of 26-30 years and 77 percentage of the study population were graduates. Nearly 53 percent of their income was above 10000 to 30000 and only 3 percent of them were at lower middle class. And also, three fourth of women respondent's family consisted of 2-5 members in their family.

Table II shows the association between breast feeding and weaning foods fed to their infant.

TABLE II THE ASSOCIATION BETWEEN BREAST FEEDING AND WEANING FOODS FED TO THEIR INFANT

	Correlation (n=30)	
	r_p	p value
Breast feeding vs weaning foods	-0.518**	0.003

r_p – Pearson's correlation, ** Correlation is significant at the 0.01 level.

From Table II, it was clear that there was negatively significant ($p < 0.01$) association which indicates that 51 percent of selected subjects who breast fed does not fed any weaning food beside breast feeding while 49 percent fed weaning food along with breast feeding.

According to the study conducted by Mehlwatet *al* (2017), in India only 54 percent of breastfed infants are initiated into complementary feeds. Gadddapa and Behra (2016) reported that only 38 percent children in the age group of 0-24 months received complementary feeding between 6-9 months of age.

Table III presents the association between breast feeding in a day time and feeding complementary food each day.

TABLE III THE ASSOCIATION BETWEEN BREAST FEEDING IN A DAY TIME AND FEEDING COMPLEMENTARY FOOD EACH DAY

	Correlation (n=30)	
	r_p	p value
Breast feeding in a day time vs feeding complementary food each day	-0.374*	0.041

r_p – Pearson’s correlation, * Correlation is significant at the 0.05 level.

Table III depicts that there was negatively significant ($p < 0.05$) association which indicates parent who feed breast milk to their children in a day time reduce feeding complementary food each day to their children. This may be because breast milk provides essential nutrients required for the infant.

Table IV highlights the association between breast feeding at a night time and feeding complementary food each day.

TABLE IV THE ASSOCIATION BETWEEN BREAST FEEDING AT A NIGHT TIME AND FEEDING COMPLEMENTARY FOOD EACH DAY

	Correlation (n=30)	
	r_p	p value
Breast feeding at a night time vs feeding complementary food each day	0.485**	0.007

r_p – Pearson’s correlation, ** Correlation is significant at the 0.01 level.

According to table IV, there was positively significant ($p < 0.001$) association. It shows the mother who breast fed at night also feed complementary food at day time.

Brown and Harries (2015) in their study reported that number of complementary meals per day was significantly inversely associated with number of night feeds (Pearson's $r = -.153$, $p = .000$). The less solid meals the infant received; more night feeds were repeated.

Table V indicates the association between breast feeding at night time and quantity of complementary food fed

TABLE V THE ASSOCIATION BETWEEN BREAST FEEDING AT A NIGHT TIME AND QUANTITY OF COMPLEMENTARY FOOD FED EACH DAY

	Correlation (n=30)	
	r_p	p value
Breast feeding at a night time vs Quantity of complementary food fed each day	0.448*	0.013

r_p – Pearson's correlation, * Correlation is significant at the 0.05 level.

Table V shows that there was positively significant ($p < 0.05$) association which indicates that parent who breast feed at night time were able to feed good quantity of complementary food at day time each day.

Table VI depicts the association between feeding complementary food each day and quantity of complementary food fed each day.

TABLE VI THE ASSOCIATION BETWEEN FEEDING COMPLEMENTARY FOOD EACH DAY AND QUANTITY OF COMPLEMENTARY FOOD FED EACH DAY

	Correlation (n=30)	
	r_p	p value
Feeding complementary food each day vs Quantity of complementary food fed each day	0.630**	0.000

r_p – Pearson’s correlation, ** Correlation is significant at the 0.01 level.

Table VI presents that positively significant ($p < 0.01$) association indicates that respondents who fed complementary food each day also fed good quantity of complementary food each day to meet out their daily requirement.

Table VII highlights the association between feeding complementary food each day and feeding food or snacks between each meal.

TABLE VII THE ASSOCIATION BETWEEN FEEDING COMPLEMENTARY FOOD EACH DAY AND FEEDING FOOD OR SNACKS BETWEEN EACH MEAL

	Correlation (n=30)	
	r_p	p value
Feeding complementary food each day vs Feeding food or snacks between each meal	0.488**	0.006

r_p – Pearson’s correlation, ** Correlation is significant at the 0.01 level.

Table VII indicates that positively significant ($p < 0.01$) association which means respondents who fed complementary food each day also fed food or snacks between each meal.

Figure I depict the normal feeding food other than breast feeding.

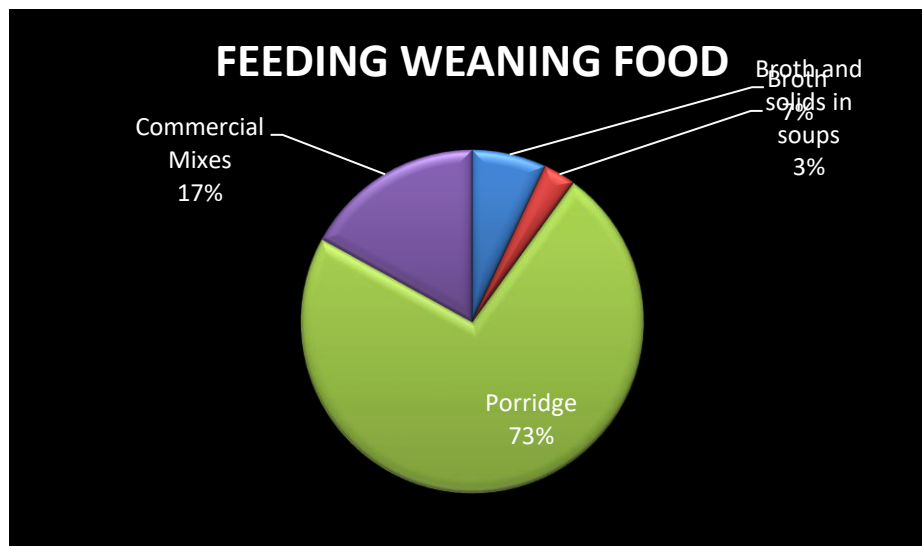


FIGURE I NORMAL FEEDING FOOD OTHER THAN BREAST FEEDING

Figure I show that 73 percentage of women feed porridge as weaning food to their infant, 17 percent of them feeds commercial mixes, and also 7 percent of the respondents feed broth whereas only 3 percent of women feed broth and solids in soups other than breast feeding.

Figure II indicates the frequency of feeding food groups.

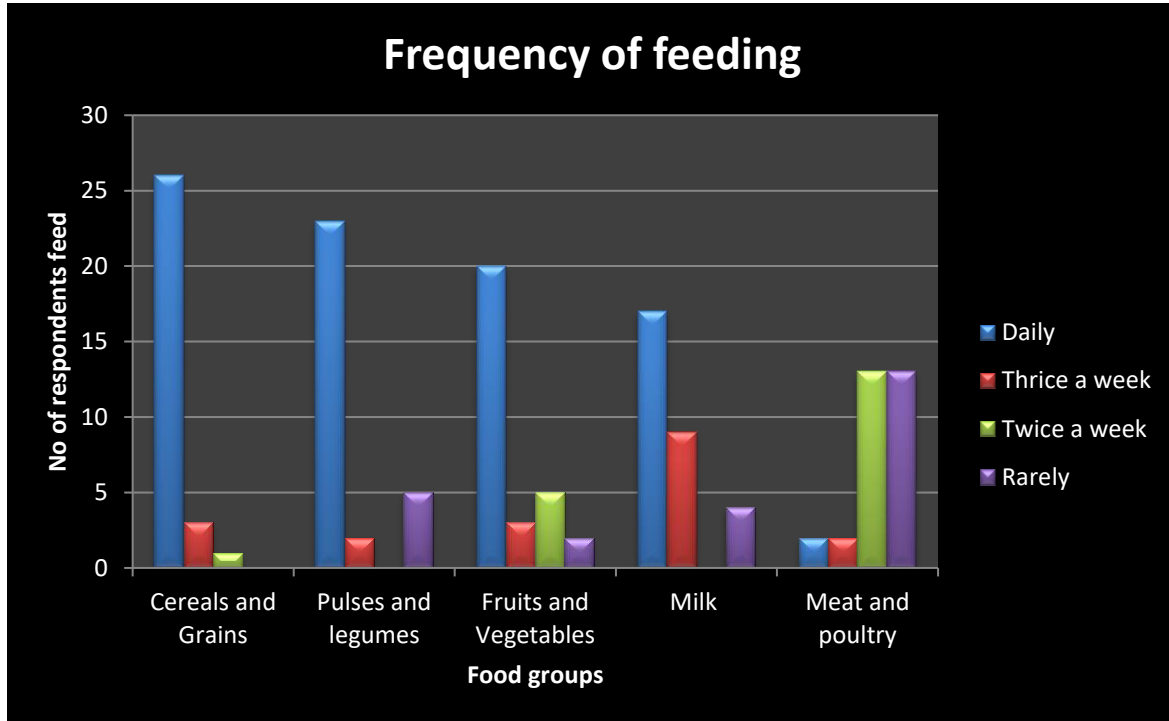


FIGURE II THE FREQUENCY OF FEEDING FOOD GROUPS

Figure II presents that majority of the selected subjects feed cereals and grains, pulses and legumes, fruits and vegetables and milk daily to meet out their daily requirement. And meat and poultry were fed rarely and twice a week only by about 40 percent of the respondents.

Molla *et al* (2017) reported that cereals (96.6%), pulses and legumes (93.3%), fruits and vegetables (43.9), milk and milk products (13.3%) were the commonly given food items to the children whereas meat and poultry (5.1) were rarely fed to the children.

Figure III shows number of respondents washing their hands before feeding

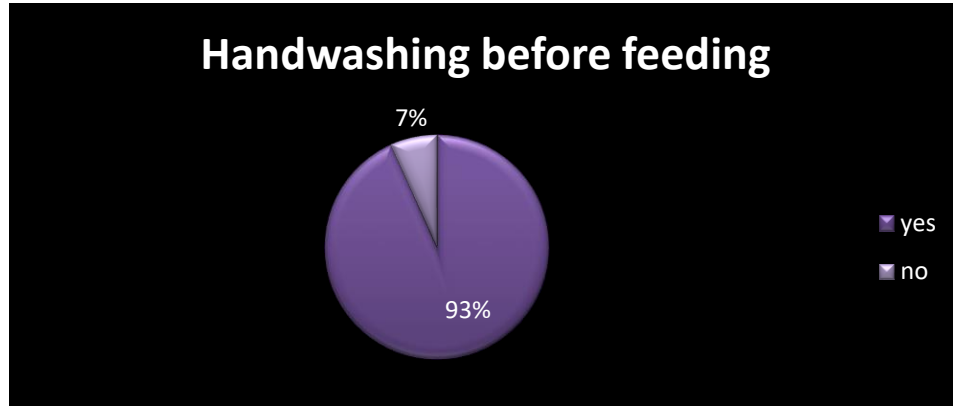


FIGURE VIII HANDWASHING BEFORE FEEDING

Figure III indicates that 93 percent of the women wash their hands before feeding their infants whereas 7 percent of the women don't wash their hands.

According to the study done by Kuruvilla *et al* (2019), it was seen that 99 percent of the women wash their hands prior to food preparation.

Figure IV shows the type of water used

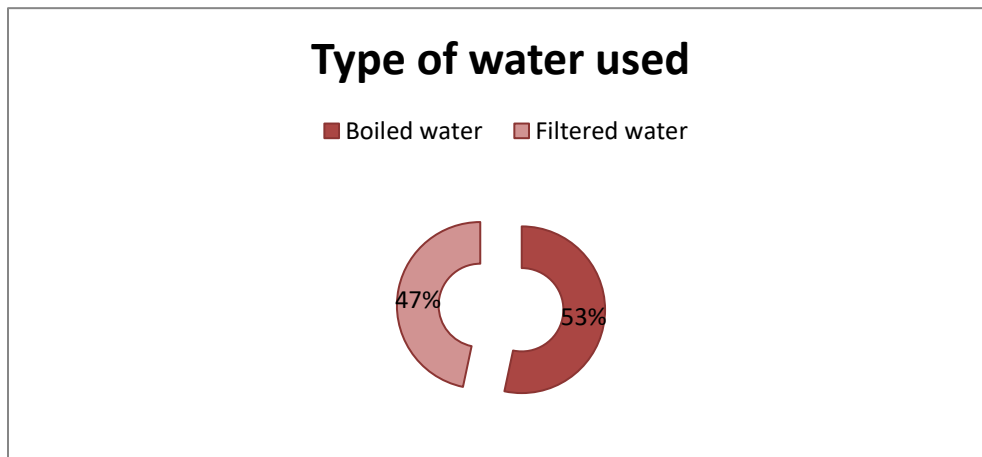


FIGURE IX SHOWS THE TYPE OF WATER USED

Figure IV depicts that 53 percent of the mother uses boiled water in young child's food whereas 47 percent uses filtered water.

Rao *et al* (2011) in their study depicted that 90 percent of the women used boiled water in the preparation of young child's food.

CONCLUSION

Nearly, half the mothers were not practicing appropriate complementary feeding and majority of mothers were not using meat and poultry when they prepare complementary foods. Hence, it is concluded from the findings of the study that it was important to create awareness among the subjects of the study since half of them only breastfed without proper introduction to weaning. Mothers with less or no knowledge on feeding practices should be informed on breast feeding and proper age of complementary feeding. This contributes in creating healthy homes and thereby a healthy society.

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