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**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.3544467>Available online at: <http://www.iajps.com>**Research Article****FEEDING AND WEANING: A COMPARISON BETWEEN
WELL NOURISHED AND SEVERELY MALNOURISHED
INFANTS UPTO AGE OF 1 YEAR.****Naheed Haroon Kazi¹, Imran Ahmed², Roomana Qureshi³, Ashique Ali Arain⁴,
Mansoor Ali Khokhar⁵, Irum Jamil⁶**¹MBBS, FCPS(Pediatrics), Assistant Professor, Department of pediatrics, Muhammad Medical College, Mirpurkhas, Sindh, Pakistan²MBBS, FCPS(Pediatrics), Assistant Professor, Department of pediatrics, Muhammad Medical College, Mirpurkhas, Sindh, Pakistan³MBBS, MD (Pediatrics), Senior Registrar, Department of pediatrics, Bilawal Medical College, LUMHS, Jamshoro⁴MBBS, MCPS (Family Medicine), M. Phil (Pharmacology), Consultant Family Physician, Assistant Professor, Department of Pharmacology, Muhammad Medical College, MirpurKhas, Sindh, Pakistan⁵MBBS, MCPS Trainee(Pediatrics), College of Physicians and Surgeons Pakistan⁶MBBS, MCPS Trainee(Pediatrics), College of Physicians and Surgeons Pakistan**Abstract:**

Feeding and weaning has great role in the development of infants but as a common observation most of the mothers lack the knowledge of the proper time to feed and the weaning along with what to feed. The impact of which could easily be seen in pediatric outpatient departments of public and private sectors hospitals. We designed this work to estimate and compare the level and nature of feeding and weaning among the well-nourished and malnourished infants less than 1 year age at pediatric unit of LUMHS hospital. So we selected 50 well-nourished and 50 malnourished infants and information about the feeding and weaning natures was gathered from mothers in the form of a questionnaire from willing to participate subjects. We found 49% males 30% out of which were well-nourished and 19% were severely malnourished while 51% were female infants out of them 20% were well-nourished and 31% were severely malnourished p-value was found significant (0.045) on chi-square when data was analyzed on SPSS 22nd version. Exclusive breast feeding was seen in 85% infants while 8% infants were fed on fresh milk of Buffalo and 7% of infants were given powder milk as their feed.

Conclusion: There are improper weaning habits specially the timing and nature of food to be used for this purpose is responsible for malnutrition.

Key Words: Weaning, Infants, Nutrition, Mal-nourishment, Breast feeding, Fresh Buffalo Milk

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INTRODUCTION:

Breastfeeding is the ideal way to provide healthy food to the growing Infants with certain physiological as well as psychological advantages for infants as well as mothers [1]. It is a well-established fact about the breastfeeding that it has positive influences on the infant health and nutritional status[2]. Infants are dependent on others for their food specially the mothers or other care provider so they are responsible for quality feeding and feeding habits in this population[3,4]. What life habit and style parents adopt and the of interaction with children do affect children eating habits[5,6]. Infant feeding and interaction has positive as well as negative aspects which parents must know and handle[7]. A study shows that 50% of mothers are not well oriented about the breast feeding and weaning periods for infants [8]. Another study revealed that only 20.9% of the mothers begin to breastfeed the infant within an hour after the birth [9]. The American Academy of Pediatrics recommended the exclusive Breast feeding over initial 6 months and then continuing for a minimum time period of 12 months along with other complementary foods the academy also recognizes the human milk a standard and beneficial food the infants [10]. The topic is a neglected in the subject in our society as well as many other regions of the globe so we thought to explore few aspects about it. The malnutrition is seen as a common presentation in the pediatric outpatients that compelled us to compile this piece of research work. With hope of improvement in the traditional practice comparison is made between the well-nourished infants and severely mal-nourished infants affected by breast feeding and weaning.

METHODOLOGY:

It was a questionnaire based cross-sectional study managed and completed at pediatric department of Liaquat University of Medical and Health Sciences

Hospital Hyderabad, Sindh, Pakistan over 6 months' time period from January to June. Interviews were conducted from mothers of infants willing to do so. Inclusion was well-nourished and mal-nourished infant with age limit of 1 year or less for both genders. The exclusion was infants of age above 1 year or any chronic infection. Obtained information was converted into SPSS data sheet 22nd version and analyzed using t-test and chi-square at confidence interval of 95% and at level of significance 0.05.

RESULTS:

Data showed 91% of mother started to breast feed their infants 70% of which could continue but 14% stopped to breast feed after 3 months while 7% stopped breast feeding before the infants were 6months of age and 9% of mothers reported even they did not breast feed their infants at all. Half of the mal-nourished infants (50%) were reported to start weaning before reaching the age of 6 months and 12 % of such infants began their weaning after the age of 6 months. Male infants were 49(49%) and female infants were 51(51%) female infants were more mal-nourished as compared to male infants the p-value was 0.045 that was significant [Table-1]. Mean weight in well-nourished infants was 6.610 ± 1.55 Kg while mean weight of mal-nourished infants was 4.084 ± 1.08 Kg there was highly significant difference between the two $p < 0.0000001$ [Table-2]. The mean length in well-nourished group of infants was 64.78 ± 5.12 Cm while it was 60.90 ± 5.23 Cm in mal-nourished group significant difference was found on comparison ,p-value 0.0003 [Table-2]. There was no significant difference in nature of milk given to male and female infants with p-value 0.9 [Table-3]. Significant difference was seen in nature of weaning food between the mal-nourished and well-nourished infants the calculated p-value was 0.0003 [Table-4].

Table-I: Comparison between male and female well-nourished and mal-nourished infants (Chi-square)

S. No	Parameters	Well-Nourished Infants n=50	Malnourished Infants n=50	Row Total	P-Value
1.	Male	30	19	49	0.045
2.	Females	20	31	51	
3.	Column Total	50	50	100	

Table-II: Comparison of weight and length between well and mal nourished infants

S. No	Parameters	Well-Nourished Infants n=50	Malnourished Infants n=50	P-Value
1.	Weight (Kg)	6.610 ± 1.55	4.084 ± 1.08	< 0.0000001
2.	Length (Cm)	64.78 ± 5.12	60.90 ± 5.23	0.0003

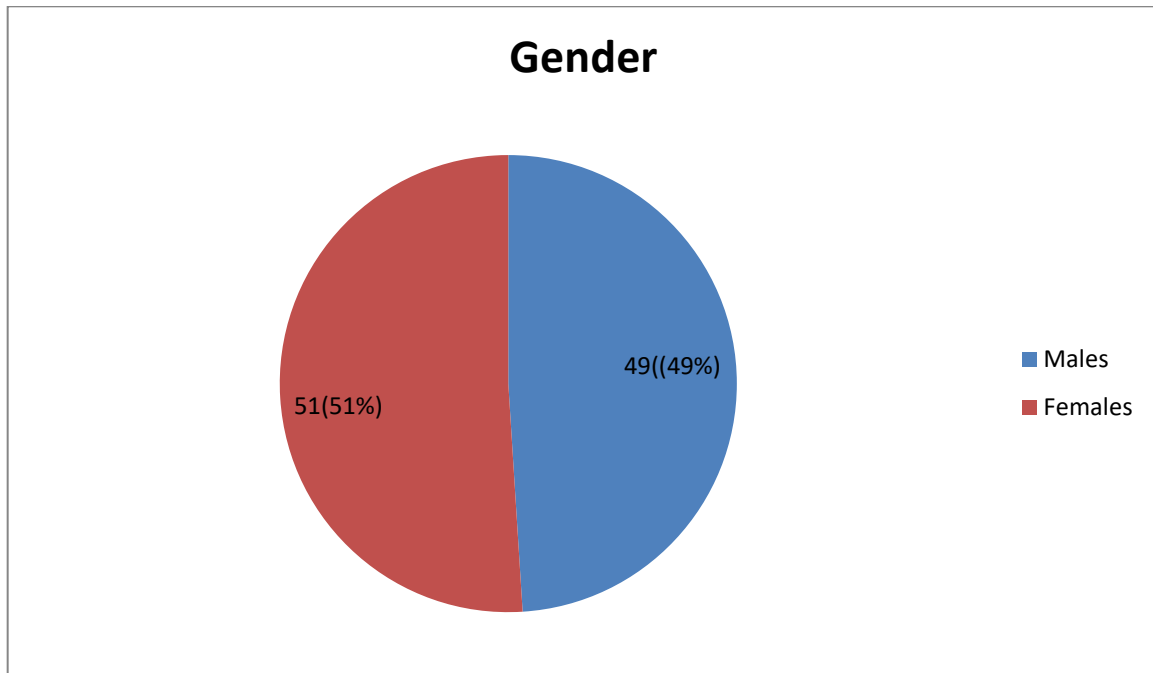
Table-III: Nature of milk given to study infants

S. No	Genders	EBF	FBM	Powder Milk	Row Total	P-Value
1.	Males	41	04	04	49	0.9
2.	Females	44	04	03	51	
3.	Column	85	08	07	100	

Note: EBF=Extensive Breast Feeding, FBM= Fresh Buffalow Milk

Table-IV: Nature of weaning given to infants under the study

S. No	Parameters	No	Home	commercial	Both	Row Total	P-Value
1.	Well-Nourished	17	17	03	13	50	0.0009
2.	Mall-nourished	14	08	15	13	50	
3.	Column Total	31	25	18	26	100	

**Figure-I: Gender distribution represented by pie chart****DISCUSSION:**

About 4 million infants are affected by severe acute malnutrition under the age of 6 months worldwide which need solid steps to control the situation [11]. Mohammed ES et al (2014) also reported lack of interest and knowledge in infant healthy feeding [12]. The chances of being underweight are reported to be 1.8 times more among male children than female due to many reasons [13]. Studies from countries like Kenya, Pakistan and Indonesia also suggested male children more under weight than females that were not in accordance with our results [14-16]. A review study from Ethiopia and reports from many countries also showed that male children are more prone to malnutrition in comparison to female children possibly due to less frequent eating and more exposure to health problems but we found female infants more vulnerable to malnutrition than males infants that inconsistent to these studies [17, 18]. Boys had more malnutrition than girls was reported by

Hamid et al (2016) from Pakistan that was also in contrast to our results [19]. There is great impact of homemade weaning foods on the development of infants in comparison to weaning items available in the market as the two differ in quality and contents. We found significant difference between the well-nourished and mal-nourished infants in terms of weaning items. Those infants who were on homemade weaning recipes were well-nourished as compared to those on commercially available. We further observed that infants in well-nourished category were reported to use exclusive breast feeding, cereals, fruits, vegetables and meat only few were also reported to use other milk along with mother's milk whereas infants in the mal-nourished category were not on these item except a few ones. We recommend promoting the education/information/awareness about the advantages of breast feeding and proper weaning, their contents, time of starting and duration to

continue along with other important aspects of this essential issue.

CONCLUSION:

There is significant difference between the breast feeding and weaning habits among the well-nourished and mal-nourished infants and female infants are more affected than male infants.

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