

**A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON
KNOWLEDGE AND PRACTICE REGARDING WEANING AMONG MOTHERS OF INFANTS IN
SELECTED COMMUNITY AREAS OF TOHANA , FATEHABAD**

SUNITA RANI^{a1} AND TAPTI BHATTACHARJEE^b

^{ab}Department of Nursing NIMS University, Jaipur Rajasthan

ABSTRACT

Weaning is a gradual process of introducing supplementary foods, starting around the age of 3-4 months. It should be supplemented by suitable foods rich in protein and other nutrients which called as supplementary foods. These include usually cow's milk, fruit juices, soft cooked rice, dhal, and vegetables. Weaning should proceed gradually and be based on the infants rate of growth and developmental skills. Weaning food should be carefully chosen to complement the nutritional need of an infant, promote appropriate nutrient intake, and maintain growth.

KEY WORDS: Weaning, Supplementary food

Breast feeding provides an unparalleled manner to supply complete and ideal nourishment for the infant in the beginning of life. Although, some studies show that exclusive breast feeding for more than 6 months may also increase malnutrition. At this age breast-milk alone is not enough to meet the needs of infant. Ideally, an infant should be exclusively breast fed for 6 months followed by additional foods being gradually introduced.

In 2002, the 55th World Health Assembly adopted a guideline based on recommendation by World Health Organization and United Nations Children's Fund, that the infant milk substitute, feeding bottles and infant food amendment Act, 2003. This National guideline formulation came into action from 1st Jan 2004 onwards.

In the first year of life, infants undergo periods of rapid growth when good nutrition is crucial. In fact, nutrition in the early years of life is a major determinant of healthy growth and development throughout childhood and of good health in adulthood. Weaning refers to a systematic process of introduction of suitable foods at the age of 4-5 months addition to mother's milk in order to provide needed nutrients to the infants. Weaning

could be a traumatic experience for the infants because they have to give up the oral gratification derived from sucking. Weaning should be started at a suitable time. It's easier to get babies accustomed to new foods earlier than when they grow older. However, weaning should definitely start around 3-4 months.

NEED FOR THE STUDY

India is a strong country of villages and about 80% of people live in villages. The education level and income level of people are low and infant feeding practices are strongly associated with the culture of the society. The growth and development of the infant depends on good maternal nutrition. Weaning is a process of gradual and progressive transfer of the baby from breast milk to the family diet. It does not mean discontinuing the breast feeding. Weaning begins from the moment supplementary food is started and continues till the child is taken off the breast completely.

Shah. N- Conducted a study at hospital among 400 children less than 5 years. Young age, delayed weaning, immunization were the probable significant risk factors for illness. Discontinuation of breast

feeding in young infants, delayed weaning causes malnutrition and hypovitaminosis among the children. The study suggested that, primary care takers of the children need sound knowledge in order to overcome malnutrition and deficiency disease.

Infants in India thrive on breast milk alone up to six months of life and their growth rate during this period is satisfactory. Breast milk alone is not able to provide sufficient amounts of all the nutrients needed to maintain growth after the first six months. Increasing need of calories and protein of growing children cannot be met by the diminishing output of mother's milk. Milk is also a poor source of vitamin C and supplementation with fruit juice is essential. Iron stores in liver of the infant would last only up to 4-6 months. Hence iron-rich foods should be given at least from six months onwards. Milk is also deficient in vitamin D. If the baby is to maintain the expected rate of growth and remain healthy and well nourished, supplementary feeding has to be resorted to round about the 6th month of life.

A worldwide survey was conducted to investigate the ways of feeding infants from birth to one year in various countries of Europe, North America, Africa, Asia and some countries in South America, suggests the proper ways of infant feeding based on the investigations and recommendations from WHO and United Nations Educational Scientific And Cultural organization (UNESCO), then concludes that breast-feeding is the best method of infant feeding and the best time to start weaning infants is between five and six months old. The term weaning is derived from the Anglo-Saxon word weaniang, which means "to become accustomed to something different. The Concise Oxford Dictionary says to wean is "to teach the sucking child to feed otherwise than from the breast. Weaning is often seen as the end of something; however, it is more

appropriately viewed as a beginning. We misuse the word wean in the context of stopping other activities or habits, weaning is not the cessation of breastfeeding but rather the addition of new foods.

In the strictest sense of the word, weaning means getting a body used to drinking milk from a cup instead of sucking milk from the breast or bottle, in the broader sense, it also means getting the baby used to taking food by biting and chewing instead of only by sucking. Weaning is now discarded in favor of the phrase complementary feeding. To make weaning an easy adjustment for a baby, it should be done gradually step by step. The „germ“ of malnutrition „infects“ a fetus in the intra-uterine life due to lack of sufficient antenatal care on part of the mother. The condition deteriorates further when after birth the infant is deprived of exclusive breast feeding or initiation of weaning is delayed. Weaning should be started after the age of 6 months and should contain energy rich semi-solid food.

It was found that mothers generally favoured breast-feeding but lacked knowledge of weaning practices. There was great emphasis on the consumption of milk. The advice from health professionals to discontinue using a feeding bottle by 12 months of age was not considered acceptable. Some mothers thought the change might cause infants to stop drinking milk and that there was little alternative suitable nourishing food available for that age group.

REVIEW OF LITERATURE

Review of literature is a key in research process. According to Nancy burns, the review of literature is a research report and it is a summary of current knowledge about a particular problem and includes, what is known and not known about the problem. The literature is received to summarize knowledge for use in practice or to provide basis for conducting a study. A literature review is a

description and analysis of the literature relevant to a particular field or topic. It gives an overview of what has been said. Who the key writers are, what are the prevailing theories and hypothesis, what questions are being asked, and what methods and methodologies are appropriate and useful.

The studies related to the topic weaning are organized and presented under the following headings.

GENERAL INFORMATION REGARDING WEANING PRACTICE IN INFANTS

Newby RM, Davies PS (2015): Conducted a cohort study on data were extracted from the demographic questionnaire and from questionnaires administered at 4 and 6 months of infant age. Participants were healthy Australian women aged between 18 and 40 years, recruited by convenience sampling in Queensland, Australia. Data were collected by self-administered questionnaire both online and on paper between October 2010 and September 2011. Breastfeeding initiation in this cohort is high. Contemporary prospective data on infant feeding have value in describing trends that may influence the health outcomes of a generation of Australian children. Even in this group of relatively well-educated Australian women, premature cessation of breastfeeding and the early introduction of foods other than breast milk to infants demonstrate behaviors not congruous with evidence-based guidelines.

Baqul AS, Supare MS (2012): Cross-sectional study was conducted in an urban slum of Nagpur, Maharashtra, India during June 2011 to December 2011. The study variables which were used were the mother's religion, occupation, education, the place of delivery, the type of delivery, the sex and the age of the baby, the antenatal clinic registration, breast feeding, weaning, knowledge of the mothers, etc. For the statistical analysis, the

Fisher's exact test was used. Out of the 384 enrolled mothers, 125(32.56%) mothers had started breast feeding within 1 hour after their deliveries. Colostrum was given by 82 (21.38%) mothers. Exclusive breast feeding for 6 months was given by 142(36.84%) mothers. The practice of exclusive breast feeding was more in the literate mothers and in mothers who were informed by the health personnel. This was statistically significant. Inappropriate feeding practices are common in an urban slum of Nagpur, Maharashtra, India.

Moore AP, Milligan P (2012): Conducted a retrospective study on Knowledge of the guidelines was high (86%) and associated with later weaning ($P < 0.001$), although 43% of this sample weaned before 24 weeks. The majority of parents used multiple sources of information, the most influential being the health visitor (26%), the Internet (25%) and books (18%). Fifty-six per cent said they received conflicting advice. Younger mothers and those of lower educational attainment were more likely to be influenced by advice from family, which was likely to be to wean earlier. Furthermore, those most influenced by their mother/grandmother were less likely to have accurate knowledge of the guidelines. The study suggests that first-time mothers have a good understanding of the weaning guidelines but seek weaning information from multiple sources, much of which is conflicting. Informal sources of weaning advice appear most influential in younger mothers and those of lower educational attainment, and result in earlier weaning.

Selvakumar (2012): Conducted a descriptive study on assessment of socio cultural factors affecting weaning practices was conducted. The aim is to evaluate the role of weaning in determining the nutritional status of infants as well as to identify the sociocultural factors affecting weaning practices in

the rural area. The health workers selected homes of 200 infants, among them 99% were breast fed, 73.5% of infants received top diluted milk, 50.5% of mothers did not give their infants semi-solid foods until after 9 months. 20.5% did not give any semi-solid or solid food at one year, 62.5% of infants received family food. About 98% have poor knowledge about nutritional requirements of infants, at the end of 12 months, 6.8% suffered from severe grades of malnutrition. These findings show that inadequate knowledge about proper weaning is the limiting factor in infant nutrition.

Yesildal et al (2012) in their study in Turkey reported that rate of exclusive breastfeeding was 22.4% and the rate of continued breast feeding up to 2 years was 10.0% . Complementary feeding Institution of complementary food is recommended at six months of age to meet the increased physiological requirements of the growing infant. Current study revealed that only 20% of total mothers (23.3% of urban and 16.7% of rural) were knowledgeable about correct age (i.e. 6 months) of start of complementary feeding. While a large majority (90% of urban mothers) knew that an infant at 1 yr of age should be taking family pot feeding whereas only 56.7% or rural mothers knew this fact.

KNOWLEDGE AND PRACTICE OF MOTHERS ABOUT WEANING OF INFANTS

Schwartz C, Madrelle J (2013): Conducted a retrospective study at France on Complementary feeding (CF) practices vary within and across cultures but have been investigated only to a very limited extent. It is however important to understand CF practices and how they differ, as CF sets the foundation for children's later food choices. The present study was set out to examine practices, attitudes and experiences of CF including the introduction of vegetables amongst French mothers

(n=18, 25-39 years). Thematic analysis of transcribed focus groups and interviews revealed the perceived importance of the weaning period, as a critical milestone for infants' development but with a sense of "now or never" for introducing new tastes including vegetables. Flavors exposure and taste discovery during weaning were identified as the beginning of a "taste journey", in which educating the palate with a variety of different foods was considered important for children's later eating habits. In particular, French mothers believed complementary feeding lay the foundations of taste early in life.

Rani TS (2012): Conducted a descriptive study in rural community of Bangalore among 100mothers of infants to assess the knowledge and practice regarding weaning. Results revealed that mean knowledge score for weaning age was 17.34, for weaning food was 8.37 and care during weaning was 1.01. The study also found that the mean attitude score was 62.33. The study concluded that mothers of infants need more information on weaning.

Chaudary R (2012): Conducted a cross-sectional study in Alma Iqbal Medical CollegeLahore among total 50 mothers of infants between 6-12 months of age to assess the weaning practices under different socio-economic and demographic variables. Self-administered questionnaire was used to assess feeding and weaning practices. . 84% infants were receiving weaning foods in addition to milk. Recommended age (6 months) was noticed in 42 cases (84%), while delayed weaning was seen in 8 (16%). Weaning was started at the correct age, several problems were observed. The inadequate use of expensive commercial cereals instead of homemade foods and improper food preparation practices were observed. The choice of expensive food was not ideal for adequate growth. Delayed

commencement of weaning had a statistical significant relationship with age, education, family income, occupation of father and mother, parity of mother and also large family size.

Pant, I. (2011): Conducted a descriptive study in urban Baroda to assess the knowledge of mothers regarding breast feeding and weaning. About 40 mothers were assessed using pretested questionnaires. Results of the study revealed that half of the mother's breastfed their babies on the 1st day, breastfeeding was stopped when the child was 3-6 months, and top feeding and solid supplements were introduced at 4-6 months. Mainly commercial baby foods were used for weaning. Most mothers avoid „dals“ for their children because it is believed to be difficult to digest and produce gas in the stomach. About 50% of mothers were not in favor of feeding a sick child with small frequent meals. This revealed inadequate knowledge of mothers regarding weaning.

HEALTH EDUCATION REGARDING WEANING OF INFANTS

Moore AP, Milligan P, Goff LM (2014): Conducted a cohort study at UK to find out the understanding of mothers. The aim of this study was to assess understanding of the UK weaning guidelines in a sample of UK parents and investigate the associations of this understanding with weaning timing, and in comparison to other influencing factors. This study conducted an online survey of UK parents. Eligible participants had weaned a child. Since the introduction of the current guidelines. Of 3607 participants, 86% accurately understood the guidelines. Eighty-seven per cent of health visitors were reported to have advised weaning at or around 6 months. Understanding of the current weaning guidelines is high and is a key independent predictor of weaning age in this population.

Ashworth, A. (2011): A study conducted on need of weaning education, among 12

developing countries suggests that it is possible even in poor communities to improve substantially the nutritional status of infants and young children by nutritional education, face to face communication by locally recruited workers. This is reinforced by radio and other mass media may be the most effective channel for weaning education. It is estimated that, through its effect on nutritional status, weaning education may reduce the diarrhea mortality rate among children less than 5 years of age.

Shi, L., Zhanq J. (2011): Conducted a retrospective study at Inappropriate complementary feeding practices have been identified as the major causes of malnutrition in young children in developing countries. This article reviewed literature on complementary feeding educational interventions from 1998 onwards. The purpose of this study was to provide evidence from published studies in the past decade on the effectiveness of educational intervention programs on improving complementary feeding practices in the developing world. Evidence from these studies supports that educational intervention can effectively improve complementary feeding practices and child nutrition and growth. The intervention should be culturally sensitive, accessible and integrated with local resources.

Anjalin, Dsouza (2009): A pre experimental study was conducted in two primary health centers of Udipi Taluk with a sample size of 50 mothers to assess the effectiveness of planned teaching program on knowledge and attitudes about complementary feeding. The study showed that the mean post-test knowledge score (32) was higher than mean pre-test knowledge score (14) and mean post-test attitude score (68) was higher than mean pre-test attitude score (50). The t-test computed to determine the significant difference of mean pre-test knowledge score of mothers on complementary feeding and

selected variables like age of the youngest child in months, type of family and educational status. No significant association was observed between the pre-test attitude of mothers and selected variables and study also found that there was relation between pre-test knowledge score and pre-test attitude scores on complementary feeding. This study also revealed that majority 80% expressed that planned teaching program was easy to understand. Hence the study found to be effective in meeting the objective.

CONCLUSION

The study was conducted to assess the knowledge and practice regarding weaning and also to provide general information regarding weaning among mothers of infants.

REFERENCES

- Basavanthappa B.T.,1998.Nursing Research (1st Edition) New Delhi Published by Jaypee brothers medical publishers: 24.
- Basavanthappa B.T.1998.Community Health Nursing (1st Edition) New Delhi Published by jaypee brothers medical publishers:166.
- Dorathy R Marlow. Barbara. A. Redding .,1998.Text Book of Pediatric Nursing (6th Edition). Philadelphia; published by W.B.Saunders Company.
- Gupta M.C.,2003.Text book of preventive and social medicine” (3rd edition), New Delhi, Jaypee Publication .
- Kasthuri Sundar Rao.2009.An Introduction to Community Health Nursing (3rd Edition), New Delhi, B.J.Publications:29
- B.T.Basavanthappa.,2008.CommunityHealth Nursing.Jaypee publication. New Delhi. Second edition: 505.
- Helizabeth B Hurlock.2007. Child growth and development.Tata McGraw publications. New Delhi. 5th ed.
- Park K,2000. Textbook of Preventive Social Medicine, 16th edition, Banarsidas, Bhanot Publishers, Jabalpur:386-387.
- Park K.,2005.Text Book of Preventive and Social Medicine. 18th ed.,B/S Banaras Ida Bhanot, Jabalpur:409.
- Gulani K.K. Community Health Nursing, Second edition 2013. Pg.388-389
- Surajgupta 2006.Text book of paediatric nutrition”, 1stedition ;peepee publishers and distributors:106-107.
- Piyushgupta .2004.Essential paediatric nursing. 2ndedition , CBS publishers and distributors, :126-127.
- WHO .2002.The goal strategy for infants and young child feeding (annexure to WHO assembly resolution .
- Cyrus Cooper.2009.Breast feeding duration and weaning diet May shape child body composition: 29.
- Reinisch P. hdSainff A, MedrickP.hd.2006.Early weaning and hospitalization with alcohol related diagnosis in adult life . A Psychiatry ,163:704-709.
- Santamaria Orleans ,Mirandehonorgeu.2006.Early nutrition and its later consequences , new opportunity:199-200.
- Al-Jassirms, El- Bashir bm 2006.. Infants feeding in Saudi Arabia ; mothers attitude and practice. East Mediterranean health,12:6-13
- Ijarotimios, OgunsemoreMT 2006.Weaning foods and their input on child feeding practice among low income Nigerian mothers “. Food nutr bull., 27(4):327-334.
- Sarwar T.2002.infant feeding practice of Pakistani mothers in England and Pakistan “j hum nutrdeit. 15(6): 419-428.