

“Computerized Based Complementary Feeding Instructions on Infants Morbidity Status”

Kogila Palanimuthu^{1*}, Praveen B.M², P.S Aithal³, N.M. Jose⁴

¹Post-Doctoral Research scholar, Pediatric and Child Health Nursing Department, Srinivas University, Mangalore, Karnataka, India

^{2, 3, 4}Srinivas University, Mangalore, Karnataka, India

ABSTRACT

Complementary feeding (CF) to infants is an advancement of steadily familiarizing semi-liquid to semi-solid foods along with mom's milk at the end of 6 months. The objectives were to assess the demographic variables of infants, to assess the infant's morbidity status. Methodology: Quantitative approach were used to evaluate the experimental and control groups. The design used in this study was Pretest posttest control group. Sample of 500 mothers and mothers of infant included who satisfying the inclusion criteria chosen by simple Random sampling. Obtained written consent from each participant before collecting the data and confidentiality of data were maintained. The collected data were analyzed by descriptive, inferential statistics. Results: Experimental Group mean SD 27.3±1.57, SE-0.83, Control Group mean SD 16.4±2.62, SE-0.52, Effect size 0.7, t value-1.95, Cohen's 'd' 5.20. At the end of 12 months among experimental group infants had no illness 97 (41%) were as in control group majority of infants 137 (59%) had illness in which 48 (35%) had exhibited minor illness, 63 (46%) had exhibited moderate illness and 26 (19%) infant's exhibited severe illness. It showed that experimental group infant's exhibited lesser illness compared to control group infants.

Key Words: Computerized Instructions, Complementary feeding, Morbidity status, Infants.

INTRODUCTION

Globally 2.8 million children deaths (28% being under five deaths) attributable to child hood under nutrition. India alone has 0.6 million child deaths, and 24.6 million attributed to stunting. Recent scientific evidence reveals that malnutrition has been directly or indirectly involves 60% of under-five year's children die annually¹. World Health Organization reports that mal-nourished children are the important aspect and suffers largely from infection and die from common childhood sicknesses than nourished young children².

According to recent studies, every 3rd deaths in young children aged 5 years or younger is due to under nutrition. Across the board infant nutrition deficiency greatly interfere the India's socio-economic development and chance to scale back economic condition³. World Health Organization (WHO) additionally recommends exclusive breastfeeding for the first six months of an infants' life, followed by complementary foods. Breastfeeding to be continued up to a minimum of a two years of recent to guard the infant from varieties of deficiency disease⁴. Likewise, early initiation of breastfeeding is incredibly crucial for survival, growth and nutrition of the newborn. In extension, it's additionally renowned permanently, infants' brain development⁵.

However, in low and middle-income countries like Asian country, perception and acceptance of contemporary birth control ways via breastfeeding are terribly low, this ensuring the deficiency disease to infants'. As per the recent statistics, rates of deficiency disease among India's young children are nearly five times over in China and double those in geographic region^{6, 7}. Only 'one fourth' of mothers' of infant begin to initiate the breast feeding within the one hour of delivery and fewer than 'half' all mothers' of infant are able to give exclusive breast feeding for the primary six months after the child birth^{8, 9}. Infants' from 6 months to 24 months may be a vulnerable period of childhood. It's the stage to have deficiency disease in several infants', presenting doubtless to the high prevalence of deficiency disease world-wide¹⁰.

Objectives:

1. To assess the pretest and posttest levels of morbidity status of infant on complementary feeding.

2. To compare between control and study groups level of knowledge with selected demographic variables of infant.

MATERIAL AND METHODS

Research approach:

Quantitative, Evaluative approach give the impression to be the utmost suitable approach for this research study.

Research design:

Pretest-posttest control group research design was appears to be appropriate for this study.

Research setting:

The research study was conducted at Selected Hospital in India.

Sample and sample size:

Infants between age group of 3-12 months and who satisfy the inclusion criteria were included for this study. Based on power analysis Formula $N = \frac{p(1-p)(Z/E)^2}{}$, sample size of 500, out of which 250 infants randomly assigned to study group and 250 were assigned to control group. Simple Random sampling technique was used to select the infants.

Sample criteria:

Inclusion criteria;

The study includes infants, who were,

- ❖ aged 3 - 5 months; who are either exclusively breast feed or partially breast feed but have not started complementary feeding.
- ❖ term /appropriate to gestational age.
- ❖ age group between 3months to 1year.
- ❖ attending pediatric outpatient department

The study excludes **Exclusion criteria**

infants, who were, Critically ill.

- ❖ having mal absorption syndrome.
- ❖ Known genetic anomaly, neurological disorder.

SCORE INTERPRETATION

Table (1): Standardized structured questionnaire to assess the morbidity status of infant

S.NO	SCORE	PERCENTAGE	LEVEL OF ILLNESS
1	1-25	≤ 50	Mild Illness
2	26-37	50-75	Moderate Illness
3	38-50	≥ 76	Severe Illness

DATA COLLECTION PROCEDURE

Structured questionnaire was used to assess the data of demographic variables and the level of morbidity status of infants on complementary feeding. Data was collected after written consent from each participant mother, and confidentiality were maintained.

Research Tool:

Part-I

Selected demographic variables of infants such as age of the child, sex of the child, number of the children, order of children.

Part-II

A structured questionnaire is used to assess the morbidity status of infant at 9 and 12 months, present study focus on Food allergy, loose motion, Dysentery, Respiratory infection, Fever, Worm infestation, any other health problems. It is based on 5 point likert scale and interpretation options as rarely "1" (one), occasionally "2" (two), frequently "3" (three), Often "4" (four), Always "5" (five). The maximum score is 50 and minimum score is 10.

ANALYSIS AND INTERPRETATION

The study results shows that morbidity status of infant's in group I and group II at 9 months were: 131 (53%), 41 (18%) infant's had no illness were as 114 (45%), 193 (82%) infant's had illness in which 65 (27%), 110 (47%) belongs to minor illness, 43 (18%), 61 (26%) had exhibited moderate illness and 6 (2%), 22 (9%) infant's with severe illness respectively. Morbidity status of infant's in group I and group II at 12 months were: 224 (91%) 16 (7%) infant's had no illness were as 21 (9.0%), 218 (93%) infant's had illness in which 15 (6%), 86 (37%) had exhibited minor illness, 6 (3%), 89 (38%) had exhibited moderate illness and 0 (0%), 43 (18%) infant's with severe illness. Group I infants had a lesser morbidity score than the Group II infants respectively, figure I and 2 exhibiting the same.

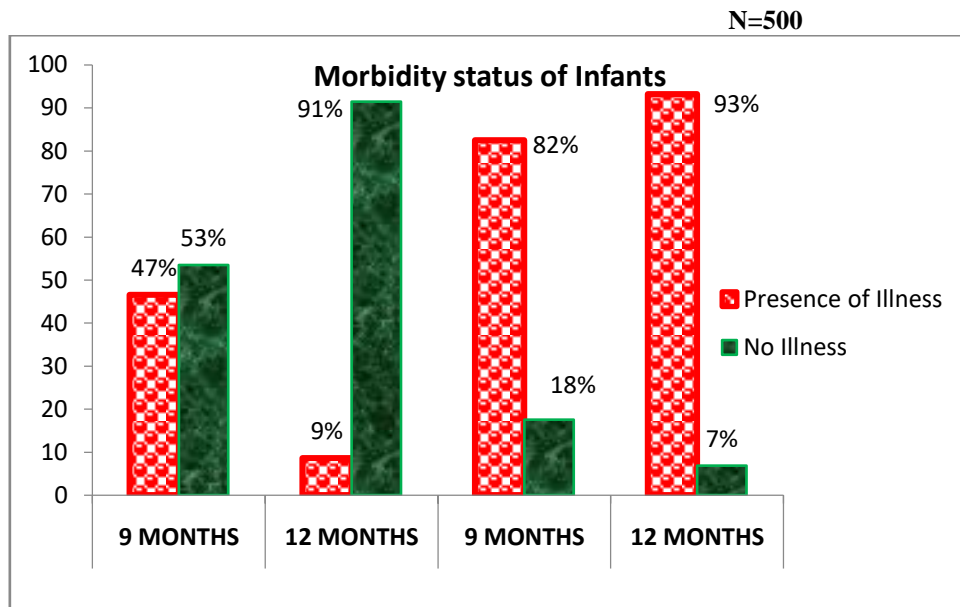


Figure-1 Morbidity status of infants' in group I and group II

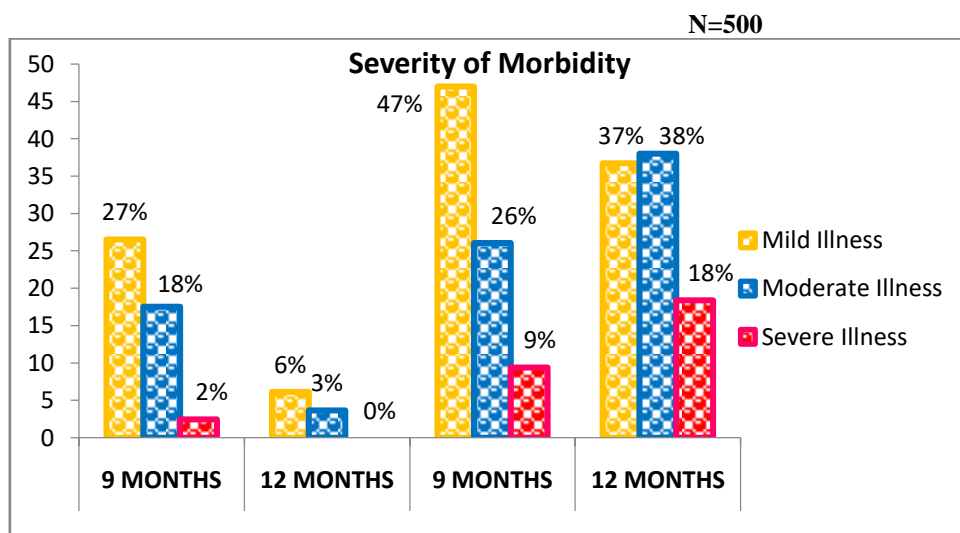


Figure-2-Severity of morbidity of infants' in group I and group II

CONCLUSION

This study concluded that Morbidity status of infant's in group I and group II at 12 months were: 224 (91%) 16 (7%) infant's had no illness were as 21 (9.0%), 218 (93%) infant's had illness in which 15 (6%), 86 (37%) had exhibited minor illness, 6 (3%), 89 (38%) had exhibited moderate illness and 0 (0%), 43 (18%) infant's with severe illness. Group I infants had a lesser morbidity score than the Group II infants. The infant's with proper Complementary feeding is a peculiar cardinal factor for the reduction of morbidity and mortality especially during the infancy period.

Conflict of interest- Nil

Source of Funding- Self funding and no external funding.

Ethical Clearance: Obtained clearance from institutional human ethical committee, CARE.

REFERENCES

- [1]. WHO and UNICEF, Joint child malnutrition estimates-Levels and trends, 2016, Pp.2-3.
- [2]. Zaman, S.; Ashraf, R.N.; Martines, J. Training in Complementary Feeding Counselling of Healthcare Workers and Its Influence on Maternal Behaviours and Child Growth: A Cluster-randomized Controlled Trial in Lahore, Pakistan. *J. Heal. Popul. Nutr.* 2008, 26, 210–222.
- [3]. Wang D. et al., *Association between the Infant and Child Feeding Index (ICFI) and nutritional status of 6- to 35-month-old children in rural western China.* *PlosOne.* 2017, Vol. 12. Pp. 01-14.
- [4]. Tylleskar, T.; Jackson, D.; Meda, N.; Engebretsen, I.M.S.; Chopra, M.; Diallo, A.H.; Doherty, T.; Ekström, E.-C.; Fadnes, L.T.; Goga, A.; et al. Exclusive breastfeeding promotion by peer counsellors in sub-Saharan Africa (PROMISE-EBF): A cluster-randomised trial. *Lancet* 2011, 378, 420–427.
- [5]. Younes, L.; Houweling, T.A.; Azad, K.; Kuddus, A.; Shaha, S.; Haq, B.; Nahar, T.; Hossen, M.; Beard, J.; Copas, A.; et al. The effect of participatory women's groups on infant feeding and child health knowledge, behavior and outcomes in rural Bangladesh: A controlled before-and-after study. *J. Epidemiol. Community Health* 2015, 69, 374–381.
- [6]. De Onis, Mercedes et al. (2018) Prevalence thresholds for wasting, overweight and stunting in children under 5 years. *Public Health Nutrition* 22(1):1-5 · October 2018.
- [7]. UNICEF, Improving Child Nutrition: The achievable imperative for global progress, UNICEF, New York, 2013.
- [8]. UNICEF, Progress for Children Beyond Averages: Learning from the MDGs, New York, 2015
- [9]. Black, R.E., et al., income and Middle-income Countries, *Lancet*, vol. 382, no. 9890, 3 August 2013, pp. 427–451.
- [10]. UNICEF/WHO/ World Bank Joint Child Malnutrition Estimates, March 2020 edition.