

## ORIGINAL ARTICLE - PUBLIC HEALTH

## A STUDY TO ASSESS THE WEANING AND ITS KNOWLEDGE AMONG POSTNATAL MOTHERS IN PARAMAKUDI HEALTH UNIT DISTRICT

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Abstract

**BACKGROUND:** Knowledge about weaning is essential for mothers as it marks an important stage in a child's development. Weaning is the process of introducing a baby to solid foods and gradually reducing their dependency on breast milk or formula. It is a crucial phase in a child's growth and development as it provides them with the necessary nutrients required for their physical and mental development.

**OBJECTIVE :** To assess the knowledge about weaning practices among Postnatal mothers in Paramakudi.

**SETTINGS AND DESIGN :** A descriptive study was conducted in the selected area, selecting the mothers who have children of age 4-6 months. Mothers who can read Tamil were included in the study. Mothers who had Visual and Auditory impairment, who can't read Tamil, Not willing mothers, women who had children diagnosed with inborn metabolic disorders, diabetes, heart disease, and infants who were on special feeds or diets were excluded from the study.

**METHODS AND MATERIAL :** The Parthian block was selected randomly among six blocks of Paramakudi HUD. A self-administered questionnaire was given to all the mothers with children between 4 to 6 months of age. Totally 60 mothers' response was collected and analyzed. A pre-validated questionnaire was used to collect the data from all the study participants. The data included were socio-demographic details and information regarding knowledge, timing, and practices of breastfeeding and weaning, and the nutritional importance of complementary food.

**RESULTS :** In our study, the Mean age of the participants was 25.6 + 3.7 years, with a minimum age of 20 and a maximum of 35 years. Occupation-wise, 23% were self-employed, 95% had own houses, and 47% were in a joint family. 60% of the participants had children aged 6 months and 33% had children of 5 months age. 93% of participants are aware of weaning and 97% of them known about weaning preparation and methods. About 87% of mothers were aware of the correct period to start weaning (6 months). About 75% of mothers are afraid of allergic reactions while starting weaning.

**CONCLUSION :** The majority of mothers followed exclusive breastfeeding and introduced complementary foods to their infant's diet at the recommended age of six months. However, the quality of complementary food, composition, quantity, and frequency was found to be inadequate. Moreover, the majority of the uneducated mothers withheld complementary food from their babies which was attributed to their lack of education and knowledge. The present study will help mothers to prevent malnutrition and nutritional deficiency diseases. Knowledge about weaning methods and practices was found to be satisfactory. Teaching mothers about good weaning practices will help to promote the growth and development of the child, to realize its full genetic potential.

**KEYWORDS :** Weaning, Postnatal mothers, Paramakudi.

**INTRODUCTION**

Breastfeeding children exclusively during the first six months of birth confers the baby with a passive immunity that is essential in the absence of a well-developed immune system. Moreover, the children are supplemented with complementary food after six months to meet the increasing nutritional requirements necessary for growth and development. This process is defined as weaning, and mothers who carry out weaning must be well informed about the timing and types of complementary food along with other aspects of nutrition.<sup>1</sup>

Weaning is important as breast milk is insufficient to meet the nutritional requirements of Infants after six months of birth. It helps to address the increasing nutritional requirements of the baby for its growth and development to realize its full genetical potential.

Breastfeeding for the first six months of life, appropriate

time for weaning, and the quality of complementary food during weaning significantly affect the lifelong eating behaviors and health status of children. However, people belonging to low socioeconomic classes, illiterates, and those who reside in rural areas with minimal access to healthcare do not have adequate knowledge of weaning practices and the nutritional requirements of children.<sup>2</sup>

Improper nutrition could predispose children to irreversible cognitive damage and affects their physical and psychological health. Considering the importance



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of complementary food and because there is no specific guideline about the composition and quality of such food, mothers need to improve their knowledge. Moreover, the low nutritional value of complementary food predisposes children to stunted growth, low immune responses, and cardiovascular diseases. Recent research has pointed toward the positive effects of nutrition-rich complementary food in the development of a beneficial gut microbiome and a healthier respiratory system. The withdrawal of breastfeeding, time to weaning, and the nature of complementary feeding differ with the social, cultural, economic, and geographical patterns globally.<sup>3</sup>

Proper knowledge and training are required to perform effective weaning. Many studies conducted on Weaning practices in India and abroad reveal that most mothers, especially primipara mothers have inadequate knowledge regarding effective weaning practices they are following traditional feeding practices. Effective weaning in the child requires proper knowledge and good technical skills in the mothers.

## JUSTIFICATION

Weaning is one of the many milestones in a baby's process of development. It is very important for a baby's health and development. Weaning can be a very emotional time for the woman and child. It is not just a transition to another feeding method, but start of an end to the special relationship between mother and child. During this process, a child may need more attention and cuddle time to take the place of the nurse.<sup>4</sup>

Today's children are the wealth of tomorrow. They are regarded as a future citizen of the nation. Every child has the right to have healthy growth. Hence it is essential to nurture them to strive for their well-being. When a baby reaches four to six months of age, milk alone is no longer sufficient to meet its nutritional requirements. Calories and other nutrients are needed to supplement milk until the child is ready to eat only adult foods. This is the weaning stage. Weaning is the process of expanding the diet to include food and drinks other than breast milk or infant formula.<sup>4</sup>

Weaning is a time of nutritional vulnerability. According to the World Health Organization (WHO), infant mortality rates are high in African (43%), Central, and South-East Asian (36%) countries.<sup>5</sup> The infant mortality rate in India is 69 per 1000, in Tamil Nadu 44/1000 live births, and in Salem 52 per 1000 live births.<sup>2</sup> One of the major causes of infant mortality is malnutrition. It is high at the time of weaning due to the rapid onset of infection and diarrhea. Weaning is a

gradual and difficult process. It is psychologically significant because the infant is required to give up major oral pleasure. They learn good things come from a cup. If an adequate amount is not provided, it leads to malnutrition diarrhea, and growth failure leading to kwashiorkor, marasmus, immunodeficiency, and persistent infection that may be fatal. A nutritionally adequate weaning diet is essential for achieving optimal growth in the first year. Growth in the first year influences both the well-being of the child and the long-term health of the adult.<sup>6</sup>

## OBJECTIVE

The objective of this study is to assess the knowledge about weaning practices among Postnatal mothers.

## SUBJECTS AND METHODS

Parthibanur block was selected randomly among six blocks of Paramakudi HUD. A self-administered questionnaire was given to all the mothers with children aged between 4 to 6 months. Totally 60 mothers' response was collected and analyzed. The study was carried out for a period of two weeks. After taking informed consent, PN mothers with 4 to 6 months old children, Mothers who can read Tamil were included in the study.

Mothers who had Visual and Auditory impairment, who can't read Tamil, Not willing mothers, women who had children diagnosed with inborn metabolic disorders, diabetes, heart disease, and infants who were on special feeds or diets were excluded from the study. A pre-validated questionnaire was used to collect the data from all the study participants. The data included were socio-demographic details and information regarding knowledge, timing, and practices of breastfeeding and weaning, and the nutritional importance of complementary food.

## RESULTS

The mean age of the study participants was 25.6 + 3.7 years, with a minimum age of 20 and a maximum of 35 years.

Table 1 shows the descriptive details of the demographic characteristics of the study participants such as age category, Educational qualification, Occupation of the PN mother, Type of family and the type of house.

It infers that 53% of the study participants had educational qualification of 10th-12th, 71% of the participants were home-maker. 53% of the participants belonged to nuclear family, and 95% participants had own houses.

60% of the participants had children aged 6 months and 33% had children of 5 months age.

Table 1: Distribution of Demographic data

Variable	Frequency	Percentage
<b>Mothers Age</b>		
<20 years	21	35
21-25 years	34	56
26-30 years	4	6
>30 years	1	1
<b>Educational Qualification</b>		
<10th	20	33
10th to 12th	32	53
>12 <sup>th</sup> / Graduate	8	13
<b>Occupation</b>		
Govt/Pvt Employee	3	5
Self-employed	14	23
Homemaker	43	71
<b>Types of Family</b>		
Joint Family	28	47
Nuclear family	32	53
<b>Type of House</b>		
Own house	57	95
Rented houses	3	5

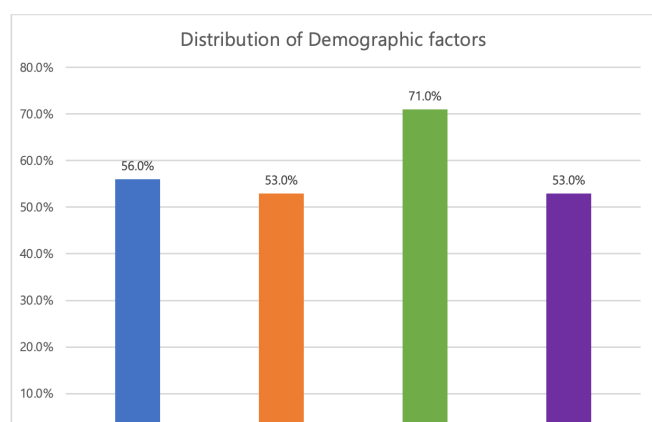


Figure 2: Prevalence of Social and emotional Problems

Table 2: Weaning Knowledge Assessment

S.No	Knowledge on weaning	Percentage
1	Do you know, What is weaning?	
	Yes	93
	No	7
2	Should hands be washed before preparation for weaning?	
	Yes	93
	No	7
3	Can weaning foods be prepared at home?	
	Yes	97
	No	3
4	Should clean vessel be used to prepare weaning foods?	
	Yes	97
	No	3
5	Can breastfeeding be continued along with weaning?	
	Yes	100
	No	0
6	Can unhygienic weaning practices cause diarrhea?	
	Yes	100
	No	
7	Can first time weaning cause allergy?	
	Yes	78
	No	22
8	Can weaning be started with semi-solid food?	
	Yes	96
	No	4
9	Does weaning increase the baby's weight?	
	Yes	97
	No	3
10	Can weaning be started with foods one by one	
	Yes	92
	No	8
11	Can weaning be gradually increased?	
	Yes	97
	No	3

12	At which month can weaning be started?	
	6 months	87
	>6 months	13
13	Till which month breast milk is enough for babies?	
	6 months	72
	>6 months	28
14	Whether home-made weaning foods are good for babies?	
	Yes	100
	No	0
15	At which month can egg be started for babies?	
	9 <sup>th</sup> -10 <sup>th</sup> month	60
	Not aware	40
16	At which month can meat be started for babies?	
	1year	60
	>2 years	40
17	From which month, the baby can eat all home foods?	
	2 years	90
	>3 years	10
18	After 9 months, can we give 1/2 bowl of food 3-4 times per day?	
	Yes	97
	No	3
19	At the start of the weaning, If the baby hesitates to take, can we continue weaning?	
	Yes	87
	No	13

Table 2 shows the response to weaning knowledge assessment questionnaire.

93% of participants are aware of weaning and 97% of them known about weaning preparation and methods. About 87% of mothers were aware of the correct period to start weaning (6 months).

100% of mothers were aware that breast feeding can be continued along with weaning and unhygienic weaning practices can cause diarrhoea. More than 60% of mothers were aware of the correct age to start egg and meat.

About 75% of mothers are afraid of allergic reactions while starting weaning.

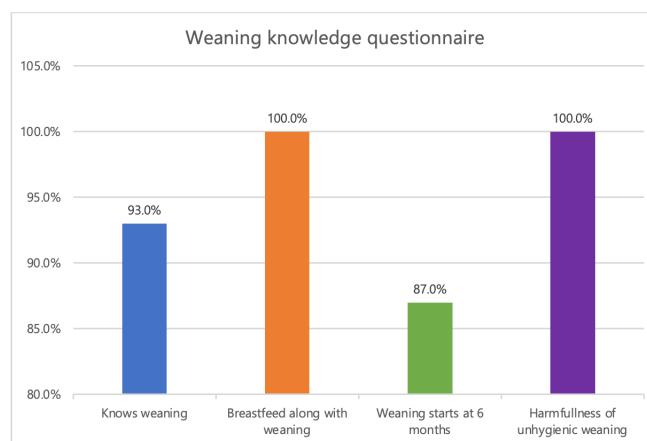


Figure 2: Level of Weaning Knowledge

## DISCUSSION

The physiological process of weaning is complex and involves biochemical, nutritional, immunological, and psychological adjustments. The introduction of new food is important both socially and nutritionally. The beginning of weaning is the beginning of a time of great change for both the mother and the child. Additional protein becomes necessary toward the end of the first year in the child and the infant also needs the bulk of roughage about this time. The ability to handle foods other than milk also depends on the physiological development of the infant.<sup>7</sup>

The appearance of salivary amylase in the saliva between two and three months of age marks the time when the infant is ready to handle more complex carbohydrates, such as starch in cereals. By four to six months of age, most infants can handle most proteins. The kidney tubules become efficient by six to eight weeks, after which there is less concern over the use of a high-protein, high-sodium diet.<sup>8</sup>

Eating solids and learning to drink from a cup are important social achievements. The optimal approach of weaning matches the needs and requirements of a given child with the function and capacities of his body.<sup>7</sup>

In a study from Malawi, 30.8% of children were noted to suffer from stunted growth. This was associated with lower rates of exclusive breastfeeding practice as evidenced by the Malawi Demographic Health Survey (2015-2016) study that assessed 2294 children aged between 0-23 months. This study also noted that women in urban areas are less likely to breastfeed infants immediately after birth. However, they follow better complementary feeding practices.<sup>9</sup>

Poor knowledge of weaning (6.2%) and complementary feeding practices was observed in a study that was reported from Nigeria. It was noted that the age of the mother and the family settings significantly influenced the knowledge and practice of weaning and complementary feeding.<sup>10</sup>

The knowledge of weaning was noted to be unsatisfactory among the women from Saudi Arabia. Moreover, women were not adequately educated about the symptoms of weaning among infants. Despite adequate educational qualifications, the infants were underfed. This was attributed to the fact that women preferred to follow local customs instead of seeking doctors' advice.<sup>11</sup>

## CONCLUSION

In our study, Demographic characteristics reveal highest percentage (52%) of mothers were between the age group of 21 – 25 years. It might be associated with the early reproductive age group as the mothers selected for the study were infants below 6 months of age and the average marriage in India for females is 21 years. In our study, the Minimum age is 20, Maximum age is 25. Occupation-wise, 23% were self-employed, 95% had own houses, and 47% were in a joint family. Mothers with 6month old child were 60%, 5month old child was 33%.

In the weaning knowledge assessment questionnaire 93% to 97% of mothers had known about weaning preparation and methods. About 87% of mothers were aware of the correct weaning starting month of 6 months, and 10% are not aware. More than 60% of mothers were aware of the correct age to start egg and meat. About 75% of mothers are afraid of allergic reactions while starting weaning.

The study results have demonstrated that the women from this geographical region have a moderate level of knowledge of breastfeeding, weaning, and complementary feeding practices. The levels of awareness among this population has significantly improved with the briefing of standard and recommended breastfeeding, weaning, and complementary food practices

## LIMITATIONS

Sample size estimation was not done following statistical methods and hence may not be representative of the study population.

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