

## Assessment of weaning practices among mothers for their infants attending the Pediatric Outpatient Department of Sindh Government Hospital Paretabad Hyderabad.

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### Abstract

**General Objective:** To assess the weaning practices among mothers for their infants those attending the pediatric outpatient department of Sind Government Hospital, Paretabad, Hyderabad.

### Specific objectives:

1. To determine the age of onset of weaning
2. To determine the type of weaning food
3. To determine the level of education and its relation to weaning

**Methods:** It was a cross-sectional study conducted at Sind Government Hospital, Paretabad, Hyderabad, during the period of 15<sup>th</sup> May 2008 to 15<sup>th</sup> June 2008. We had included all the patients according to the inclusion criteria and did not do sampling. Data was collected by principal investigator herself on a pre-formed, pre - tested questionnaire about weaning practices among mothers for their infants. Respondents were mothers/care givers accompanying their infants who were interviewed in their own language to avoid inconvenience. The operational definitions of variables were already set before the starting of data collection process. The study population included all new patients visiting in out patient department of Sindh Government Hospital Paretabad, Hyderabad during the study period. The variables included the basic demographic variables i.e. age, residence, occupation, education and socio-economic status of mothers, age of onset of weaning, type of first food given as weaning, hygienic practices of mothers etc.

The exclusion criteria included prematurely borne infants, those revisiting OPD, and those who visited the facility for acute medical problems that required hospitalization.

**Result:** Among 307 infants aged 3-12 months registered, males were 54.1% in comparison to females (45.9%). The majority of the mothers visiting the facility belonged to slum areas (79.2%). Regarding maternal attitudes and practices of weaning, 67 (21.8%) mothers considered cow's milk as a weaning diet while majority of them i.e. 240 (78.2%) were of the opinion that semisolids were the weaning foods. About 24.8% mothers started weaning earlier and only 47.6% of them started to give weaning food to their infants between ages 3 - 6 months. A strong association is evident between socio- economic status of mothers and the use of commercial weaning foods ( $p=0.01$ ). The study concludes that there is a dire need of promoting among mothers the norms of giving proper weaning foods to their infants.

### Introduction:

The dawn of 21<sup>st</sup> century has seen many revolutions in the field of health but more emphasis has been laid down on the child health. The age group that initiates the value of health is "critical window" period (from birth up to two years of age). The phenomena peculiar to this age group is rapid growth and development. Every day 26,000 children under the age of five die around the

world, mostly from preventable causes and nearly all of them in developing countries. More than one third of these die in first month of life in infancy and in up to half of under five years deaths, an under lying cause is under nutrition<sup>1</sup>. Almost one-third of children in developing countries are malnourished, one hundred and fifty millions are underweight for their age<sup>2</sup>. Under nutrition results from an array of interrelated factors, which are also the principle proximate causes of growth faltering including inappropriate infant's feeding practices, and inadequate nutrition during episodes of infectious diseases, specially diarrhea which is responsible for one billion of episodes and 3,000,000-5,000,000 deaths each year<sup>3</sup>. Diarrhea has been ranked as second most common pediatric disease in developing world and 2.2 million children die from diarrheal diseases that are often aggravated by malnutrition<sup>4</sup>. Good nutritional status is ensured by over coming barriers of poor exclusive breast feeding and improper complementary feeding practices. In a study conducted in Brazil, improper feeding practices showed fourteen times more risk of death

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from diarrhea and four times greater risk of death due to acute respiratory infections<sup>5</sup>. Regarding infant's feeding practices, the WHO guidelines say that in order to guarantee satisfaction of child's nutritional needs, appropriate complementary feeding must be timely, appropriate & safe<sup>6</sup>. After about six month's age, a child needs to be fed frequently with energy rich nutrients for optimal growth & development. The countries who fail to make such investments at right time, their children are fourteen times more likely to die from diarrheal diseases and four times more likely to die from pneumonia<sup>4</sup>. National Nutritional Survey of Pakistan in 2001 showed alarming picture of prevalence of under nutrition in children i.e. 37.6% & more than 50% of our children are anemic<sup>7</sup>. Out of twelve million children of under five who die each year in developing world, the death of over six million, or 50% are either directly or indirectly attributable to malnutrition<sup>4</sup>. South Asia is housing almost fifth of world population and two by third of world's malnourished children. More than half of these malnourished children are found in just three countries i.e. Bangladesh, India and Pakistan<sup>8</sup>. The inappropriate complementary feeding practices have been cited as major determinant for it<sup>9</sup>. Malnutrition in infancy has been the least considered health problem for the common people and it has been unnecessarily linked with inadequate access to food, but it has been observed that even with adequate food and in presence of safe and healthy environment, children and especially infants still become malnourished. Therefore the present study was designed to draw concrete conclusions on maternal practices.

#### General Objective:

To assess the weaning practices among mothers for their infants attending the pediatric out patient department of Sind Government Hospital Paretabad, Hyderabad.

#### Specific objectives:

1. To determine the infant's age of onset of weaning.
2. To determine type of weaning food.
3. To determine the level of education & its relation to weaning.

#### Subjects and Methods:

The study was conducted in outpatient department of Sind Government Hospital Hyderabad. Its catchment area includes Phulali, Paretabad, Mir Nabi Bux Town, Liaquat colony, Firdous colony & Laloo Lashari. It was a one months cross-sectional study conducted during the period of 15<sup>th</sup> May 2008 to 15<sup>th</sup> June 2008. We included all the infants according to inclusion criteria & we did not do sampling. The study was based on interviews & filling of questionnaires. The data was collected by the principle investigator herself. Total three hundred & seven infants were registered. The operational definition of variables was already set before the starting of data collection process.

#### Variables:

1. Basic demographic characteristics of mothers and

their infants such as gender of infants, residence, educational status of mothers & their socio-economic status. Maternal knowledge about weaning such as infant's age of onset of weaning and type of first weaning food given to infants

**Inclusion Criteria:** All infants aged three months to twelve months:

1. Who were normal at birth without any problem that could hamper their feeding
- Who were mild to moderately ill & didn't require to be hospitalized

#### Exclusion Criteria:

Infants revisiting the pediatrics OPD, born prematurely or those requiring hospitalization were excluded from the study.

During data collection process, the mothers were taken into confidence & the infants were referred to the desired consultants, whenever needed. The data collecting format was prepared to analyze each variable separately. The Statistical Package for Social Sciences (SPSS) version 12 was used to analyze data. Chi-square test was applied to compile the results.

#### Results:

The personal characteristics of the study population are shown in Table I. Among 307 infants aged 3-12 months, males were 54.1% in comparison to females (45.9%). The majority of the mothers visiting the facility belonged to slum areas (79.2%) & the remaining 20.8% were belonging to urban areas of Hyderabad city. Amongst 307 registered mothers, 46.9% were illiterate & among the literate mothers only 18.2% mothers were educated upto secondary school level. The 78.8% the mothers belonged to poor socio-economic class in contrast to only 5.5 % belonging to upper socio-economic class. Regarding maternal attitudes & practices of weaning, 67 (21.8%) mothers considered cow's milk as a weaning diet while majority of them i.e. 240 (78.2%) were of the opinion that semisolids are the weaning foods. About 24.8% mothers started earlier and only 47.6% of them started to give weaning food to their infants between ages 3-6 months. The major reason given for early weaning was either subsequent pregnancy or insufficient breast milk. Majority of the mothers gave history of giving commercial foods as first ever weaning diet given to their infants (45.9%) while home made sago rice was given by only 17.9% of them (Table II).

Although male infants visited our facility more in comparison to females but there is no statistically significant relation between early weaning & gender of the infant ( $p=0.06$ ) (Table III). However a statistically significant association was seen between maternal education & early onset of weaning ( $p=0.00$ ) (Table IV). Similarly a strong association is evident between socio-economic status of mothers & the use of commercial weaning foods ( $p=0.01$ ). Regarding area of residence, no significant relation was observed in its relationship to early onset of weaning (0.06) and to use of commercially prepared

weaning diets (0.015).

**Table - I:**  
**DEMOGRAPHIC CHARACTERISTICS OF MOTHERS & THEIR INFANTS n= 307**

Characteristic	Number (%)
<b>Gender of Infant</b>	
Males .....	166 (54)
Females.....	141 (45)
<b>Educational Status Of Mothers</b>	
Illiterate.....	144 (46.9)
Primary .....	107 (34.9)
Secondary .....	56 (18.2)
<b>Socio-economic Status Of Family</b>	
Poor class .....	242 (78.8)
Middle class .....	48 (15.6)
Upper class .....	17 (5.5)
<b>Residence</b>	
Urban .....	64(20.8)
Slums .....	243 (79.2)

**Table No: II**  
**MATERNAL ATTITUDES & PRACTICES TOWARDS WEANING**

Characteristics	Numbers ( % )
<b>Type of first food given to infant</b>	
Sago rice .....	55 (17.9)
Commercial foods .....	141 (45.9)
Wheat /Dalia ...	32 (10.4)
Biscuits ...	44 (14.3)
Others .....	35 (11.4)
<b>Age of Infant at Onset Of Weaning</b>	
< 3 months .....	76 (24.8)
3 -6 months .....	146 (47.6)
> 6 months .....	85 (27.7)
<b>Maternal Knowledge about Weaning</b>	
Introduction of semi-solids ...	240 (78.2)
Adding cows milk to infants feed ...	76 (21.8)

**Table No: III**  
**RELATIONSHIP BETWEEN GENDERS OF INFANT & EARLY WEANING**  
n = 307  
p=0.06

EARLY ONSET OF WEANING	GENDER OF INFANT		TOTAL
	MALE	FEMALE	
YES	34	42	76
NO	132	99	231
TOTAL	166	141	307

**Table No: IV**  
**RELATIONSHIP BETWEEN MATERNAL EDUCATION & EARLY WEANING**  
n = 307  
p=0.00

MATERNAL EDUCATION	EARLY ONSET OF WEANING		TOTAL
	YES	NO	
Illiterate	21	123	144
Primary	28	79	107
Secondary	27	29	56
TOTAL	76	231	307

**Discussion:**

The study of weaning practices among mothers of infants provides an opportunity to assess the real situation in the area catered by the Out Patient Department of Sind Government Hospital Paretabad, Hyderabad. Our finding of more males visiting the facility in comparison to female infants is just similar to a hospital based study conducted at Kolkata which showed male infants visits predominant over the female infants, visits i.e. 52.7% of males compared with 47.3% females<sup>9</sup>. This may be by chance or may be due to more concern given by mothers to their male children as traditionally seen in our society. Our study also shows 46.9% of the mothers to be illiterate (table I). This picture of maternal education is similar to the finding seen in a study conducted in Al Fatah Pediatric Hospital, Ben Ghazi, Libya<sup>10</sup>. This finding is in accordance to the overall literacy rate among females in our country as recorded by Pakistan Health & Demographic Survey<sup>11</sup>. Another reason for this finding in our study can be that our area of study mainly caters the slum population (79.2%) (Table I) where female educa-

tion is expected to be low. Despite this situation, still 78.2% of the mothers in our study had enough knowledge about weaning foods (Table II). A study conducted at National Institute of Child Health in Karachi revealed 83% of mothers having good knowledge about weaning practices<sup>12</sup>. Another study conducted at Pakistan Institute of Medical Sciences, Islamabad showed the figure of 70.04%<sup>13</sup>. Regarding time of onset of weaning, we find 47.6% mothers having started weaning foods to their infants at 3-6 months age (Table III). A similar study conducted at Fatima Jinnah Medical College Hospital revealed that weaning was started between 4-6 months age in 24.9% infants<sup>14</sup>. The reason behind this higher figure for this variable can be that we collected information in relatively wider age group of infants & as we had set lesser than three months age as the criteria of early weaning, therefore we could have captured large number of infants at 3-6 months age. The reasons given for early weaning in 24.8% of the mothers were subsequent pregnancy (32.8%) & insufficiency of breast milk (31.6%). In contrast to this; rapid weight gain was found the most strong reason for early weaning, in a study conducted in United Kingdom<sup>15</sup>. Our study reveals commercially prepared weaning foods as a norm (45.9%) while this trend was found in 58% of the mothers in a similar study conducted in Lahore<sup>16</sup>. Although our finding is a lower but still there seems a room for counseling the mothers on this issue as the trend of giving home made weaning foods is still found to be low (28.3%) in our study. Our study also shows strong tendency in mothers residing in the slum areas to adopt urban practices of weaning (p=0.00).

#### Recommendations:

1. The group discussions & counseling sessions with mothers are necessary so that they may be made to understand the importance of nutrition of children according to their ages.
2. Consumption of low cost simple energy yielding weaning foods from family pot should be encouraged among the masses.
3. Governments should emphasize on the guiding principles of weaning food practices & adoption to local conditions that are acceptable, available, affordable & easily accessible.
4. Governments should properly utilize mass media for promoting proper dietary practices during weaning.

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