Disseminating Scientific Techniques on Breastfeeding Among College Students

Ngangbam Supriya Devi

(12PEX003)

Thesis Submitted to

Avinashilingam Institute for Home Science and Higher Education for Women

Coimbatore – 641043

In Partial Fulfilment of the Requirement for the

Degree of Master of Science in Extension and Communication

MARCH, 2014

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Signature of the Head of the Department

Signature of the Supervisor

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INTRODUCTION

INTRODUCTION

"A baby nursing at a mother's breast is an undeniable affirmation of our rootedness in nature"

-David Suzuki

Seidu (2013), reveals that over the last couple of decades, there has been an increasing interest in the promotion of exclusive breastfeeding as the 'best' feeding method for newborns. To a large extent it has been inspired by mounting scientific evidence on the importance of exclusive breastfeeding in reducing infant morbidity and mortality. Exclusive breastfeeding is regarded as imperative for infant's survival because in resource limited settings where poor and sub-optimal breastfeeding practices frequently result to child malnutrition which is major cause of more than half of all child deaths. Exclusive breastfeeding for six months has been recommended followed by introduction of complementary foods and continued breastfeeding for 24 hours.

Tonz (2000), suggested that breastfeeding is an age-old practice that has been very critical not only to the physiology, growth, and overall well-being of neonates but the physiology and health of women as well, it is one of the practices among human societies that transcend the boundaries of time and place. The practice has been a method of feeding to which infants have not only adapted but lived on for most of human existence on earth**.**

Sokol (2007), pointed out that breastfeeding was the norm in virtually all human societies and almost every child was breastfed regardless of socio-cultural environment and economic status.

Brulde (2011), indicated that breastfeeding served and continues to serve as an appropriate method through which newborns are offered essential nutrients necessary for optimal growth and intellectual development.

Breastfeeding is the natural, biological way of providing babies and young children with nutrients required for healthy growth and development. Breastfeeding initiation is variable in length and influenced by the individual clinical circumstances of both mother and baby. Babies are breastfed exclusively until six months of age, and that mothers then continue breastfeeding with the addition of appropriate complementary foods until twelve months of age (Queensland Maternity and Neonatal Clinical Guidelines Program, 2010).

At global level, out of 60 per cent of the 10.9 million deaths annually among children under five, over two-thirds of these deaths are associated with inappropriate feeding practices, occur during the first year of life. Only 35 percent of infants worldwide are breastfed exclusively during the first four months of life. Complementary feeding frequently begins too early or too late, and foods are often nutritionally inadequate or unsafe. Malnourished children who survive are more frequently sick and suffer life-long consequences of impaired development. Rising incidences of overweight and obesity in children are also a matter of serious concern. Because poor feeding practices are a major threat to social and economic development, they are among the most serious obstacles to attaining and maintaining health that face this age group. Optimal infant feeding contributes significantly to the overall development of those who survive, as its promotion leads to prevention of child malnutrition. Out of 136 million babies born each year, around 90 million are not breastfed exclusively for the first six months (Agunbiade, 2012).

In India, annually about 26 million babies born each year, 20 million babies are not able to receive exclusive breastfeeding for the first six months and about 13 million do not get good timely and appropriate complementary feeding after six months along with continued breastfeeding. Less than half of children (46%) under six months of age are exclusively breastfed (India Report, 2012).

In Tamil Nadu, 79 percent of children under four months of age are exclusively breastfed. The percentage of infants exclusively breastfed drops steadily from 88 percent for children under two months of age to 32 percent for children who are 4-5 months old. Half of children in the age group 4-6 months were exclusively breastfed up to 4 months and 11 percent of children in the age group 7-9 months are exclusively breastfed up to 6 months (rchiips.org).

Davis (2010), stated that colostrums is the first fluid that comes from the breast immediately after birth. It is yellowish in colour and contains high protein and anti bodies. It is often described as the first form of ‘immunization’ for a new born child.

Bhutta (2005), viewed that initiation of breastfeeding is defined as an infant ever having been to the breast or had breast milk; therefore, an alternative to assessing initiation is to measure ever breastfed as this indicates whether an infant has ever been breastfeed or received breast milk, or whether mothers have attempted to breastfeed, without regard to whether breastfeeding is or was established.

Babies should be exclusively breastfed – meaning that they receive nothing but breastmilk, not even water, for about the first six months of life. Except in the rarest cases, no additional foods or fluids are necessary, and they can be harmful – introducing germs, triggering allergies and filling the stomach so that the infant takes less breastmilk. Exclusive breastfeeding is regarded as imperative for infants' survival large as it reduces the rate of infant morbidity and mortality and also malnutrition which is a major cause of more than half of all child deaths (Paoli, 2001).

Stanley (2007), expressed that breastfeeding are beneficial for both children and their mothers. Benefits for children includes decreases in incidence of otitis media and gastroenteritis, lower risk of obesity and lower risk of asthma, decreased rates of sudden infant death syndrome, reduction in the incidence of type 1 and type 2 diabetes mellitus, certain types of cancer, and improved performance on certain tests of cognitive development. And benefits for mothers who breastfed their infants include increased postpartum uterine activity (inferentially this would lead to reduced postpartum blood loss), greater weight loss postpartum compared with mothers who bottle-fed their infants, decreased incidence of premenopausal breast cancer and decreased incidence of ovarian cancer.

Righard (2010), pointed out that effective breastfeeding technique involves the correct positioning of the infant at the breast to stimulate the oral searching reflex of the baby. For successful breastfeeding, the baby is encouraged to open the mouth wide and thrust the tongue forward to take the breast and then, with the tongue under the areola, to express milk from the breast by slow, deep sucks.

Latham (2008), stated that women would need to transmit knowledge about breastfeeding to other women and to increase their confidence in themselves and their infant feeding choices. Confidence is necessary for the let-down reflex to function properly and for women to make reflex to function properly and for women to make the political demands for changes that would allow breastfeeding and work to coexist. Increasing the frequency and duration of breastfeeding would potentially improve the nutritional and ultimately the health status of infants, contribute to child spacing, and reduce individual and national dependence on uneconomical milk products.

Dhandapany (2008), pointed out that lack of confidence in mothers ability to breastfeed, problems with the infant latching or suckling, breast pain or soreness, perceptions of insufficient milk supply, and a lack of individualized encouragement from their clinicians in the early post discharge period are some of the common

reasons for early breastfeeding discontinuation. Some of these problems can be overcome if the woman is informed antenatally about the benefits of breastfeeding and prepared mentally for exclusive breastfeeding. Therefore, antenatal counselling to the women has a role in promotion of breastfeeding.

India has good legislation to protect breastfeeding from commercial sector; it needs to be enforced effectively. It recommends how one can support women during difficult circumstances even like disasters and HIV and calls for a comprehensive policy direction, coordination, budgetary provision, and action in all ten areas found deficient (worldbreastfeedingtrends.org).

Dissemination an active and planned efforts to encourage target groups to adopt an innovation. Educating mothers on correct breastfeeding practices and child nutrition is very much necessary. Infant feeding practices have significant effects on the health of both mothers and children. Mothers are affected through the influences of breastfeeding on the period of postpartum infertility, and hence on fertility levels and the length of birth intervals. These effects vary according to the duration and intensity of breastfeeding. Proper infant feeding, starting from the time of birth, is important for the physical and mental development of the child (District Level Household Survey, 2002-2004).

Recent schemes of the Ministry of Women and Child Development (MWCD), Government of India include the Indira Gandhi Matritva Sahyog Yojana (IGMSY) - a Conditional Maternity Benefit (CMB) Scheme aiming at improving optimal IYCF practices including health and nutrition status of pregnant and lactating (P&L) women; Rajiv Gandhi Scheme for the Empowerment of Adolescent Girls (RGSEAG) or SABLA initiated with the objective to empower adolescent girls. Other positive steps taken by MWCD is ICDS strengthening and restructuring with special focus on children under 3 years and pregnant and lactating mothers (National Institute of Public Cooperation and Child Development, 2012).

Need for the Study

Lack of confidence in mother's ability to breastfeed, poor knowledge on importance of breastfeeding. Also, the antenatal counselling on breastfeeding is inadequate in the population and needs to be strengthened. Informing all pregnant women about the benefits and management of breastfeeding should be a priority during antenatal visits.

Hence, the present study is undertaken with the following objectives: are to

1. assessing the knowledge level on breastfeeding techniques among students.
2. imparting education on scientific information and techniques of breastfeeding to the students.
3. and evaluating the impact of the programme.

REVIEW OF LITERATURE

II REVIEW OF LITERATURE

The literature pertaining to the study entitled “Disseminating Scientific Techniques on Breastfeeding Among College Students” is reviewed under the following headings:

A. Status of Breastfeeding
B. Facts about Breastfeeding
C. Programmes/ Policies/ Agencies on promoting Breastfeeding
D. Related Studies

A. Status of Breastfeeding

Global Strategy for Infant and Young Child Feeding, malnutrition has been responsible for 60 per cent of the 10.9 million deaths annually among children under five. Over two-thirds of these deaths are often associated with inappropriate feeding practices. Not more than 35 per cent of infants worldwide are exclusively breastfed during the first four months, complementary feeding frequently begins too early or too late, and foods are often nutritionally inadequate or unsafe. Malnourished children who survive are more frequently sick and suffer life-long consequences of impaired development. Rising incidences of overweight and obesity in children are a matter of serious concern. Because poor feeding practices are a major threat to social and economic development, they are among the most serious obstacles to attaining and maintaining health (UNICEF, 2009).

In India about 26 million babies are delivered annually, 20 million babies are not able to receive exclusive breastfeeding for the first six months and about 13 million do not get good timely and appropriate complementary feeding after six months along with continued breastfeeding. Unfortunately, exclusive breastfeeding for the first six months has not shown any rise over the past two decades in India. Only 25 per cent of newborns were put to the breast within one hour of birth. Less than half of children 46 per cent under six months of age are exclusively breastfed. Only 20 per cent children age (6-23) months are fed appropriately according to all three recommended practices for infant and young child feeding. Only one- third 33 per cent Indian children receive service from an Anganwadi centres; less than 25 per

cent receive supplementary foods through ICDS and only 18 per cent have their weights measured in an AWC (India Report, 2012).

In Tamil Nadu, the initiation of breastfeeding within two hours of the birth of the child is not universally followed. Seventy-eight percent of the children were breastfed within two hours of birth, and 88 percent were breastfed within one day of birth, while 11 percent of children were breastfed after one day of birth, ten percent of children were breastfed within one day of birth but after two hours of birth, 9 percent were breastfed after the first day of birth but before 3 days and two percent of the children were put to the breast after three days. Nearly one percent (0.7 percent) of the children were never breastfed. In Tamil Nadu, 79 percent of children under four months of age are exclusively breastfed. The percentage of infants exclusively breastfed drops steadily from 88 percent for children under 2 months of age to 32 percent for children who are 4-5 months old. Half (50 percent) of children in the age group 4-6 months were exclusively breastfed up to 4 months and 11 percent of children in the age group 7-9 months are exclusively breastfed up to 6 months (District Level Household Survey, 2002-2004).

TABLE I
UNITED STATES REPORT CARD (2013)

State	Ever Breastfed	Breastfeeding at 6 months	Breastfeeding at 12 months	Exclusive breastfeeding at 3 months	Exclusive breastfeeding at 6 months
U.S. National	76.5	49.0	27.0	37.7	16.4
Alabama	60.4	29.5	14.2	23.5	11.9
Alaska	84.7	58.1	37.4	48.8	26.8
Arizona	83.2	49.7	25.4	39.4	15.0
Arkansas	57.7	24.2	14.4	22.5	9.2
California	91.6	71.3	45.3	56.8	27.4
Colorado	89.1	56.5	27.4	44.6	24.7
Connecticut	76.9	45.6	20.0	35.8	15.5
Delaware	68.0	39.1	17.4	30.6	17.4
Dist of Columbia	73.7	45.1	20.8	32.1	14.6
Florida	71.8	40.9	20.0	29.2	10.6
Georgia	68.2	31.8	12.9	22.2	6.2
Hawaii	87.4	64.9	42.2	51.6	22.0
Idaho	91.8	74.5	45.5	60.3	27.0
Illinois	75.2	48.8	21.0	34.6	11.1
Indiana	63.6	37.7	16.5	27.7	13.8
Iowa	76.5	54.0	32.1	43.2	18.8
Kansas	72.9	41.8	27.3	30.5	15.1
Kentucky	52.6	32.5	18.9	33.4	14.4
Louisiana	60.6	31.3	14.9	30.6	10.7
Maine	75.4	48.9	27.9	46.2	22.9
Maryland	69.4	52.0	24.2	29.3	15.1
Massachusetts	83.0	62.4	28.9	55.7	20.6
Michigan	74.6	45.1	22.8	34.3	13.0
			23.1	47.2	23.5
			9.1	17.0	5.1

Source: Centres for Disease Control and Prevention National Immunization Survey (NIS), (2010)

FIGURE I
INDIA REPORT CARD (2012)

TABLE II

Country Ranking of Exclusive breastfeeding (% of children under 6 months

Rank	Country	Value	Year
1	Croatia	98.13	2008
2	Rwanda	84.90	2010
3	Chile	84.50	2006
4	Afghanistan	83.00	2006
5	Sri Lanka	75.80	2007
6	Solomon Islands	73.70	2007
7	Cambodia	73.50	2010
8	Malawi	71.90	2010
9	Peru	70.60	2011
10	Nepal	69.60	2011
41	India	46.40	2006
42	Mauritania	45.90	2010
43	Moldova	45.50	2005
44	Swaziland	44.10	2010
45	Benin	43.00	2008
46	Colombia	42.80	2010
47	Syrian Arab Republic	42.60	2009
48	Turkey	41.60	2008
49	Mozambique	41.10	2011
50	Brazil	41.00	2008
130	Algeria	6.90	2006
131	Gabon	6.20	2000
132	Tunisia	6.20	2006
133	Côte d'Ivoire	4.30	2006
134	Chad	3.40	2010
135	Suriname	2.00	2006
136	Djibouti	1.30	2006

Source: UNICEF, State of the World's Children, Child info, and Demographic and Health Surveys by ICF International, 2012

B. Facts about Breastfeeding

Breastfeeding is the normal way of providing young infants with the nutrients they need for healthy growth and development. Virtually all mothers can breastfeed, provided they have accurate information and the support of their family, the health care system and society at large (WHO, 2014).

Colostrum (also known as first milk) is a form of milk produced by the mammary glands after giving birth. They are thick, sticky and yellowish in colour, it has high concentrations of nutrients and antibodies, but it is small in quantity. Colostrum is high in carbohydrates, high in protein and low in fat (as newborns may find fat difficult to digest). Newborns have very small digestive systems, and colostrum delivers its nutrients in a very concentrated low-volume form. It has a mild laxative effect, encouraging the passing of the baby's first stool, which is called meconium. This clears excess bilirubin, a waste product of dead red blood cells which is produced in large quantities at birth due to blood volume reduction, from the infant's body and helps prevent jaundice. Colostrum contains large numbers of antibodies called "secretory immunoglobulin" (IgA) that help protect the mucous membranes in the throat, lungs, and intestines of the infant (UNICEF, 2014).

Salariya (2010), suggested that mothers first provide breast milk to their infants within one hour of birth – referred to as “early initiation of breastfeeding”. This ensures that the infant receives the colostrum (“first milk”), which is rich in protective factors.

According to Labbok (2006), defined that exclusive breastfeeding is the only feeding or breastmilk feeding and no other foods or fluids (no water, no juices, no tea, no pre-lacteal feeds), with the exception of drops or syrups consisting of micronutrient supplements or medicines.

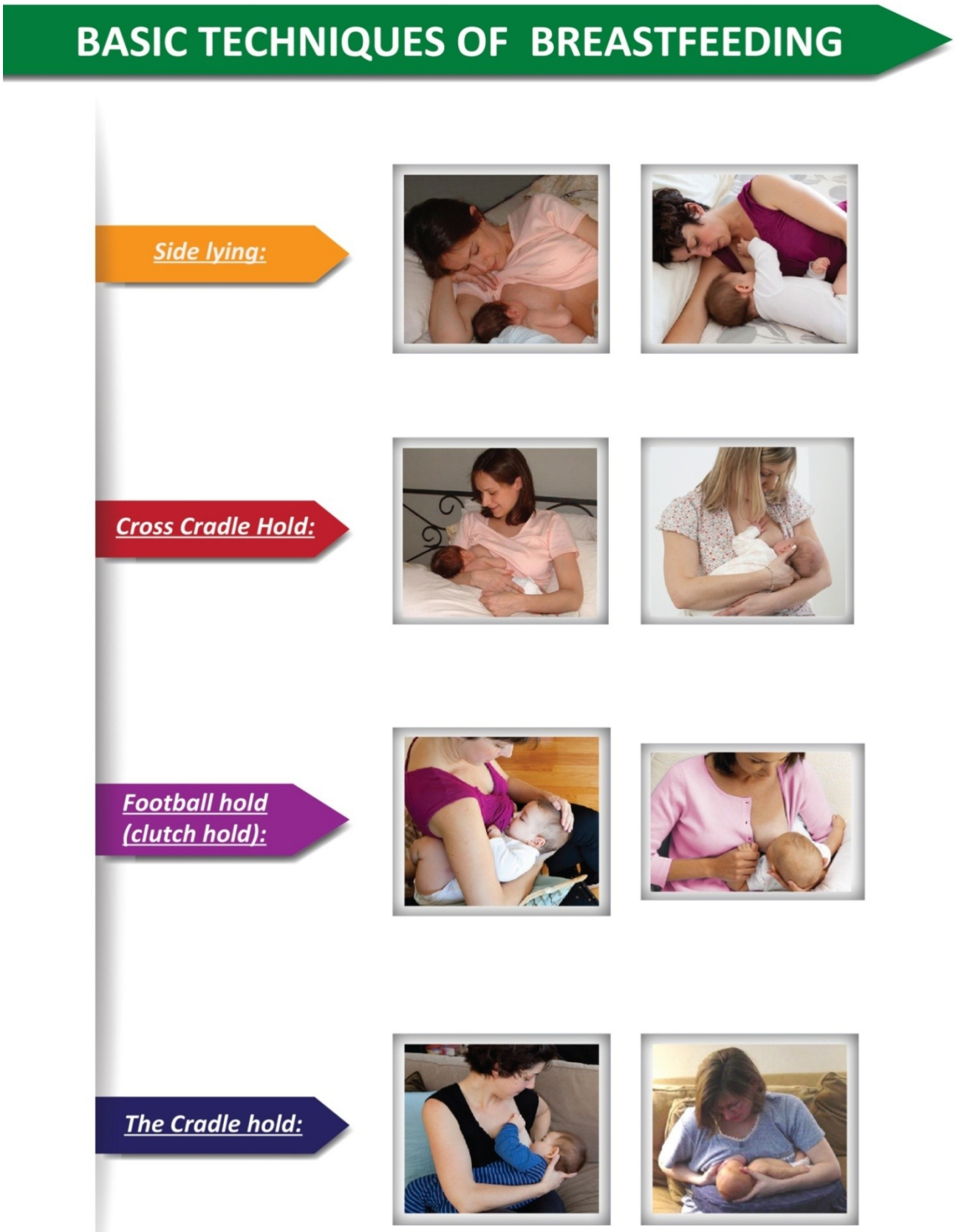
Brulde (2011), states that exclusive breastfeeding served and continues to serve as an appropriate method through which newborns are offered essential nutrients necessary for optimal growth and intellectual development. Breast milk is regarded as perfect, natural and protective food for newborns. Given that prolonging people’s lives (by reducing mortality) and preventing disease (by reducing morbidity) are some of the goals of public health breastfeeding and/or exclusive breastfeeding has been acknowledged as an effective approach to the achievement of these goals. Breastfeeding was found to be protective against sudden infant death syndrome by reducing the risk by 50% at all ages during infancy; these benefits have been reported to exhibit dose-response relationship, that is,

health gains increases with increases in duration and exclusivity. Infants when exclusively breastfed for the optimal duration of six months are significantly protected against the major childhood diseases conditions viz. diarrhoea, gastrointestinal tract infection, allergic diseases, diabetes, obesity, childhood leukaemia and lymphoma, inflammatory and bowel disease.

Righard (2010), pointed out that effective breastfeeding technique involves the correct positioning of the infant at the breast to stimulate the oral searching reflex of the baby. With correct positioning and for successful breastfeeding, the baby is encouraged to open the mouth wide and thrust the tongue forward to take the breast and then, with the tongue under the areola, to express milk from the breast by slow, deep sucks.

FIGURE II
ADVANTAGES OF BREASTFEEDING

FIGURE III
BASIC TECHNIQUES OF BREASTFEEDING



Breastfeeding enhances mother and baby emotional attachment and contributes to optimal short and long term health outcomes for both. Statistically a baby who is not breastfeeding has more health care needs than its breastfed counterparts (Queensland Maternity and Neonatal Clinical Guidelines Program, 2010).

Datta (2007), explains about the benefits of breast milk are incalculable and incomparable. It is a complete mix of nutrients & antibodies. Varying composition of breast milk keeps pace with the infant's individual growth and changing nutritional needs, prevents many gastro-intestinal disorders in infants and reduces the risk of breast, ovarian, cervical, and endometrial cancers in mothers. It also helps in delaying the return of fertility and spacing of subsequent pregnancies. Breast fed infants typically need fewer sick care visits, prescriptions, and hospitalizations with reduced health care costs.

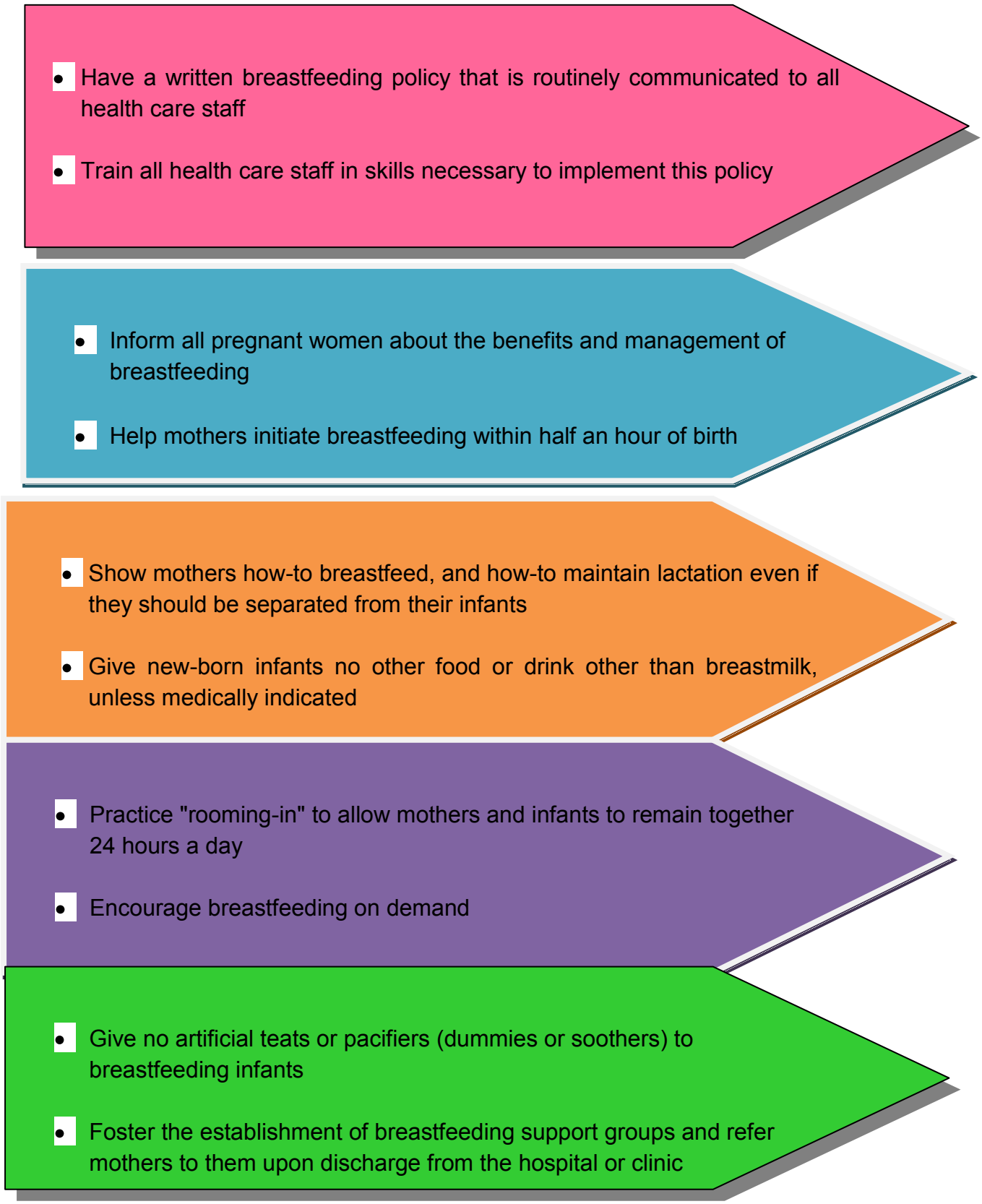
Myths of Breastfeeding: Breastfeeding is painful, it is inconvenient, women who breastfeed can't safely lose weight until their babies are weaned, a breastfed baby needs extra water, formula is as good as breastmilk, if the baby has diarrhoea or vomiting the mother should stop breastfeeding, physicians know a lot about breastfeeding, a mother who smokes is better not to breastfeed, breastfeeding in public requires that a woman's breasts be exposed, it is difficult to breastfeed successfully.

Reality of Breastfeeding: Breastfeeding should not hurt, though some may have some minor discomfort during the first week or two, breastfeeding is far more convenient that bottle feeding, breastmilk is free, pre-mixed, pre-warmed and always ready to use, breastfeeding actually contributes to gradual, healthy weight loss because it can burn an extra 300-500 calories per day, breast milk contains all the water a baby needs. Formula doesn't provide the full range of nutrients contained in breastmilk, nor does it contain the antibodies that can protect infants against disease, The best medicine for a baby's gut infection is breastfeeding, very few physicians learned anything at all about breastfeeding in medical school, a mother who can't stop smoking should breastfeed. It has been shown to decrease the negative effects of cigarette smoke on the baby's lungs, there are many techniques a woman can learn for breastfeeding her baby discreetly in public, it is a natural activity that almost any mother and baby can learn together (UNICEF,2013).

FIGURE IV

FACTORS INFLUENCING BREASTFEEDING

FIGURE V
10 STEPS TO SUCCESSFUL BREASTFEEDING



Source: Lisa Nicole Woods, Behaviour Change Communication in Emergencies: A Toolkit,2006

C. Programmes/ Policies/ Agencies on promoting Breastfeeding

Breastfeeding Promotion Network of India (BPNI)

BPNI, was established on 3rd Dec, 1991 at Wardha, Maharashtra. It is a registered, independent, non-profit, national organization that works towards protecting, promoting and supporting breastfeeding and appropriate complementary feeding of infants & young children. BPNI believes that breastfeeding is the right of all mothers and children. And works through advocacy, social mobilization, information sharing, education, research, training and monitoring the company compliance with the IMS Act. BPNI does not accept funds or sponsorship of any kind from the companies producing infant milk substitutes, feeding bottles, related equipments, or infant foods. Their mission is to empower all women to exclusively breastfeed their children for the first six months of age, and continue breastfeeding for at least two years, along with adequate and appropriate complementary feeding, starting at six months. And their objective is to enhanced nutrition, health and development of infants and young children through programmes designed to increase national and state commitments, education of public and health care workers, countering commercial influences, decentralised capacity development, providing technical support and training to enhance skills of community workers, and social mobilisation, to improve optimal infant and young child feeding practices (bpni.org).

World Alliance for Breastfeeding Action (WABA)

The World Alliance for Breastfeeding Action (WABA) is a global network of individuals & organisations concerned with the protection, promotion & support of breastfeeding worldwide. WABA action is based on the Innocenti Declaration, the Ten Links for Nurturing the Future and the Global Strategy for Infant & Young Child Feeding. WABA is in consultative status with UNICEF & an NGO in Special Consultative Status with the Economic and Social Council of the United Nations (ECOSOC). The World Alliance for Breastfeeding Action (WABA) was formed on 14 February, 1991. WABA is a global network of organizations and individuals who believe breastfeeding is the right of all children and mothers and who dedicate themselves to protect, promote and support this right. WABA acts on the Innocenti Declaration and works in close liaison with UNICEF (waba.org).

The Baby-Friendly Hospital Initiative

Hospitals and maternity units set a powerful example for new mothers. The Baby-Friendly Hospital Initiative (BFHI), launched in 1991, is an effort by UNICEF and the World Health Organization to ensure that all maternities, whether free standing or in a hospital, become centres of breastfeeding support. A maternity facility can be designated 'baby-friendly' when it does not accept free or low-cost breastmilk substitutes, feeding bottles, and has implemented 10 specific steps to support successful breastfeeding. The process is currently controlled by national breastfeeding authorities, using Global Criteria that can be applied to maternity care in every country. Implementation guides for the BFHI have been developed by UNICEF and WHO (UNICEF, 2013).

National Maternity Benefit Scheme

National Maternity Benefit Scheme is a part of the National Social Assistance Programme, established on 1995, it is designed for pregnant women from BPL households. Under NMBS there is a provision for the payment of Rs. 500 per pregnancy to women belonging to poor households for pre-natal and post-natal maternity care upto first two live births. The benefit is provided to eligible women of 19 years and above. This financial assistance is deemed to support their nutritional needs during pregnancy. The NMBS was however modified into a new scheme called Janani Suraksha Yojana (JSY) in 2005. The JSY is aimed at reducing maternal mortality and/or infant mortality through promotion of institutional deliveries. Under the scheme, irrespective of the number of births, women who have institutional deliveries are entitled to receive assistance of Rs. 1,400. Recently, the aforementioned orders were reviewed. As a result, the Supreme Court ordered for the retention of the benefit provided in NMBS under JSY (sccommissioners.org).

Integrated Child Development Services (ICDS) Scheme

According to Valmiki, (2012), ICDS was launched on 2nd October 1975, ICDS Scheme represents one of the world's largest and most unique programmes for early childhood development. ICDS is the foremost symbol of India's commitment to her children- India's response to the challenge of providing pre-school education on one hand and breaking the vicious cycle of malnutrition, morbidity, reduced learning capacity and mortality, on the other.

Objectives: The Integrated Child Development Services (ICDS) Scheme was launched in 1975 with the following objectives:

i. to improve the nutritional and health status of children in the age-group 0-6 years;
ii. to lay the foundation for proper psychological, physical and social development of the child;
iii. to reduce the incidence of mortality, morbidity, malnutrition and school dropout;
iv. to achieve effective co-ordination of policy and implementation amongst the various departments to promote child development; and
v. to enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education.

National Nutrition Policy

National Nutrition Policy was adopted by the Government of India in 1993, under the aegis of the Department of Women and Child Development. It advocated a multi-sectoral strategy for eradicating malnutrition and achieving optimum nutrition for all. The policy advocates the monitoring the nutrition levels across the country and sensitising government machinery on the need for good nutrition and prevention of malnutrition. The National Nutrition Policy also includes the Food and Nutrition Board, which develops posters, audio jingles and video spots for disseminating correct facts about breastfeeding and complementary feeding (Women Welfare, 2010).

Balika Samriddhi Yojana

Balika Samriddhi Yojana was established on 15 August, 1997. The recast will be a 100% Centrally Sponsored Scheme to extend 100% central assistance to States/Union Territories to provide benefits under the Scheme in accordance with the norms, guidelines and conditions laid down by the Central Government. Their objectives are: To change negative family and community attitudes towards the girl child at birth and towards her mother. To improve enrolment and retention of girl children in schools. To raise the age at marriage of girls. To assist the girl to undertake income generating activities. The Balika Samriddhi Yojana will cover both rural and urban areas in all districts in India (indianyojana.com)

Nutrition Programme for Adolescent Girls (NPAG)

Nutrition Programme for Adolescent Girls, it was stated in the year 2003 .To address the problem of under-nutrition among adolescent girls and pregnant women and lactating mothers, the Planning Commission, launched the Nutrition Programme for Adolescent Girls (NPAG), on a Pilot Project basis in 51 districts in the country. Under this scheme, 6 kg. of food-grains were given to under nourished adolescent girls, pregnant women and lactating mothers. Eligibility was determined on the basis of their weight. The Pilot Project was continued in the year 2003-04 also. It, however, could not be continued in the year 2004-05. The Government approved the implementation of NPAG, through the Department of Women and Child Development, in 51 backward districts identified by the Planning Commission in the year 2005-06 to provide 6 kg of free food-grains to undernourished adolescent girls only (pregnant women & lactating mothers are not covered as these are targeted under ICDS). The scheme is being continued for the Annual Plan 2006-07 on pilot project basis. The funds are given as 100% grant to States/UTs so that they can provide food grains through the Public Distribution System free of cost to the families of identified undernourished persons. The success of the intervention is dependent on effective linkages with the Public Distribution System (PDS) (nutritionprogramme.com).

D. Related Studies

Isselmann *et al*., (2013) analyzed a study on "The association of breastfeeding duration with later maternal feeding styles in infancy and toddlerhood". The study of the aim was to evaluate the association of breastfeeding duration with a wide range of maternal feeding approaches in late infancy and toddlerhood. A secondary analysis of cross-sectional data from an ethnically-diverse sample of 154 mothers of infants (aged 7–11 months) and toddlers (aged 12–24 months) was performed. Breastfeeding history was self-reported where 75% of mothers had weaned by the time of the interview. Multiple dimensions of maternal feeding approaches were measured using the Infant Feeding Styles Questionnaire which assesses pressuring, restriction, responsive, laissez-faire, and indulgent approaches to feeding. Analyses were performed separately for infants and toddlers and adjusted for maternal education level, ethnicity, and marital status. The findings of the result was Mothers of infants who breastfed for longer durations tended to report greater responsiveness to infant satiety cues ($p \leq 0.01$) and reduced pressuring in feeding complementary foods ($p < 0.05$). Mothers of toddlers who breastfed for longer

durations tended to report reduced pressuring in feeding complementary foods ($p<0.01$). They suggest that breastfeeding may shape maternal feeding approaches related to responsiveness to infant cues as infants enter a period of complementary feeding, even after considering a range of demographic characteristics previously associated with breastfeeding behaviours. That responsiveness to feeding cues was not associated with breastfeeding duration in the toddler sample suggests that some aspects of this association might be isolated to infancy.

Rocha *et al., (*2011) carried out a study on "Development of a technique for evaluating temporal parameters of sucking in breastfeeding preterm newborns". The aim of the study was to developed and test the reliability of a technique for measuring temporal parameters of sucking in breastfeeding infants. The technique was developed using a cohort of 11 term and 12 preterm infants, and subsequently evaluated using a cohort of 43 preterm infants. Measurements related to sucking pressure in the term and preterm infants were acquired. The signals were recorded for 5 min, saved on a computer, and stored for analysis. For purposes of analysis, the minute with the highest quality signal was chosen. Signal analysis was performed by two researchers, and inter- and intra-observer agreement was assessed. The newborns in the sample had different gestational ages. A technique was developed for the analysis of temporal parameters of sucking during breastfeeding and evaluated in 43 preterm infants with different gestational ages for the following variables: number of bursts per minute, number of sucks per burst, sucking rate, pause rate, and duration of pauses. The intra-observer agreement was 0.85 and the inter-observer agreement was 0.85. They concluded that the technique that was developed and validated proved capable of measuring temporal parameters of sucking in breastfeeding newborns.

Dyson *et al.,* (2010) carried out a study on "Policy and public health recommendations to promote the initiation and duration of breast-feeding in developed country settings" The purpose of the study was to estimate and to develop the policy and public health recommendations for implementation at all levels by individuals and organizations working in, or related to, the field of breast-feeding promotion in developed country settings, where breast-feeding rates remain low. They conducted the study by using two research phases comprising (i) an assessment of the formal evidence base in developed country settings and (ii) a consultation with UK-based practitioners, service managers and commissioners, and representatives of service users. One hundred and ten studies evaluating an

intervention in developed country settings were assessed for quality and awarded an overall quality rating. Studies with a poor quality rating were excluded. The resulting seventy studies examined twenty-five types of intervention for breast-feeding promotion. These formed the basis of the second consultation phase to develop the evidence-based interventions into recommendations for practice, which comprised (i) pilot consultation, (ii) electronic consultation, (iii) fieldwork meetings and (iv) workshops. Draft findings were synthesized for two rounds of stakeholder review conducted by the National Institute for Health and Clinical Excellence. They suggested that the need for national policy directives was clearly identified as a priority to address many of the barriers experienced by practitioners when trying to work across sectors, organisations and professional groups.

Ling Gau (2004) carried out a study on “Evaluation of a lactation intervention program to encourage breastfeeding” The aim of the study was to evaluate the implementation of a change to the breastfeeding policy in seven hospitals in accordance with the ‘Ten Steps to Successful Breastfeeding’ issued by the World Health Organization and the United Nations Children’s Fund and to assess the impact of hospital practices on breastfeeding. They conducted the study by using A 3-year quasi-experimental pre-post test design in 12 hospitals. The subjects were composed of 4614 lactating women in both experimental and control groups. The research instruments included the Baby-Friendly hospital Initiative training programs and questionnaires on breastfeeding duration, knowledge, attitude, and demographic data. The results indicated that the exclusive and overall breastfeeding rates of the experimental group were higher than those of the control group ($p<0.001$); moreover, the breastfeeding rates generally exhibited an increasing trend year by year ($p<0.001$). The results also showed that the experimental group scored higher in breastfeeding knowledge than the control group as did positive attitudes toward breastfeeding ($t>1.96$, $p<0.05$) with scores increasing year by year. The results also showed that higher scores reflected better knowledge in breastfeeding, and, in turn, a longer duration of breastfeeding.

Srivastava *et al.,* (2013) carried out a study on “Breastfeeding practices for newborns among urban poor in Lucknow, northern India” The aim of the study was to describe evidence-based WHO-defined (exclusive, predominant, partial, never breastfed) breastfeeding patterns and the factors associated with them for neonates among urban poor in Lucknow, northern India. The study was conducted at two urban public hospitals at Lucknow. Neonates who did not have any morbidity or

congenital malformation and were residents of Lucknow were enrolled within 48 h of birth and followed-up once at six weeks at the outpatients' clinic or home to assess established (voluntary) breastfeeding pattern. The result of the study was total of 1020 neonates were enrolled from March 2007 to April 2008. Follow-up information on established breastfeeding pattern was available for 937 (91.8%) of the enrolled neonates. Rate of exclusive breastfeeding during the neonatal period was 26.4%, predominant breastfeeding was 28.7%, partial breastfeeding was 40.1%, and no breastfeeding was 4.7%. Potentially harmful weaning materials (animals' milk (35.8%), formula feeds (17.6%), water (48.1%) and other substances (teas/herbal drinks/juices/soups/rice water/mashed banana/etc (9.9%)) were being fed to 74% (95% CI: 70.7%–76.3%) of the neonates. Neonates born to mothers with no formal education, fathers with no formal education, whose mothers had fewer (<3) antenatal care visits, were born in Muslim families, were slum residents or were from low socio-economic status were significantly ($p < 0.05$) less likely to be exclusively breastfed than their counterparts. They concluded that the proportion of neonates being exclusively breastfed was low at 26.2% (95% CI: 23.7%–29.4%). There is a need for promotion of exclusive breastfeeding for all newborns in urban Lucknow, northern India.

Kronborg et al., (2009) carried out a study on “How Are Effective Breastfeeding Technique and Pacifier Use Related to Breastfeeding Problems and Breastfeeding Duration”. The aim of the study was *to* investigate how breastfeeding technique and pacifier use were related to breastfeeding problems and duration of breastfeeding. The data were collected from the intervention group of a randomized trial in which health visitors followed up with mothers for 6 months after childbirth. The health visitors classified the breastfeeding technique at approximately 1 week after birth and repeated the observation if a correction was necessary. Effective technique included positioning, latch, sucking, and milk transfer. Data on breastfeeding problems and pacifier use were obtained from self-reported questionnaires. The study population included 570 mother-baby pairs with complete information on breastfeeding technique and pacifier use. The primary outcome was duration of exclusive breastfeeding. The findings of the result was One-half of the mothers showed ineffective breastfeeding technique at the first\ observation, most frequently ineffective position (61%) and latch (52%). In the unadjusted analysis, only sucking and milk transfer were associated with breastfeeding duration. In the adjusted analysis, ineffective technique was significantly associated with mothers reporting early breastfeeding problems, which thereby influenced the breastfeeding

duration. Pacifier use had an independent negative impact on duration of breastfeeding. A single correction of the breastfeeding technique was not associated with duration or occurrence of problems. They concluded that observation of breastfeeding technique may help mothers in the stage of when they are establishing breastfeeding to avoid early and later problems, but breastfeeding technique is less useful in predicting breastfeeding duration. Use of a pacifier should be avoided in the first weeks after birth.

Giles *et al.,* (2010) carried out a study on "Attitudes to breastfeeding among adolescents" The aim of the study was to employ the theory of planned behaviour (TPB) to predict and explain young people's motivations to breastfeed with a view to designing an intervention to positively promote breastfeeding among adolescents. A cross-sectional survey was conducted with 2021 Year 10 pupils. The findings of the result was having been breastfed as a child and having seen a mother breastfeeding significantly correlated with intention among both females and males. In descending order of importance, the TPB direct constructs were all significantly correlated with intention among males and females. A hierarchical multiple regression was performed with the intention to breastfeed/encourage partner to breastfeed as the dependent variable, and the TPB successfully predicted intention among males and females. They suggest that the TPB is a useful framework on which to base the design of an intervention to promote attitude change, and highlight the importance of key theoretical constructs in predicting intentions to breastfeed.

Boutwell *et al*., (2012) carried out a study on "Role of breastfeeding in childhood cognitive development". The aim of the study was to examine whether the association between breastfeeding and childhood cognitive development is direct or whether the association is spurious owing to confounding variables. The study was conducted a propensity score matching (PSM) analysis using data from the Early Childhood Longitudinal Study, Birth Cohort. The study of the result was PSM models revealed that prior to matching, the association between breastfeeding and cognitive functioning was significant (mean difference = 3.20, *t*-value = 7.86, 95% confidence interval (CI) = 2.40–4.00, $P \leq 0.05$). After controlling for a range of confounding factors, the mean difference was reduced by 40% (mean difference = 1.92, *t*-value = 3.75, 95% CI = 0.92–2.93, $P \leq 0.05$); however, significant differences remained between groups. They suggest that the study provide tentative evidence that breastfeeding may have an influence on the development of cognitive abilities in children.

Chowdary *et al*., (2009) carried out a study on “Breast Feeding Practices and Newborn Care in Rural Areas”. The aim of the study was to describe the breastfeeding and newborn care practices in rural areas and the secondary objective was to describe the factors affecting the initiation and duration of breastfeeding. The study and data was collected using the pre-tested questionnaire on breastfeeding and newborn practices. The findings of the study shows 97% of the mothers initiated breastfeeding, 19% used pre lacteal feeds, 90% had hospital deliveries and 10% had home deliveries, and 50% used a house knife to cut the umbilical cord among home deliveries. They suggest that the study emphasizes the need for breastfeeding intervention programs especially for the mother during antenatal and postnatal check-ups and practices like discarding the colostrum and early/late weaning are still widely prevalent and need to be addressed.

Silvers *et al*., (2012) carried out a study on “Breastfeeding Protects against Current Asthma up to 6 Years of Age”. The aim of the study was to investigate the effects of breastfeeding on wheezing and current asthma in children 2 to 6 years of age. The study was conducted by using questionnaires administered at birth and at 3, 6, and 15 months. The findings of the study was after adjustment for confounders, each month of exclusive breastfeeding was associated with significant reductions in current asthma from 2 to 6 years (all, $P < .03$). Current asthma at 2, 3, and 4 years was also reduced by each month of any breastfeeding (all, $P < .005$). They concluded that Breastfeeding, particularly exclusive breastfeeding, protects against current asthma up to 6 years. Although exclusive breastfeeding reduced risk of current asthma in all children to age 6, the degree of protection beyond 3 years was more pronounced in atopic children.

METHODOLOGY

III METHODOLOGY

The methodology pertaining to the study entitled “Disseminating Scientific Techniques on Breastfeeding Among College Students” are presented under the following:

A. SELECTION OF THE AREA
B. SELECTION OF THE SAMPLE
C. SELECTION OF THE METHOD AND TOOL
D. ACTION PROGRAMME
E. ANALYSIS AND INTERPRETATION OF THE DATA

A. SELECTION OF THE AREA

The area selected for the present study is Coimbatore. Coimbatore is one of the district of the state of Tamil Nadu in India. It is located in the Western part of the State in the Kongu Nadu region. Coimbatore is known as the “Manchester of South India”. Avinashilingam Institute for Home Science and Higher Education for Women University is situated in Coimbatore, therefore the University has been chosen by the investigator to conduct the research.

The area was selected due to the following reason:

- Easy to conduct the research.
- Being an exclusive women University, the investigator finds free and comfortable to conduct the research and reach the targeted students.
- Convenience in communicating with the group.
- Economical and easy to segregate the targeted mass.
- Present research topic is need of the hour for women student.

B. SELECTION OF THE SAMPLE

According to Kothari (2006), a sample is a definite plan for obtaining a sample from a given population. The sample was selected randomly from the campus of Avinashilingam Institute for Home Science and Higher Education for Women University, Coimbatore.

The total sample comprises of 300, the investigator had decided to take all the final year students from the Department of Food Science and Nutrition (52), Human Development (55), Rural Development and Sociology (29), Food Service Management and Dietetics (47), Interior Design (41) and Textile and Clothing (56). The detail of the sample selected is given in Table- III

TABLE-III
SELECTION OF THE SAMPLE

Number of Sample											
Food Science and Nutrition		**Human Development**		**Rural Development and Sociology**		**Food Service Management and Dietetics**		**Interior Design**		**Textile and Clothing**	
U.G	**P.G**	**U.G**	**P.G**	**U.G**	**P.G**	**U.G**	**P.G**	**U.G**	**P.G**	**U.G**	**P.G**
30	22	35	20	29	-	30	17	40	21	36	20

Note: U.G= Under Graduate, P.G=Post Graduate

C. SELECTION OF THE METHOD AND TOOL

A survey is a process of collecting data from existing population in the study. A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents (wikipedia.org).

The investigator selected questionnaire as a tool to collect the data in order to carry out the research. The questionnaire was framed by the investigator to elicit the knowledge and attitude on Breastfeeding Techniques among College students. The questionnaire consisted of eleven parts. The first part of the questionnaire gathered the student's background such as age, education, community, place, religion, size of the family, family monthly income, source of family income. The second part of the questionnaire was the infrastructure facilities used by the students. The third part is about the Health and Nutritional status of the students. The forth part of the questionnaire was to know about the Awareness on Breastfeeding. The fifth part was to know the basic knowledge about the Breastfeeding. The sixth part was the awareness on Newborn feeding. The seventh part is to know the attitude of the students towards breastfeeding. The eight part of the questionnaire was to indicate about the successful breastfeeding. The ninth part was to know the different advantages for both baby and mother. The tenth part of the questionnaire was about the Awareness on Government Policy and Programmes to promote the Breastfeeding Techniques and lastly but not the least the eleventh part of the

questionnaire was to suggests for successful Breastfeeding to promote the Breastfeeding Techniques (Annexure-I). The survey was conducted with the selected Undergraduate and Postgraduate final year students of Avinashilingam Institute for Home Science and Higher Education for Women University. After getting permission from the University the investigator fixed date and time to conduct her research. Then the investigator met the students and established rapport and orient regarding the objectives concerned about her research. After that the investigator distributed questionnaire to the students from the selected departments in their respected classes, the students took around 10 to 15 minutes, in order to fill the questionnaire and had returned the same to the investigator.

i) Obtaining Ethical Clearance of the study:

The application form explaining the design and the protocols used in the research study was subjected to the Institutional Human Ethics Committee of Avinashilingam Institute for Home Science and Higher Education for Women University, Coimbatore. The ethical clearance was obtained, the Approval number is AUW/IHEC-13-14/XMT-04 enclosed in (Annexure-II).

D. ACTION PROGRAMME

The word Action Plan means the sequence of steps that must be taken, or activities that must be performed well, for a strategy to succeed.

An action plan has three major elements (1) Specific tasks (2) Time horizon (3) Resource allocation

Under this heading there are three main steps to be followed by the investigator to have a proper and convenient way to perform the task that has been taken up by the investigator.

i) Planning the programme
ii) Implementing the programme
iii) Evaluating the programme

i) Planning the programme:

The investigator had chosen the final year students of Under-Graduate and Post Graduate as her target group. The investigator has taken up the feasibility study in order to complete her research successfully, taking into account legal, economic, technological, scheduling and other factors. The feasibility study allows the investigator to investigate the possible negative and positive outcomes of her

research. The investigator also considered the time horizon for conducting the programme and also obtained permission from the authorities of the University to conduct her research.

For planning the programme the investigator followed the steps. They are as follows:

a) Pooling of teaching materials
b) Preparation of teaching learning materials (TLM)
c) Application of teaching materials

a) Pooling of teaching materials:

Pooling is a resource management term that refers to the grouping together of resources (assets, equipment, personnel, effort, etc.) for the purposes of maximizing advantage and minimizing risk.

The investigator pooled the teaching materials on Breastfeeding from the sources namely:

- Journals
- E-Journals
- Internet
- Books

b) Preparation of Teaching and Learning Materials (TLM)

The investigator prepared the teaching and learning materials like leaflet, pamphlet, booklet and power-point presentation on the topic breastfeeding techniques. The relevant information has been enclosed and put in sequential manner by the investigator.

c) Application of teaching materials

The leaflet, pamphlet, booklet and power-point presentation were used by the investigator for dissemination of information/ knowledge on Breastfeeding.

In order to impart the education on Breastfeeding Techniques. The plan of work has presented in the Table- IV.

Plan of Work – Imparting Education of Breastfeeding Techniques

TABLE- IV

EDUCATION PROGRAMME

Topics	Method used	Material used	Resource person
Meaning of Breast milk, importance of breast milk, advantages of breast milk, types of milks, definition of breastfeeding, benefits of colostrums, initiation of breastfeeding, importance of exclusive breastfeeding	Lecture	Power-point, leaflet	Investigator, UGC MRP Principal Investigator
Keys to successful breastfeeding: skin to skin contact, rooming in, avoiding supplementary feeding, limit use of pacifiers and consulting a doctor.	Lecture and Interactive	Pamphlet	Investigator, UGC MRP Principal Investigator
Techniques of Breastfeeding: cross cradle hold, side lying, football (clutch hold), cradle hold	Demonstration	Power-point	Investigator & Dr. Miss Kalaivani
Problems of Breastfeeding: engorgement, block ducts, mastitis, sore nipples, flat or inverted nipples, low milk supply	Lecture	Videos	Investigator, UGC MRP Principal Investigator
Pros and Cons of breastfeeding and bottle feeding	Interactive	Booklet	-do-
Techniques of expressing milk: hand expression, manual breast pump, electric breast pump, hospital grade breast pump	-do-	Power-point	-do-
Infant hunger cues: early cues, mid cues and late cues	Interactive	-do-	-do-
Food habits of mother, Taboos of breastfeeding.	-do-	-do-	-do-
Counselling of family members, relatives etc	-do-	-do-	-do-
Programmes/Policies/Agencies on promoting breastfeeding	-do-	-do-	-d0-

i) Implementing the programme:

Dissemination is the scattering of information widely it also means the disclosure of knowledge by any appropriate means (e.g. publication, conferences, workshops, web-based activities).

Education awareness defines educating community members and bringing awareness to the general public or targeted groups.

The investigator had assessed the knowledge of the students about breastfeeding techniques with the help of questionnaire that has been distributed among the selected targeted groups.

After assessing the knowledge of the students the investigator had conducted a Nutrition/ Health Education Programme on the topic “Breastfeeding Techniques” with the help of Teaching Learning Materials to the selected groups in order to transmit knowledge to increase their confidence, for the let-down reflex to function properly to make the political demands for changes that would allow breastfeeding and work to coexist. Increasing the frequency and duration of breastfeeding would potentially improve the nutritional and ultimately the health status of infants, contribute to child spacing and reduce individual and national dependence on uneconomical milk products.

ii) Evaluating the programme

Evaluation is a systematic determination of a subject's merit, worth and significance, using criteria governed by a set of standards. It can assist an organization, program, project or any other intervention or initiative to assess any aim, realisable concept/proposal, or any alternative, to help in decision-making, or to ascertain the degree of achievement or value in regard to the aim and objectives and results of any such action that has been completed and the purpose of evaluation, is to gain insight into prior or existing initiatives and to enable reflection and assist in the identification of future change.

After imparting education their knowledge level on Breastfeeding Techniques was assessed through the same Questionnaire that has been distributed earlier.

INVESTIGATOR IMPLEMENTING THE PROGRAMME
PLATE- I

E. ANALYSIS AND INTERPRETATION OF THE DATA

Kothari (2008) says that the data after collection has to be processed and analyzed in accordance with the outline laid down for the purpose at the time of developing the research plan. Technically processed, implied, edited, coded, classified and tabulated and of collected data so that they emendable to analysis. Gathered responses were analyzed with the help of SPPS software (Version-16). The collected data were consolidated, analyzed and presented in chapter IV. Data analysis procedure done through the following:

a) Chi-square test

The study tried to find out the association between Attitudes towards Breastfeeding on Awareness on Government policy and Programmes to promote the Breastfeeding Techniques and Suggestions for successful Breastfeeding by using the chi-square analysis. The formula used was

$$\chi^2 = \sum \frac{(O-E)2}{E}$$

Where,

O=Observed frequency and

E=Expected frequency

b) Factor Analysis

The study tried to apply the factor analysis to identify the Basic knowledge on Breastfeeding practices, Awareness on Newborn Feeding, Attitude on Breastfeeding by the College students, Indicators of successful Breastfeeding and Advantages of breastfeeding for baby and mother. Factor analysis attempts to identify underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. Factor analysis is often used in data reduction to identify a small number of factors that explain most of the variance observed in a much larger number of manifest variables. Factor analysis can also be used to generate hypothesis regarding causal relationship between two more variables or to screen variables for subsequent analysis.

In the study Kaiser Criteria is followed a way of reducing all factors with Eigen values more than 0.7. Through factor rotation, factor loadings were found out and the variable with factor loading more than 0.3 were retained Alpha test were applied to find out the significance of factor loading. The Kaiser – Mayer- Elkin ratio was calculated for individual and reliable factors.

RESULTS AND DISCUSSION

IV RESULT AND DISCUSSION

The result pertaining to the study entitled “Disseminating Scientific Techniques on Breastfeeding Among College Students” are discussed under the following headings:

A. Personal information of the students

B. Infrastructure facilities of the students

C. Health and Nutritional status of the students and

D. Pre and Post Assessment of Awareness/Knowledge/ Attitude on Breastfeeding Information/ Techniques

A. Personal information of the Students

The Table- V explains about the personal information of the students (Figure- VI)

TABLE- V

PERSONAL INFORMATION OF THE STUDENTS

Characteristics		Percentage N=300
Age (years)	20-22	61
	23-25	39
Education	Under Graduate	46
	Post Graduate	54
Community	SC	17
	ST	14
	BC	59
	OC	10
Place	Rural	46
	Urban	54
Religion	Hindu	66
	Muslim	13
	Christian	21
Type of the family	Nuclear	78
	Joint	22
Size of the family	Small (4 members)	70
	Large (more than 4 members)	30
Family monthly Income (in □)	1000-9,000	15
	10,000-19,000	25
	20,000-25,000	30
	Above 25,000	30
Source of family income (head)	Agriculture	25
	Business	34
	Private Sector	22
	Government	19

Age:

Sixty one per cent of the students belong to the age group of 20-22 years and (39 per cent) of the students belong to age group of 23-25.

Education:

Fifty four per cent of the students were studying PG final year and remaining (46 per cent) were UG final year.

Community:

Community is a fundamental and unique institution in Indian society. (59 per cent) of the students were belong to backward caste and minimum 10 percent were from other caste.

Place:

Fifty four per cent of the students are living in urban area with and 46 per cent are from rural area.

Religion:

It was interesting to observe that 66 per cent of the students were Hindus, 21 percent were Christians and remaining 13 per cent of the students belongs to Muslims.

Type of Family:

Majority (78 per cent) of the students were belong to nuclear type of family and remaining (22 per cent) were joint type of family.

Size of the Family:

Seventy per cent of the students were belong to small size of family with and remaining 30 per cent were from large size of family.

Family monthly Income:

Thirty per cent of the students family monthly income were range between □ 20,000- □ 25,000 and also above □ 25,000, followed by 25 per cent (□ 10,000- □ 19,000) and 15 per cent (□1 ,000- □ 9,000) respectively.

Source of family Income:

Thirty four per cent of their family income source was business and minimum (19 per cent) source of family income from government.

B. Infrastructure Facilities

The infrastructure facilities used by the students has been discussed under the Table- VI

TABLE- VI
INFRASTRUCTURE FACILITIES

Amenities		Percentage N=300
Housing	Own House	100
	Rented House	-
Education	Play school/centres	39
	Anganwadi	70
	Primary School	54
	High School	50
	University	39
Communication (at home)	Mobile	98
	Newspaper	82
	Radio	97
	Television	95
	Computer/laptop with internet connection	39
Drinking water	Tape water	63
	Hard/Pore well	37
Health	Primary Health Centre	49
	Government Hospital	97
	Private Hospital	91
	Clinic	44
Drainage	Open	43
	Underground	19
	No Drainage	38
Toilet	Public	20
	Common Toilet	46
	Separate/ Own Toilet	99

*Multiple response

The table indicates that cent per cent of the students residing in their own houses. In their located area 70 per cent of respondents had got Anganwadi facilities, followed by primary school 54 per cent , (50 per cent) had got high school facility (39 per cent) both play school / centres and university. 98 per cent students are having mobile facilities in their home, (97 per cent) had radio facility, (95 per cent) had television facilities, (82 per cent) newspaper facilities and remaining (39 per cent) had computer/laptop with internet connection. The data shows that important need infrastructure facilities such as government hospital, drinking water and toilet are available.

C. Health status of the students

The details about Health status are discussed under the following heads:

i) Health status
ii) Health problems of the student
iii) Food pattern of the students

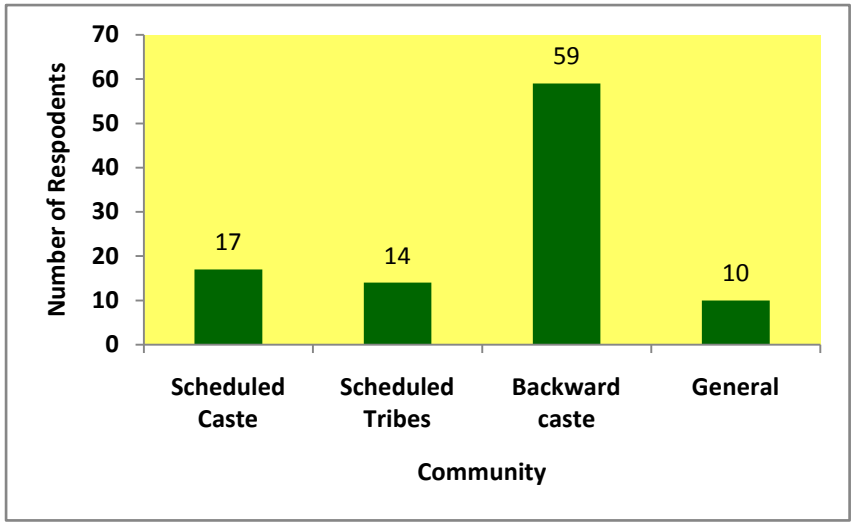
i. Health status

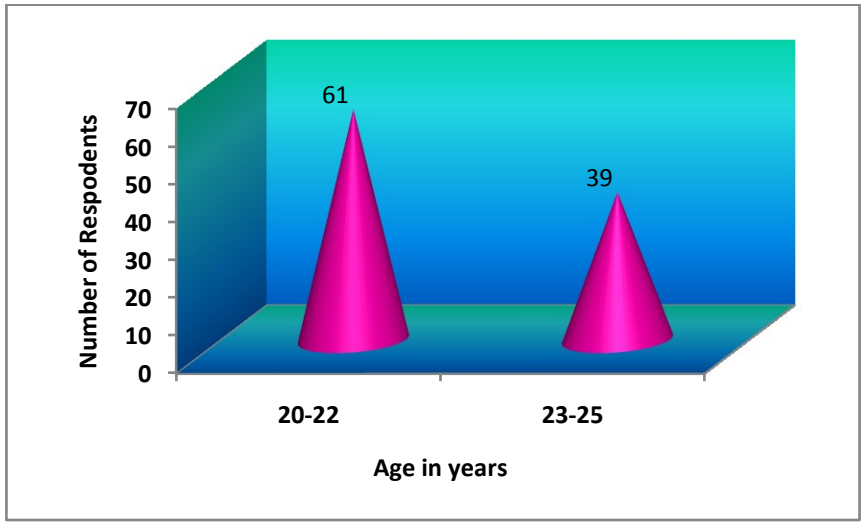
The Table- VII indicates the health status of the students

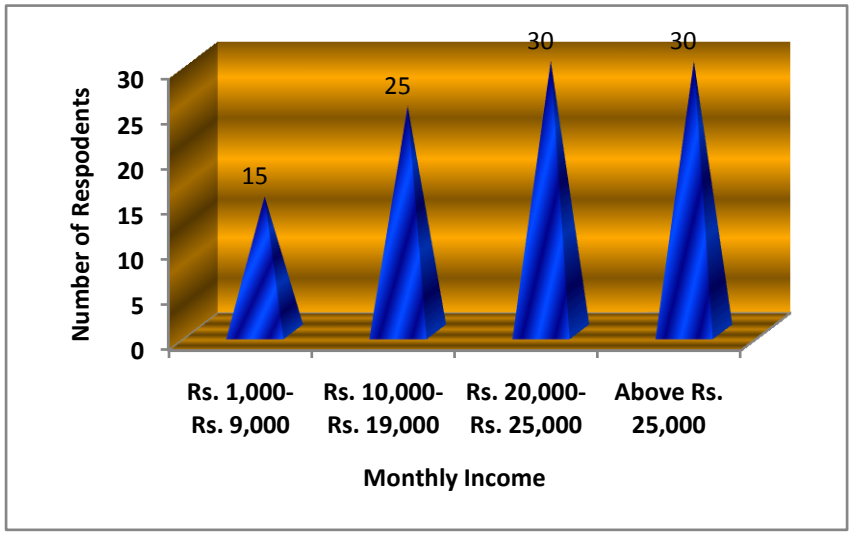
TABLE- VII
HEALTH STATUS OF THE STUDENTS

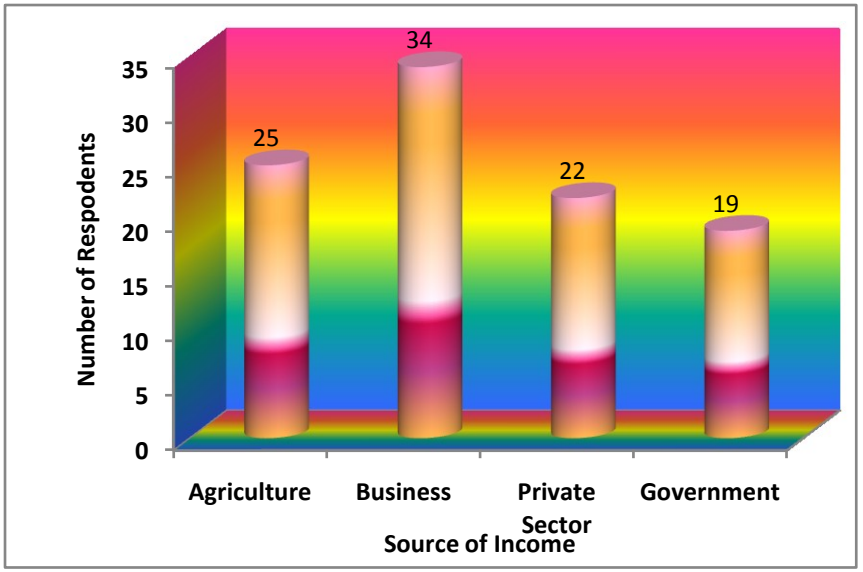
Variables		Percentage N=300
	46-50	30
	Above 51 kg	19
Height (cm)	130-140	37
	141-150	35
	151-160	17
	Above 161	11
Blood Group	AB^+	6
	A^+	33
	B^+	30
	O^+	31
Ways of maintaining health	Yoga	11
	Meditation	13
	Going to Fitness Centre	7
	Regular Walking and Exercise	59
	Balanced Diet	10
Weight (kg)	35-40	12
	41-45	39

The data shows that 39 per cent of the students weight is between 41-45 kg and 12 per cent of their weight is between 35-40 kg. This shows that they are healthy. 37 per cent of the students height range between 130-140 cm, 11 per cent of their height is above 161 cm. (33 per cent) of the students belong to A^+, (6 per cent) belong to AB^+.









PERSONAL INFORMATION OF THE RESPONDENTS

FIGURE VI

ii. Health problems of the student

Health problems of the student are depicted in the Table- VIII

TABLE – VIII

HEALTH PROBLEMS OF THE STUDENT

Problems	Percentage N=300 (YES)	Percentage N=300 (NO)
Irregular Periods	13	87
Severe Headache	35	65
Dizziness	21	79
Anaemia	10	90
Asthma	3	97
Allergy	40	60

It is amazing to note that 97 per cent are free from asthma, followed by anaemia (90 per cent) respectively. Only 13 per cent of the students have irregular periods and 3 per cent have asthma. This shows that their health status is satisfactory.

iii) Food Pattern of the students

(a) Food Habit of the students

Food Habit of the students is depicted in the Table- IX

TABLE –IX

FOOD HABIT OF THE STUDENTS

Habits		Percentage N= 300
Food habit	Vegetarian	19
	Non-Vegetarian	63
	Ova-Vegetarian	19

63 per cent of the students were belongs to non-vegetarian and 19 per cent fall under category of both vegetarian and ova-vegetarian.

(b) Food intake patterns of the students

The Table- X explains about the food intake patterns of the students.

TABLE –X

FOOD INTAKE PATTERNS OF STUDENTS

Food intake patterns	Percentage N= 300		
	Daily	Weekly	Seldom
Milk and Dairy Products	87	10	3
Vegetables	67	17	16
Fruits	50	34	16
Deep fat fried foods	90	7	3
Baking foods	50	34	16
Sweets	94	3	3
Beverages	90	7	3
Meat group and Substitutes	50	34	16
Junk/Fast foods	67	17	16

Majority (94 per cent) of the students have consumed sweets daily, and (34 per cent) weekly intake falls under the category of fruits, baking foods and meat group and substitutes followed by (3 per cent) seldom intake of milk and dairy products, deep fat fried foods and beverages.

D. PRE AND POST ASSESSMENT OF AWARENESS/KNOWLEDGE/ ATTITUDE ON BREASTFEEDING INFORMATION/ TECHNIQUES

The details about Awareness/Knowledge/ Attitude on Breastfeeding Information/ Techniques are discussed under following headings:

- Awareness on Breastfeeding
- Basic knowledge on Breastfeeding
- Awareness on Newborn Feeding
- Attitude on Breastfeeding by the College students
- Indicators of Successful Breastfeeding
- Advantages of Breastfeeding for baby and mother
- Awareness on Government Policy and Programme to promote the Breastfeeding Techniques
- Suggestions for successful Breastfeeding to promote the breastfeeding Techniques

i) Awareness on Breastfeeding

The knowledge level about awareness on breastfeeding of the students are explained in Table- XI

TABLE – XI
AWARENESS ON BREASTFEEDING

Knowledge		Percentage N=300 (YES)	Percentage N=300 (NO)
Awareness		80	20
Source of information	Family members	58	42
	Print media	82	18
	Electronic media (Radio,T.V)	90	10
	College/NSS/CSS Camp	68	32
	Celebration of World Breast Feeding day	60	40
Training/ Education	Clinical experience	12	82
	Conducted research	12	82
	Lifestyle nutrition course	66	34
	Taught in other courses	86	14
	Seminars/ conference/ workshop	80	20

Eighty per cent of the students indicated that they are aware of breastfeeding. 90 per cent of the students received information on breastfeeding through electronic media such as radio and T.V, followed by print media (82 per cent) and family members (58 per cent) respectively.

ii) Basic knowledge on Breastfeeding Practices

To resolve the 19 statements related to the basic knowledge on before and after breastfeeding practices number of variables, factor analysis technique was applied. To find out whether all the 19 variables could be used for the analysis KMO & Bartlett's test of Sphericity were applied. The following Table- XII gives the results of KMO and Bartlett's test of Sphericity on the opinion of the sample units in possessing before and after Breastfeeding Practices.

TABLE – XII

KMO AND BARTLETT'S TEST

BASIC KNOWLEDGE ON BREASTFEEDING PRACTICES

		Before	**After**
Kaiser-Meyer-Elkin Measure of Sampling Adequacy		0.514	0.646
Bartlett's Test of Sphericity	Approx. Chi-square	4646.79	1527.41
	Degrees of Freedom	171	171
	Significance	.000	.000

Source: Estimates based on field survey, 2013.

The results of KMO & Bartlett's test of Sphericity revealed that factor analysis could be carried out with the 19 selected variables effectively. Principal component analysis and rotation method of variance and Kaiser Normalisation were applied to extract factors.

Using varimax rotation, factor loadings were estimated and the Table - XIII exhibits the highest loading (after rotation) of the variables into factors.

Table - XIII

Rotated Component Matrix – (Before) Basic Knowledge on Breastfeeding practices

Factor / Variable	1	2	3	4	5	6	7	8
Colostrum is the breast milk that produce in the first few days after delivery		0.71						
Colostrums is thick and yellowish and clear in colour	0.65							
Breastfeeding should be initiated immediately after birth regardless of the type of delivery (normal or caesarian) & place of birth (home or hospital)		0.56						
Breastfeeding is the natural continuation of feeding from umbilical cord ,when the baby was inside the mother's uterus	0.67							
Mother's milk is the first food for the baby				0.64				
Underweight baby must be breastfeed every 11/2 hour		0.73						
Breastfeeding prevents childhood obesity			0.84					
Foremilk is the milk that is produced early in a feed								0.83
Hindmilk is the milk that is produced later in a feed			0.62					
Baby is not feeding							0.72	
Infrequent feeding					0.85			
Feeding of artificial milk				0.80				
Frequently empting and breastfeeding					0.84			
Massage may reduce breast engorgement		0.52						
Not feeding in the night	0.73							
Stop breast feeding	0.71							
Washing the breast with the plain water and keep it dry						0.78		
Washing the breast with soap and water							0.79	
Proper techniques of breastfeeding						0.81		

According to the loadings of the variables, among the 8 factors for the before breastfeeding practices, factor1 was highly loaded on Colostrums is thick and yellowish and clear in colour (0.65), Breastfeeding is the natural continuation of feeding from umbilical cord, when the baby was inside the mother's uterus (0.67), Not feeding in the night (0.73) and Stop breast feeding (0.71). Factor2 was highly loaded on Colostrum is the breast milk that produce in the first few days after delivery (0.71), Breastfeeding should be initiated immediately after birth regardless of the type of delivery (normal or caesarian) & place of birth (home or hospital) (0.56), Underweight baby must be breastfeed every 11/2 hour (0.73) and Massage may reduce breast engorgement (0.52).

Factor3 was highly loaded on Breastfeeding prevents childhood obesity (0.84) and Hindmilk is the milk that is produced later in a feed (0.62). Factor4 was highly loaded with Mother's milk is the first food for the baby (0.64) and Feeding of artificial milk (0.80). Factor 5 was highly loaded with Infrequent feeding (0.85) and frequently empting and breastfeeding (0.84). Factor 6 was highly loaded with washing the breast with the plain water and keep it dry (0.78) and Proper techniques of breastfeeding (0.81). Factor 7 was highly loaded with Baby is not feeding (0.72) and Washing the breast with soap and water (0.79). Factor 8 was highly loaded with Foremilk is the milk that is produced early in a feed (0.83).

Table - XIV

Rotated Component Matrix – (After) Basic Knowledge on Breastfeeding Practices

Factor / Variable	1	2	3	4	5	6
Colostrum is the breast milk that produce in the first few days after delivery						0.58
Colostrums is thick and yellowish and clear in colour					0.81	
Breastfeeding should be initiated immediately after birth regardless of the type of delivery (normal or caesarian) & place of birth (home or hospital)					0.68	
Breastfeeding is the natural continuation of feeding from umbilical cord ,when the baby was inside the mother's uterus				0.79		
Mother's milk is the first food for the baby				0.93		
Underweight baby must be breastfeed every 11/2 hour			0.75			
Breastfeeding prevents childhood obesity					0.81	
Foremilk is the milk that is produced early in a feed		0.83				
Hindmilk is the milk that is produced later in a feed				0.79		
Baby is not feeding						0.73
Infrequent feeding	0.89					
Feeding of artificial milk				0.52		
Frequently empting and breastfeeding		0.74				
Massage may reduce breast engorgement			0.88			
Not feeding in the night			0.75			
Stop breast feeding	0.64	0.66				
Washing the breast with the plain water and keep it dry	0.50	0.51				
Washing the breast with soap and water	0.85					
Proper techniques of breastfeeding						0.55

According to the loadings of the variables, among the 6 factors for the after breastfeeding practices, factor1 was highly loaded on infrequent feeding (0.89), stop breast feeding (0.64), washing the breast with the plain water and keep it dry (0.50) and Washing the breast with soap and water (0.85). Factor2 was highly loaded on Foremilk is the milk that is produced early in a feed (0.83), Frequently empting and breastfeeding (0.74), Stop breast feeding (0.66) and Washing the breast with the plain water and keep it dry (0.51). Factor3 was highly loaded on Underweight baby must be breastfeed every 11/2 hour(0.75), Massage may reduce breast engorgement (0.88) and Not feeding in the night (0.75). Factor4 was highly loaded with Breastfeeding is the natural continuation of feeding from umbilical cord, when the baby was inside the mother's uterus (0.79), Mother's milk is the first food for the baby (0.93), Hindmilk is the milk that is produced

later in a feed (0.79) and Feeding of artificial milk (0.52). Factor 5 was highly loaded with Colostrums is thick and yellowish and clear in colour (0.81), Breastfeeding should be initiated immediately after birth regardless of the type of delivery (normal or caesarian) & place of birth (home or hospital) (0.68) and Breastfeeding prevents childhood obesity (0.81). Factor 6 was highly loaded with Colostrum is the breast milk that produce in the first few days after delivery (0.58), Baby is not feeding (0.73) and Proper techniques of breastfeeding (0.55).

The communality obtained for the 19 variables are given in Table- XV

TABLE- XV
COMMUNALITIES

Variables	Basic Knowledge on Breastfeeding Practices	
	Before	After
Colostrum is the breast milk that produce in the first few days after delivery	0.602	0.695
Colostrums is thick and yellowish and clear in colour	0.574	0.749
Breastfeeding should be initiated immediately after birth regardless of the type of delivery (normal or caesarian) & place of birth (home or hospital)	0.702	0.810
Breastfeeding is the natural continuation of feeding from umbilical cord ,when the baby was inside the mother's uterus	0.707	0.879
Mother's milk is the first food for the baby	0.663	0.918
Underweight baby must be breastfeed every 11/2 hour	0.750	0.895
Breastfeeding prevents childhood obesity	0.737	0.730
Foremilk is the milk that is produced early in a feed	0.727	0.859
Hindmilk is the milk that is produced later in a feed	0.713	0.708
Baby is not feeding	0.730	0.639
Infrequent feeding	0.799	0.827
Feeding of artificial milk	0.740	0.693
Frequently empting and breastfeeding	0.813	0.739
Massage may reduce breast engorgement	0.762	0.912
Not feeding in the night	0.757	0.813
Stop breast feeding	0.713	0.912
Washing the breast with the plain water and keep it dry	0.624	0.693
Washing the breast with soap and water	0.828	0.686
Proper techniques of breastfeeding	0.801	0.680
Extraction Method: Principal Component Analysis.		

The communalities of all the 19 variables were above 0.5 indicating that a good percentage of variance in the variables was explained by the factors. To find out how many factors are to be retained, Eigen values were obtained.

The estimated Eigen values are given in Table- XVI

TABLE- XVI
EIGEN VALUE

Factor	Initial Eigen values			
	Before		After	
	Eigen Value	% of Variance	Eigen Value	% of Variance
Colostrum is the breast milk that produce in the first few days after delivery	2.7757	14.6087	4.3816	23.0611
Colostrums is thick and yellowish and clear in colour	2.2177	11.6721	3.9588	20.8360
Breastfeeding should be initiated immediately after birth regardless of the type of delivery (normal or caesarian) & place of birth (home or hospital)	1.9387	10.2039	2.3261	12.2424
Breastfeeding is the natural continuation of feeding from umbilical cord ,when the baby was inside the mother's uterus	1.7646	9.2873	1.8333	9.6490
Mother's milk is the first food for the baby	1.3433	7.0702	1.4205	7.4761
Underweight baby must be breastfeed every 11/2 hour	1.3077	6.8824	1.1125	5.8553
Breastfeeding prevents childhood obesity	1.1731	11.1744	-	-

Before Basic Knowledge on Breastfeeding practices 7 factors with Eigen values greater than one were retained. These 7 factors could explain about 71% of the variations in the 19 variables. When all the 300 respondents were combined together in analyzing the reasons for possessing after breast feeding practices, 7 factors were extracted explaining about 71% of variations in the 19 variables.

After Basic Knowledge on Breastfeeding practices seven factors with eigen values exceeding one were retained for the analysis. These 6 factors could explain 79% of the variations in the 19 variables related to reasons for possessing before breast feeding practices.

i) Awareness on Newborn Feeding

To resolve the 12 statements related to awareness on new born feeding before and after breastfeeding practices number of variables, factor analysis technique was applied. To find out whether all the 12 variables could be used for the analysis KMO & Bartlett's test of Sphericity were applied. The Table-XVII gives the results of KMO and Bartlett's test of Sphericity on the opinion of the sample units in possessing awareness on new born feeding before and after breast feeding practices.

TABLE - XVII
KMO AND BARTLETT'S TEST

(AWARENESS ON NEWBORN FEEDING)

		Before	**After**
Kaiser-Meyer-Elkin Measure of Sampling Adequacy		0.508	0.524
Bartlett's Test of Sphericity	Approx. Chi-square	1345.28	1805.24
	Degrees of Freedom	66	66
	Significance	.000	.000

The results of KMO & Bartlett's test of Sphericity revealed that factor analysis could be carried out with the 12 selected variables effectively. Principal component analysis and rotation method of variance and Kaiser Normalisation were applied to extract factors.

Using varimax rotation, factor loadings were estimated and Table- XVIII exhibits the highest loading (after rotation) of the variables into factors.

Table - XVIII

Rotated Component Matrix – (Before) Awareness on New born breastfeeding practices

Factor / Variable	1	2	3	4
A normal full term infant is born with instinctive reflex ability to breastfeed effectively			0.62	
Newborns can instinctively find the nipple without help and attach correctly to the breast				0.67
A newborn's heart rate is stabilized by skin-to-skin contact				0.87
Separation of a newborn from the mother at birth can cause harmful stress to the baby	0.83			
Mothers breastfeed less today because of technological advances		0.69		
Infant formula is just as good as breast milk		0.84		
Mothers with tuberculosis or HIV infection can breastfed babies	0.93			
Should be clear knowledge on breastfeeding				0.79
Should be keeping the breast clean		0.73		
Colostrum should be given to the baby			0.90	
Mother should take medicine for breastfeeding problems according to doctor advice			0.86	
Most babies do not need complementary foods before six months of age	0.63			

According to the loadings of the variables, among the 4 factors for the before awareness on new born breastfeeding practices, factor1 was highly loaded on Separation of a newborn from the mother at birth can cause harmful stress to the baby (0.83), Mothers with tuberculosis or HIV infection can breastfed babies (0.93) and Most babies do not need complementary foods before six months of age (0.63). Factor2 was highly loaded on Mothers breastfeed less today because of technological advances (0.69), Infant formula is just as good as breast milk (0.84) and Should be keeping the breast clean (0.73). Factor3 was highly loaded on A normal full term infant is born with instinctive reflex ability to breastfeed effectively (0.62), Colostrum should be given to the baby (0.90) and Mother should take medicine for breastfeeding problems according to doctor advice (0.86). Factor4 was highly loaded with Newborns can instinctively find the nipple without help and attach correctly to the breast (0.67), a newborn's heart rate is stabilized by skin-to-skin contact (0.87) and Should be clear knowledge on breastfeeding (0.79).

Table – XIX

Rotated Component Matrix – (After) Awareness on New born breastfeeding practices

Factor / Variable	1	2	3	4
A normal full term infant is born with instinctive reflex ability to breastfeed effectively		0.79		
Newborns can instinctively find the nipple without help and attach correctly to the breast				0.85
A newborn's heart rate is stabilized by skin-to-skin contact		0.50		0.67
Separation of a newborn from the mother at birth can cause harmful stress to the baby		0.78		
Mothers breastfeed less today because of technological advances		0.56		
Infant formula is just as good as breast milk	0.69			
Mothers with tuberculosis or HIV infection can breastfed babies	0.71			
Should be clear knowledge on breastfeeding			0.79	
Should be keeping the breast clean	0.87			
Colostrum should be given to the baby			0.81	
Mother should take medicine for breastfeeding problems according to doctor advice			0.57	
Most babies do not need complementary foods before six months of age	0.79			

According to the loadings of the variables, among the 4 factors for the after awareness on new born breastfeeding practices, factor1 was highly loaded on 'Infant formula is just as good as breast milk (0.69), Mothers with tuberculosis or HIV infection can breastfed babies (0.71), Should be keeping the breast clean (0.87) and Most babies do not need complementary foods before six months of age (0.79). Factor2 was highly loaded A normal full term infant is born with instinctive reflex ability to breastfeed effectively (0.79), A newborn's heart rate is stabilized by skin-to-skin contact (0.50), Separation of a newborn from the mother at birth can cause harmful stress to the baby (0.78) and Mothers breastfeed less today because of technological advances (0.56). Factor3 was highly loaded on Should be clear knowledge on breastfeeding (0.79), Colostrum should be given to the baby (0.81) and Mother should take medicine for breastfeeding problems according to doctor advice (0.57). Factor4 was highly loaded with Newborns can instinctively find the nipple without help and attach correctly to the breast (0.85) and a newborn's heart rate is stabilized by skin-to-skin contact (0.67).

The communality obtained for the 12 variables are given in Table - XX

TABLE- XX
COMMUNALITIES

Variables	Awareness on New born feeding	
	Before	**After**
A normal full term infant is born with instinctive reflex ability to breastfeed effectively	0.7354	0.7294
Newborns can instinctively find the nipple without help and attach correctly to the breast	0.6835	0.7872
A newborn's heart rate is stabilized by skin-to-skin contact	0.8263	0.8085
Separation of a newborn from the mother at birth can cause harmful stress to the baby	0.8015	0.6464
Mothers breastfeed less today because of technological advances	0.7500	0.5149
Infant formula is just as good as breast milk	0.7553	0.7402
Mothers with tuberculosis or HIV infection can breastfed babies	0.9014	0.7304
Should be clear knowledge on breastfeeding	0.6176	0.6825
Should be keeping the breast clean	0.6821	0.7981
Colostrum should be given to the baby	0.8186	0.8144
Mother should take medicine for breastfeeding problems according to doctor advice	0.8209	0.7512
Most babies do not need complementary foods before six months of age	0.5760	0.7655
Extraction Method: Principal Component Analysis.		

The communalities of all the 12 variables were above 0.5 indicating that a good percentage of variance in the variables was explained by the factors. To find out how many factors are to be retained, eigen values were obtained.

The estimated eigen values are given in Table- XXI

TABLE- XXI
EIGEN VALUE

Factor	Initial Eigen values			
	Before		After	
	Eigen Value	% of Variance	Eigen Value	% of Variance
A normal full term infant is born with instinctive reflex ability to breastfeed effectively	3.0306	25.2552	2.8996	24.1635
Newborns can instinctively find the nipple without help and attach correctly to the breast	1.8085	15.0708	2.4602	20.5019
A newborn's heart rate is stabilized by skin-to-skin contact	1.5989	13.3240	1.9136	15.9464
Separation of a newborn from the mother at birth can cause harmful stress to the baby	1.3251	11.0422	1.4954	12.4619
Mothers breastfeed less today because of technological advances	1.2056	10.0470	-	-

Before Awareness on New born feeding breastfeeding practices seven factors with eigen values exceeding one were retained for the analysis. These 5 factors could explain 73% of the variations in the 12 variables related to reasons for possessing before Awareness on new born feeding breast feeding practices.

After Awareness on New born feeding breastfeeding practices 4 factors with eigen values greater than one were retained. These 5 factors could explain about 75% of the variations in the 12 variables. When all the 300 respondents were combined together in analyzing the reasons for possessing after Awareness on new born feeding breast feeding practices, 5 factors were extracted explaining about 75% of variations in the 12 variables.

ii) Attitude on Breastfeeding by the College Students

To resolve the 21 statements related to attitude on breastfeeding by the college students before and after breastfeeding practices number of variables, factor analysis technique was applied. To find out whether all the 21 variables could be used for the analysis KMO & Bartlett's test of Sphericity were applied. The following Table- XXII gives the results of KMO and Bartlett's test of Sphericity on the opinion of the sample units in possessing awareness on new born feeding before and after breast feeding practices.

TABLE - XXII
KMO AND BARTLETT'S TEST

(ATTITUDE ON BREASTFEEDING BY THE COLLEGE STUDENTS)

		Before	**After**
Kaiser-Meyer-Elkin Measure of Sampling Adequacy		0.674	0.741
Bartlett's Test of Sphericity	Approx. Chi-square	4026.59	5390.85
	Degrees of Freedom	210	210
	Significance	.000	.000

The results of KMO & Bartlett's test of Sphericity revealed that factor analysis could be carried out with the 21selected variables effectively. Principal component analysis and rotation method of variance and Kaiser Normalisation were applied to extract factors.

Using varimax rotation, factor loadings were estimated and Table- XXIII exhibits the highest loading (after rotation) of the variables into factors.

Table - XXIII

Rotated Component Matrix –

(Before) Attitude on Breastfeeding by the College students Breastfeeding practices

Factor / Variable	1	2	3	4	5	6
The mother can breastfeed successfully, regardless of size of her breast		0.62				
The quantity of milk produced by the mother does not depend on the size of her breast	0.69					0.54
Breastfeeding gives satisfaction to the mother					0.83	
Breastfeeding is painful			0.81			
It is acceptable that the mother breastfeeds in front of family & friends	0.95					
Breastfeeding affects the beauty of the mother		0.77				
Breastfeeding helps in birth spacing	0.83					
Lactating mothers should not use perfumes and flowers while breastfeeding		0.59	0.55			
The mother should not breastfeed when the baby suffers from diarrhea				0.79		
Exclusive Breastfeeding makes mother to be weak			0.87			
Commercial formula feeds are necessary within 6 months		0.77				
Others must not see the mother and baby while breastfeeding	0.92					
If baby is teething should stop breastfeeding completely	0.77					
If a mother has mastitis should stop breastfeeding completely		0.74				
Mothers who have small breast do not produce enough milk to feed their baby					0.81	
Breastfeeding in public is against the law					0.79	
High calorie diet must be taken by all mothers at the time of lactation						0.54
Spicy foods should not be taken by all mothers at the time of lactation				0.51		0.70
Breastfeeding mother should not take tobacco and alcohol					0.85	
Mother can breastfeed & eat different foods	0.86					
Healthy food must be taken by the mothers for sufficient milk secretion				0.89		

According to the loadings of the variables, among the 6 factors for the Before attitude on breastfeeding by the college students breastfeeding practices, factor1 was highly loaded on The quantity of milk produced by the mother does not depend on the size of her breast (0.69), It is acceptable that the mother breastfeeds in front of family & friends (0.95), Breastfeeding helps in birth spacing (0.83), Others must not see the mother and baby while breastfeeding (0.92), If baby is teething should stop breastfeeding completely (0.77) and Mother can breastfeed & eat different foods (0.86). Factor2 was

highly loaded on The mother can breastfeed successfully, regardless of size of her breast (0.62), Breastfeeding affects the beauty of the mother *(0.77),* Lactating mothers should not use perfumes and flowers while breastfeeding (0.59), Commercial formula feeds are necessary within 6 months (0.77) and If a mother has mastitis should stop breastfeeding completely (0.74). Factor3 was highly loaded on Breastfeeding is painful (0.81), lactating mothers should not use perfumes and flowers while breastfeeding (0.55) and exclusive Breastfeeding makes mother to be weak (0.87). Factor4 was highly loaded with the mother should not breastfeed when the baby suffers from diarrhea (0.79), Spicy foods should not be taken by all mothers at the time of lactation (0.51) and Healthy food must be taken by the mothers for sufficient milk secretion (0.89). Factor5 was highly loaded on Breastfeeding gives satisfaction to the mother (0.83), Breastfeeding mother should not take tobacco and alcohol (0.85), Mothers who have small breast do not produce enough milk to feed their baby (0.81) and Breastfeeding in public is against the law (0.79). Factor6 was highly loaded with The quantity of milk produced by the mother does not depend on the size of her breast (0.54), High calorie diet must be taken by all mothers at the time of lactation (0.54) and Spicy foods should not be taken by all mothers at the time of lactation (0.70).

Table - XXIV
Rotated Component Matrix –
(After) Attitude on Breastfeeding by the college students Breastfeeding practices

Factor / Variable	1	2	3	4	5	6
The mother can breastfeed successfully, regardless of size of her breast			0.91			
The quantity of milk produced by the mother does not depend on the size of her breast			0.83			
Breastfeeding gives satisfaction to the mother					0.82	
Breastfeeding is painful			0.58			0.50
It is acceptable that the mother breastfeeds in front of family & friends		0.78				
Breastfeeding affects the beauty of the mother		0.78				
Breastfeeding helps in birth spacing		0.64				
Lactating mothers should not use perfumes and flowers while breastfeeding		0.82				
The mother should not breastfeed when the baby suffers from diarrhea	0.67					
Exclusive Breastfeeding makes mother to be weak	0.84					
Commercial formula feeds are necessary within 6 months	0.76	0.50				
Others must not see the mother and baby while breastfeeding	0.75					
If baby is teething should stop breastfeeding completely	0.53			0.72		
If a mother has mastitis should stop breastfeeding completely				0.90		
Mothers who have small breast do not produce enough milk to feed their baby	0.69					
Breastfeeding in public is against the law		0.76				
High calorie diet must be taken by all mothers at the time of lactation						0.85
Spicy foods should not be taken by all mothers at the time of lactation				0.54		
Breastfeeding mother should not take tobacco and alcohol					0.84	
Mother can breastfeed & eat different foods		0.52				
Healthy food must be taken by the mothers for sufficient milk secretion					0.66	

According to the loadings of the variables, among the 6 factors for the after attitude on breastfeeding by the college students breastfeeding practices, factor1 was highly loaded on the mother should not breastfeed when the baby suffers from diarrhea (0.67), Exclusive Breastfeeding makes mother to be weak (0.84), Commercial formula feeds are necessary within 6 months (0.76), Others must not see the mother and baby

while breastfeeding (0.75), If baby is teething should stop breastfeeding completely (0.53) and Mothers who have small breast do not produce enough milk to feed their baby (0.69). Factor2 was highly loaded on It is acceptable that the mother breastfeeds in front of family & friends (0.78), Breastfeeding affects the beauty of the mother (0.78), Breastfeeding helps in birth spacing (0.64), Lactating mothers should not use perfumes and flowers while breastfeeding (0.82), commercial formula feeds are necessary within 6 months (0.50), Breastfeeding in public is against the law (0.76) and Mother can breastfeed & eat different foods (0.52). Factor3 was highly loaded on the mother can breastfeed successfully, regardless of size of her breast (0.91), the quantity of milk produced by the mother does not depend on the size of her breast (0.83) and breastfeeding is painful (0.58). Factor4 was highly loaded with If baby is teething should stop breastfeeding completely (0.72), If a mother has mastitis should stop breastfeeding completely (0.90) and Spicy foods should not be taken by all mothers at the time of lactation (0.54). Factor5 was highly loaded on Breastfeeding gives satisfaction to the mother (0.82), Breastfeeding mother should not take tobacco and alcohol (0.84) and Healthy food must be taken by the mothers for sufficient milk secretion (0.66). Factor6 was highly loaded with Breastfeeding is painful (0.50) and High calorie diet must be taken by all mothers at the time of lactation (0.85).

The communality obtained for the 21 variables are given in Table- XXV

TABLE- XXV
COMMUNALITIES

Variables	Attitude on breastfeeding by the college students	
	Before	**After**
The mother can breastfeed successfully, regardless of size of her breast	0.7811	0.8652
The quantity of milk produced by the mother does not depend on the size of her breast	0.8313	0.8561
Breastfeeding gives satisfaction to the mother	0.8675	0.6949
Breastfeeding is painful	0.7398	0.8302
It is acceptable that the mother breastfeeds in front of family & friends	0.9284	0.8332
Breastfeeding affects the beauty of the mother	0.6641	0.6652
Breastfeeding helps in birth spacing	0.8823	0.8329
Lactating mothers should not use perfumes and flowers while breastfeeding	0.7297	0.8297
The mother should not breastfeed when the baby suffers from diarrhea	0.6781	0.7309
Exclusive Breastfeeding makes mother to be weak	0.7636	0.8164
Commercial formula feeds are necessary within 6 months	0.7249	0.8730
Others must not see the mother and baby while breastfeeding	0.8612	0.8150
If baby is teething should stop breastfeeding completely	0.7273	0.8452
If a mother has mastitis should stop breastfeeding completely	0.6328	0.8759
Mothers who have small breast do not produce enough milk to feed their baby	0.4852	0.6570
Breastfeeding in public is against the law	0.7838	0.7433
High calorie diet must be taken by all mothers at the time of lactation	0.7223	0.7844
Spicy foods should not be taken by all mothers at the time of lactation	0.7920	0.8239
Breastfeeding mother should not take tobacco and alcohol	0.8098	0.7610
Mother can breastfeed & eat different foods	0.8501	0.7658
Healthy food must be taken by the mothers for sufficient milk secretion	0.8089	0.8155
Extraction Method: Principal Component Analysis.		

The communalities of all the 21variables were above .5 indicating that a good percentage of variance in the variables was explained by the factors. To find out how many factors are to be retained, Eigen values were obtained. The estimated Eigen values are given in Table- XXVI

TABLE- XXVI

EIGEN VALUE

Factor	Initial Eigen values			
	Before		After	
	Eigen Value	% of Variance	Eigen Value	% of Variance
The mother can breastfeed successfully, regardless of size of her breast	4.8767	23.2222	6.9597	33.1415
The quantity of milk produced by the mother does not depend on the size of her breast	3.3567	15.9845	3.4013	16.1968
Breastfeeding gives satisfaction to the mother	2.1595	10.2833	2.0967	9.9843
Breastfeeding is painful	1.8692	8.9012	1.5167	7.2226
It is acceptable that the mother breastfeeds in front of family & friends	1.5826	7.5362	1.4408	6.8608
Breastfeeding affects the beauty of the mother	1.1607	5.5273	1.2996	6.1887
Breastfeeding helps in birth spacing	1.0587	5.0414	-	-

Before attitude on breastfeeding by the college students breastfeeding practices 7 factors with eigen values greater than one were retained. These 7 factors could explain about 76% of the variations in the 21 variables. When all the 300 respondents were combined together in analyzing the attitude on breastfeeding by the college students breastfeeding practices, 7 factors were extracted explaining about 76% of variations in the 21 variables.

After attitude on breastfeeding by the college students breastfeeding practices seven factors with eigen values exceeding one were retained for the analysis. These 6 factors could explain 80% of the variations in the 21 variables related to attitude on breastfeeding by the college students breastfeeding practices.

iii) Indicators of Successful breastfeeding

To resolve the 20 statements related to before and after indicators of successful breastfeeding practices number of variables, factor analysis technique was applied. To find out whether all the 20 variables could be used for the analysis KMO & Bartlett's test of Sphericity were applied. The Table-XXVII gives the results of KMO and Bartlett's test

of Sphericity on the opinion of the sample units in possessing awareness on new born feeding before and after breast feeding practices.

TABLE- XXVII
KMO AND BARTLETT'S TEST

(INDICATORS OF SUCCESSFUL BREASTFEEDING)

		Before	After
Kaiser-Meyer-Elkin Measure of Sampling Adequacy		0.722	0.768
Bartlett's Test of Sphericity	Approx. Chi-square	4007.04	3559.78
	Degrees of Freedom	190	190
	Significance	.000	.000

The results of KMO & Bartlett's test of Sphericity revealed that factor analysis could be carried out with the 20 selected variables effectively. Principal component analysis and rotation method of variance and Kaiser Normalisation were applied to extract factors.

Using varimax rotation, factor loadings were estimated and Table- XXVIII exhibits the highest loading (after rotation) of the variables into factors.

Table - XXVIII
Rotated Component Matrix – (Before) Indicators of Successful Breastfeeding practices

Factors / Variables	1	2	3	4	5	6
Baby's body close to mothers				0.50		
Baby face facing the mother breast					0.77	
Baby's nose opposite to the nipple						0.73
Baby chin touching the breast and nose close to breast					0.68	
Baby's stays attached to breast	0.82					
Mother should keep secure and confident hold						0.76
Face to face attention from mother			0.73			
Mouth wide open		0.71				
Chin touching the breast and nose close to breast			0.79			
Lower lip turned outwards	0.85					
Block part of the breast not visible below the lower lip	0.83					
Large block portion of breast and nipple including milk collecting ducts are inside baby's mouth			0.80			
Audible and visible swallowing		0.87				
Sustained rhythmic suck	0.84					
Relaxed arms and hands				0.83		
Moist mouth	0.55			0.63		
Soaked / heavy nappies		0.60				
Breast softening	0.79					
No compression of the nipple at the end of the feed	0.74					
Mother feels relaxed and sleepy		0.87				

According to the loadings of the variables, among the 6 factors for the before indicators of successful breastfeeding practices, factor1 was highly loaded on Baby's stays attached to breast (0.82), Lower lip turned outwards (0.85), Block part of the breast not visible below the lower lip (0.83), Sustained rhythmic suck (0.84), Moist mouth (0.55), Breast softening (0.79) and No compression of the nipple at the end of the feed (0.74). Factor2 was highly loaded on Mouth wide open (0.71), Audible and visible swallowing (0.87), Soaked / heavy nappies (0.60) and Mother feels relaxed and sleepy (0.87). Factor3 was highly loaded on Face to face attention from mother (0.73), Chin touching the breast and nose close to breast (0.79) and large block portion of breast and nipple including milk collecting ducts are inside baby's mouth (0.80). Factor4 was highly loaded with Baby's body close to mothers (0.50), relaxed arms and hands (0.83) and moist mouth (0.63). Factor5 was highly loaded on Baby face facing the mother breast (0.77)

and Baby chin touching the breast and nose close to breast (0.68). Factor6 was highly loaded on Baby's nose opposite to the nipple (0.73) and Mother should keep secure and confident hold (0.76).

Table - XXIX
Rotated Component Matrix – (After) Indicators of Successful Breastfeeding practices

Factors / Variables	1	2	3	4	5
Baby's body close to mothers	0.75				
Baby face facing the mother breast	0.77				
Baby's nose opposite to the nipple	0.55				0.64
Baby chin touching the breast and nose close to breast		0.77			
Baby's stays attached to breast		0.79			
Mother should keep secure and confident hold				0.62	
Face to face attention from mother				0.67	
Mouth wide open			0.81		
Chin touching the breast and nose close to breast					0.82
Lower lip turned outwards				0.82	
Block part of the breast not visible below the lower lip	0.50	0.52			
Large block portion of breast and nipple including milk collecting ducts are inside baby's mouth			0.80		
Audible and visible swallowing		0.67		0.50	
Sustained rhythmic suck	0.59				
Relaxed arms and hands					0.50
Moist mouth	0.61				
Soaked / heavy nappies			0.60		
Breast softening		0.79			
No compression of the nipple at the end of the feed			0.87		
Mother feels relaxed and sleepy	0.82				

According to the loadings of the variables, among the 6 factors for the after indicators of successful breastfeeding practices, factor1 was highly loaded on Baby's body close to mothers (0.75), Baby face facing the mother breast (0.77), Baby's nose opposite to the nipple (0.55), Block part of the breast not visible below the lower lip (0.50), Sustained rhythmic suck (0.59), Moist mouth (0.61) and Mother feels relaxed and sleepy (0.82). Factor2 was highly loaded on Baby chin touching the breast and nose close to breast (0.77), Baby's stays attached to breast (0.79), Block part of the breast not visible below the lower lip (0.52), audible and visible swallowing (0.67) and Breast softening (0.79). Factor3 was highly loaded on large block portion of breast and nipple including milk collecting ducts are inside baby's mouth (0.80), Soaked / heavy nappies (0.60), Mouth wide open (0.81) and No compression of the nipple at the end of the feed (0.87). Factor4 was highly loaded with Mother should keep secure and confident hold

(0.62), Face to face attention from mother (0.67), Lower lip turned outwards (0.82) and audible and visible swallowing (0.50). Factor5 was highly loaded on Baby's nose opposite to the nipple (0.64), Chin touching the breast and nose close to breast (0.82) and relaxed arms and hands (0.50).

The communality obtained for the 20 variables are given in Table- XXX

TABLE- XXX
COMMUNALITIES

Variables	Awareness on Indicators of successful breastfeeding	
	Before	**After**
Baby's body close to mothers	0.5910	0.6443
Baby face facing the mother breast	0.6597	0.6949
Baby's nose opposite to the nipple	0.6289	0.7494
Baby chin touching the breast and nose close to breast	0.5165	0.7001
Baby's stays attached to breast	0.8681	0.7859
Mother should keep secure and confident hold	0.7739	0.6657
Face to face attention from mother	0.7345	0.6176
Mouth wide open	0.6942	0.3962
Chin touching the breast and nose close to breast	0.7176	0.7142
Lower lip turned outwards	0.8075	0.7256
Block part of the breast not visible below the lower lip	0.8355	0.7759
Large block portion of breast and nipple including milk collecting ducts are inside baby's mouth	0.7002	0.8295
Audible and visible swallowing	0.7859	0.7115
Sustained rhythmic suck	0.9253	0.6369
Relaxed arms and hands	0.8222	0.4611
Moist mouth	0.8082	0.7020
Soaked / heavy nappies	0.5946	0.6268
Breast softening	0.6883	0.6626
No compression of the nipple at the end of the feed	0.8231	0.8406
Mother feels relaxed and sleepy	0.8129	0.7635
Extraction Method: Principal Component Analysis.		

The communalities of all the 20 variables were above 0.5 indicating that a good percentage of variance in the variables was explained by the factors. To find out how many factors are to be retained, eigen values were obtained. The estimated eigen values are given in Table-XXXI

TABLE- XXXI

EIGEN VALUE

Factor	Initial Eigen values			
	Before		After	
	Eigen Value	% of Variance	Eigen Value	% of Variance
Baby's body close to mothers	5.7016	28.5080	6.1114	30.5572
Baby face facing the mother breast	2.7696	13.8479	3.1402	15.7009
Baby's nose opposite to the nipple	2.1541	10.7707	2.1509	10.7545
Baby chin touching the breast and nose close to breast	1.5723	7.8615	1.2598	6.2990
Baby's stays attached to breast	1.4994	7.4972	1.0419	5.2096
Mother should keep secure and confident hold	1.0911	5.4554	-	-

Before indicators of successful breastfeeding practices 6 factors with eigen values exceeding one were retained for the analysis. These 6 factors could explain 73% of the variations in the 20 variables related to reasons for possessing before indicators of successful breastfeeding practices.

After indicators of successful breastfeeding practices 5 factors with eigen values greater than one were retained. These 5 factors could explain about 70% of the variations in the 20 variables. When all the 300 respondents were combined together in analyzing the reasons for possessing after indicators of successful breastfeeding practices, 5 factors were extracted explaining about 70% of variations in the 20 variables.

iv) Advantages of breastfeeding for Baby and Mother

To resolve the 14 statements related to advantages of breastfeeding for baby and mother before and after breastfeeding practices number of variables, factor analysis technique was applied. To find out whether all the 14 variables could be used for the analysis KMO & Bartlett's test of Sphericity were applied.

The Table- XXXII gives the results of KMO and Bartlett's test of Sphericity on the opinion of the sample units in possessing awareness on new born feeding before and after breast feeding practices.

TABLE -XXXII
KMO AND BARTLETT'S TEST

(ADVANTAGES OF BREASTFEEDING FOR BABY AND MOTHER)

		Before	After
Kaiser-Meyer-Elkin Measure of Sampling Adequacy		0.501	0.531
Bartlett's Test of Sphericity	Approx. Chi-square	632.539	6280.15
	Degrees of Freedom	91	91
	Significance	.000	.000

The results of KMO & Bartlett's test of Sphericity revealed that factor analysis could be carried out with the 14 selected variables effectively. Principal component analysis and rotation method of variance and Kaiser Normalisation were applied to extract factors.

Using varimax rotation, factor loadings were estimated and Table- XXXIII exhibits the highest loading (after rotation) of the variables into factors.

Table - XXXIII
Rotated Component Matrix –
(Before) Advantages of breastfeeding for baby and mother

Factors / Variables	1	2	3	4	5	6	7
Good for health and perfect nutrition				0.85			
Increases the baby's intelligence					0.87		
Breastfeeding increased the immunity of the baby	0.60						
Breast milk prevent the child from the cavalai diseases			0.62				
Protects against onset of adult diseases (diabetes, high blood pressure)			0.75				
Reduces the risk of lung infection among babies		0.51					
Protected from allergy and diseases compared to formula milk	0.50						
Helps to reduce the extra fat and body weight						0.84	
Maintains the shape of the body		0.79					
Prevent breast engorgement							0.73
Reduces risk of ovarian cancer						0.58	
Reduces risk of breast cancer		0.61					
Frequent breastfeeding Prevents diabetic mellitus	0.86						
Breastfeeding helps the mother & baby to develop a special bonding							0.74

According to the loadings of the variables, among the 7 factors for the before advantages of breastfeeding for baby and mother breastfeeding practices, factor1 was highly loaded on Breastfeeding increased the immunity of the baby (0.60), Protected from allergy and diseases compared to formula milk (0.50) and Frequent breastfeeding Prevents diabetic mellitus (0.86). Factor2 was highly loaded on Reduces the risk of lung infection among babies (0.51), Maintains the shape of the body (0.79) and Reduces risk of breast cancer (0.61). Factor3 was highly loaded on Breast milk prevent the child from the cavalai diseases (0.62) and Protects against onset of adult diseases (diabetes, high blood pressure) (0.75). Factor4 was highly loaded with Good for health and perfect nutrition (0.85). Factor5 was highly loaded with Increases the baby's intelligence (0.87). Factor 6 was highly loaded with Helps to reduce the extra fat and body weight (0.84) and Reduces risk of ovarian cancer (0.58). Factor7 was highly loaded with Prevent breast engorgement (0.73) and Breastfeeding helps the mother & baby to develop a special bonding (0.74).

Table - XXXIV
Rotated Component Matrix –
(After) Advantages of breastfeeding for baby and mother

Factors / Variables	1	2	3	4	5
Good for health and perfect nutrition		0.95			
Increases the baby's intelligence		0.95			
Breastfeeding increased the immunity of the baby			0.89		
Breast milk prevent the child from the cavalai diseases			0.90		
Protects against onset of adult diseases (diabetes, high blood pressure)	0.83				
Reduces the risk of lung infection among babies	0.52		0.53	0.58	
Protected from allergy and diseases compared to formula milk				0.86	
Helps to reduce the extra fat and body weight		0.95			
Maintains the shape of the body		0.62		0.57	
Prevent breast engorgement	0.83				
Reduces risk of ovarian cancer	0.85				
Reduces risk of breast cancer	0.80				
Frequent breastfeeding Prevents diabetic mellitus	0.50				0.79
Breastfeeding helps the mother & baby to develop a special bonding					0.98

According to the loadings of the variables, among the 5 factors for the after advantages of breastfeeding for baby and mother breastfeeding practices, factor1 was highly loaded on Protects against onset of adult diseases (diabetes, high blood pressure) (0.83), Reduces the risk of lung infection among babies (0.52), Prevent breast

engorgement (0.83), Reduces risk of ovarian cancer (0.85), Reduces risk of breast cancer (0.80) and Frequent breastfeeding Prevents diabetic mellitus (0.50). Factor2 was highly loaded on good for health and perfect nutrition (0.95), Increases the baby's intelligence (0.95), Helps to reduce the extra fat and body weight (0.95) and Maintains the shape of the body (0.62). Factor3 was highly loaded on Breastfeeding increased the immunity of the baby (0.89), Breast milk prevent the child from the cavalai diseases (0.90) and Reduces the risk of lung infection among babies (0.53). Factor4 was highly loaded with Reduces the risk of lung infection among babies (0.58), Protected from allergy and diseases compared to formula milk (0.86) and Maintains the shape of the body and (0.57). Factor5 was highly loaded with Frequent breastfeeding Prevents diabetic mellitus (0.79) and Breastfeeding helps the mother & baby to develop a special bonding (0.98).

The communality obtained for the 14 variables are given in Table-XXXV

TABLE- XXXV
COMMUNALITIES

Variables	Advantages of breastfeeding for baby and mother	
	Before	**After**
Good for health and perfect nutrition	0.8159	0.9295
Increases the baby's intelligence	0.8349	0.9609
Breastfeeding increased the immunity of the baby	0.8192	0.9047
Breast milk prevent the child from the cavalai diseases	0.7249	0.9077
Protects against onset of adult diseases (diabetes, high blood pressure)	0.5976	0.9356
Reduces the risk of lung infection among babies	0.7163	0.9054
Protected from allergy and diseases compared to formula milk	0.6619	0.8901
Helps to reduce the extra fat and body weight	0.7386	0.9365
Maintains the shape of the body	0.6314	0.8975
Prevent breast engorgement	0.7208	0.9212
Reduces risk of ovarian cancer	0.7119	0.9395
Reduces risk of breast cancer	0.7270	0.8579
Frequent breastfeeding Prevents diabetic mellitus	0.7744	0.9596
Breastfeeding helps the mother & baby to develop a special bonding	0.7371	0.9771
Extraction Method: Principal Component Analysis.		

The communalities of all the 14 variables were above 0.5 indicating that a good percentage of variance in the variables was explained by the factors. To find out how many factors are to be retained, eigen values were obtained. The estimated eigen values are given in Table-XXXVI

TABLE-XXXVI

EIGEN VALUE

Factor	Initial Eigen values			
	Before		After	
	Eigen Value	% of Variance	Eigen Value	% of Variance
Good for health and perfect nutrition	2.0747	14.8193	6.1665	44.0464
Increases the baby's intelligence	1.7429	12.4492	2.5533	18.2379
Breastfeeding increased the immunity of the baby	1.7084	12.2031	1.8333	13.0951
Breast milk prevent the child from the cavalai diseases	1.3337	9.5266	1.2610	9.0075
Protects against onset of adult diseases (diabetes, high blood pressure)	1.2038	8.5985	1.1091	7.9224
Reduces the risk of lung infection among babies	1.1144	7.9598	-	-
Protected from allergy and diseases compared to formula milk	1.0338	7.3845	-	-

Before Advantages of breastfeeding for baby and mother breastfeeding practices seven factors with eigen values exceeding one were retained for the analysis. These 7 factors could explain 73% of the variations in the 7 variables related to reasons for possessing before Awareness on new born feeding breast feeding practices.

After Advantages of breastfeeding for baby and mother breastfeeding practices 5 factors with eigen values greater than one were retained. These 5 factors could explain about 92% of the variations in the 5 variables. When all the 300 respondents were combined together in analyzing the reasons for possessing after Advantages of breastfeeding for baby and mother breastfeeding practices, 5 factors were extracted explaining about 92% of variations in the 5 variables.

v) Awareness on government policy and programmes to promote the breastfeeding techniques

The study tried to find out the association between attitude of the after and before Awareness on government policy and programmes to promote the breastfeeding techniques variable like National Maternity Benefit Scheme (NMBS), Rajiv Gandhi Scheme for empowerment of adolescent girls (RGSEAG) – SABLA, Breastfeeding Promotion Network of India(BPNI), World Alliance for Breastfeeding Action (WABA), Baby friendly hospital, Ayush in infant feeding, Integrated Child Development Services Scheme, World Breastfeeding Week was first celebrated in 1992, World Breastfeeding Week (WBW) celebrating every 1-7 August, 2013, World Breastfeeding Week (WBW) theme is 'Breastfeeding Support: Closed to Mothers by using chisquare analysis.

Table- XXXVII

Estimated chi-square value of association between attitude of the after and before Awareness on government policy and programmes to promote the breastfeeding techniques

Variables	Calculated χ^2value	χ^2 0.05	Influence
National Maternity Benefit Scheme (NMBS)	190.08	43.77	Rejected null hypothesis. It is statistically Significant
Rajiv Gandhi Scheme for empowerment of adolescent girls (RGSEAG) – SABLA	275.60	43.77	Rejected null hypothesis. It is statistically Significant
Breastfeeding Promotion Network of India(BPNI)	275.00	43.77	Rejected null hypothesis. It is statistically Significant
World Alliance for Breastfeeding Action (WABA)	209.70	43.77	Rejected null hypothesis. It is statistically Significant
Baby friendly hospital	252.80	43.77	Rejected null hypothesis. It is statistically Significant
Ayush in infant feeding	266.68	43.77	Rejected null hypothesis. It is statistically Significant
Integrated Child Development Services Scheme	118.82	43.77	Rejected null hypothesis. It is statistically Significant
World Breastfeeding Week was first celebrated in 1992.	392.54	43.77	Rejected null hypothesis. It is statistically Significant
World Breastfeeding Week (WBW) celebrating every 1-7 August 2013.	316.60	43.77	Rejected null hypothesis. It is statistically Significant
World Breastfeeding Week (WBW) theme is 'Breastfeeding Support: Closed To Mothers	407.50	43.77	Rejected null hypothesis. It is statistically Significant

The table makes it evident that the attitude of the after and before Awareness on government policy and programmes to promote the breastfeeding techniques was significantly associated with the variables of National Maternity Benefit Scheme (NMBS),

Rajiv Gandhi Scheme for empowerment of adolescent girls (RGSEAG) –SABLA, Breastfeeding Promotion Network of India(BPNI), World Alliance for Breastfeeding Action (WABA), Baby friendly hospital, Ayush in infant feeding, Integrated Child Development Services Scheme, World Breastfeeding Week was first celebrated in 1992, World Breastfeeding Week (WBW) celebrating every 1-7 August, 2013, World Breastfeeding Week (WBW) theme is 'Breastfeeding Support: Closed to Mothers, since the calculated χ^2 is more than the critical values. Hence, the null hypothesis is rejected and it is statistically significant.

vi) Suggestions for successful breastfeeding to promote the breastfeeding techniques

The Table- XXXVIII explains about the estimated chi-square value of association between attitude of before and after Suggestion for successful breastfeeding with the variables of Breast Feeding Education and timely Counselling Should be given to all the mother, Training should be imparted by health care staff, Compulsory breastfeeding must be given to infant for first six months, Encourage breastfeeding on demand, Don't give artificial nipples or pacifiers to breastfeeding infants, Provide milk expression machine at affordable cost, Keep mothers and infants together and Breastfeeding techniques is necessary to address youth at colleges to spread by using chisquare analysis.

Table- XXXVIII
Estimated chi-square value of association between attitude of Before and After Suggestion for Successful Breastfeeding

Variables	Calculated χ^2value	χ^2 0.05	Influence
Breast Feeding Education and Timely Counselling Should be given to all the mother	107.54	43.77	Rejected null hypothesis. It is statistically Significant
Training should be imparted by health care staff	324.12	43.77	Rejected null hypothesis. It is statistically Significant
Compulsory breastfeeding must be given to infant for first six months	54.66	43.77	Rejected null hypothesis. It is statistically Significant
Encourage breastfeeding on demand	385.72	43.77	Rejected null hypothesis. It is statistically Significant
Don't give artificial nipples or pacifiers to breastfeeding infants	324.72	43.77	Rejected null hypothesis. It is statistically Significant
Provide milk expression machine at affordable cost	294.32	43.77	Rejected null hypothesis. It is statistically Significant
Keep mothers and infants together	129.62	43.77	Rejected null hypothesis. It is statistically Significant
Breastfeeding techniques is necessary to address youth at colleges to spread	149.34	43.77	Rejected null hypothesis. It is statistically Significant

The table makes it evident that the attitude of before and after Suggestion for successful breastfeeding. was significantly associated with the variables of Breast

Feeding Education and Timely Counselling should be given to all the mother, Training should be imparted by health care staff, Compulsory breastfeeding must be given to infant for first six months, Encourage breastfeeding on demand, Don't give artificial nipples or pacifiers to breastfeeding infants, Provide milk expression machine at affordable cost, Keep mothers and infants together and Breastfeeding techniques is necessary to address youth at colleges to spread, since the calculated χ^2 is more than the critical values. Hence, the null hypothesis is rejected and it is statistically significant.

SUMMARY AND CONCLUSION

V SUMMARY AND CONCLUSION

Breastfeeding is an age-old practice that has been very critical not only to the physiology, growth, and overall well-being of neonates but the physiology and health of women as well, it is one of the practices among human societies that transcend the boundaries of time and place. The practice has been a method of feeding to which infants have not only adapted but lived on for most of human existence on earth.

The study entitled “Disseminating Scientific Techniques on Breastfeeding Among College Students” was undertaken with the objectives: to

- assessing the knowledge level on breastfeeding techniques among students.
- imparting education on scientific information and techniques of breastfeeding to the students.
- and evaluating the impact of the programme.

The area chosen for the study was Avinashilingam Institute for Home-Science and Higher Education for Women University, Coimbatore, with a total sample of 300 of final year students of both U.G and P.G of different Departments.

For conducting the Research, Questionnaire was used as a tool to elicit information on Socio Economic Background and Breastfeeding awareness level of the students.

Education programme on Breastfeeding Techniques was arranged by the investigator. After educating the students, the objectives of the research were explained and relevant data was collected by the investigator from the students.

A. Personal information of the students

- Out of 300 samples sixty one per cent of the students belong to the age group of 20-22 years and (39 percent) belong to age group of 23-25.
- Fifty four per cent of the students were studying PG final year and remaining (46 percent) were UG final year.
- Community is a fundamental and unique institution in Indian society. (59 per cent) of the students were belong to backward caste and minimum 10 percent were from other caste.

- Fifty four per cent of the students are living in urban area with and 46 per cent are from rural area.
- It was interesting to observe that 66 per cent of the students were Hindus, 21 percent were Christians and remaining 13 per cent of the students belongs to Muslims.
- Majority (78 per cent) of the students were belong to nuclear type of family and remaining (22 per cent) were joint type of family.
- Seventy per cent of the students were belong to small size of family with and remaining 30 per cent were from large size of family.
- Thirty per cent of the students family monthly income were range between 20,000 to 25,000 and also above 25,000, followed by 25 per cent (10,000 to 19,000) and 15 per cent (1,000 to 9,000) respectively.
- Thirty four per cent of their family income source was business and minimum (19 per cent) source of family income from government.

B. Infrastructure facilities of the students

Cent per cent of the students resides in their own houses. In their located area 70 per cent of respondents had got Anganwadi facilities, followed by primary school 54 per cent , (50 per cent) had got high school facility (39 per cent) both play school / centres and university. 98 per cent students are having mobile facilities in their home, (97 per cent) had radio facility, (95 per cent) had television facilities, (82 per cent) newspaper facilities and remaining (39 per cent) had computer/laptop with internet connection. The data shows that important need infrastructure facilities such as government hospital, drinking water and toilet are available.

C. Health and Nutritional status of the students

Thirty nine per cent of the student's weight is between 41 to 45 kg and 12 per cent of their weight is between 35 to 40 kg. This shows that they are healthy. Thirty seven per cent of the students height range between 130 to 140 cm, 11 per cent of their height is above 161 cm. (33 per cent) of the students belong to $A^{+,}$ (6 per cent) belong to AB^{+} .

Most of the students of 97 per cent are free from asthma, followed by anaemia (90 per cent) respectively. Only 13 per cent of the students have irregular periods and 3 per cent have asthma. This shows that their health status is satisfactory.

Sixty three per cent of the students were belongs to non-vegetarian and 19 per cent fall under category of both vegetarian and ova-vegetarian.

Majority (94 per cent) of the students have consumed sweets daily, and (34 per cent) weekly intake falls under the category of fruits, baking foods and meat group and substitutes followed by (3 per cent) seldom intake of milk and dairy products, deep fat fried foods and beverages.

D. PRE AND POST ASSESSMENT OF AWARENESS/KNOWLEDGE/ ATTITUDE ON BREASTFEEDING INFORMATION/ TECHNIQUES

Eighty per cent of the students indicated that they are aware of breastfeeding. 90 per cent of the students received information on breastfeeding through electronic media such as radio and T.V, followed by print media (82 per cent) and family members (58 per cent) respectively.

Before Basic Knowledge on Breastfeeding practices 7 factors with Eigen values greater than one were retained. These 7 factors could explain about 71% of the variations in the 19 variables. When all the 300 respondents were combined together in analyzing the reasons for possessing after breast feeding practices, 7 factors were extracted explaining about 71% of variations in the 19 variables.

After Basic Knowledge on Breastfeeding practices 7 factors with eigen values exceeding one were retained for the analysis. These 6 factors could explain 79% of the variations in the 19 variables related to reasons for possessing before breast feeding practices.

Before Awareness on New born feeding 7 factors with eigen values exceeding one were retained for the analysis. These 5 factors could explain 73% of the variations in the 12 variables related to reasons for possessing before Awareness on new born feeding breast feeding practices.

After Awareness on New born feeding breastfeeding 4 factors with eigen values greater than one were retained. These 5 factors could explain about 75% of the variations in the 12 variables. When all the 300 respondents were combined together in analyzing the reasons for possessing after Awareness on new born feeding breast feeding practices, 5 factors were extracted explaining about 75% of variations in the 12 variables.

Before attitude on breastfeeding by the college students breastfeeding practices 7 factors with eigen values greater than one were retained. These 7 factors could explain about 76% of the variations in the 21 variables. When all the 300 respondents were combined together in analyzing the attitude on breastfeeding by

the college students breastfeeding practices, 7 factors were extracted explaining about 76% of variations in the 21 variables.

After attitude on breastfeeding by the college students breastfeeding practices 7 factors with eigen values exceeding one were retained for the analysis. These 6 factors could explain 80% of the variations in the 21 variables related to attitude on breastfeeding by the college students breastfeeding practices.

Before indicators of successful breastfeeding practices 6 factors with eigen values exceeding one were retained for the analysis. These 6 factors could explain 73% of the variations in the 20 variables related to reasons for possessing before indicators of successful breastfeeding practices.

After indicators of successful breastfeeding practices 5 factors with eigen values greater than one were retained. These 5 factors could explain about 70% of the variations in the 20 variables. When all the 300 respondents were combined together in analyzing the reasons for possessing after indicators of successful breastfeeding practices, 5 factors were extracted explaining about 70% of variations in the 20 variables.

Before Advantages of breastfeeding for baby and mother seven factors with eigen values exceeding one were retained for the analysis. These 7 factors could explain 73% of the variations in the 7 variables related to reasons for possessing before Awareness on new born feeding breast feeding practices.

After Advantages of breastfeeding for baby and mother 5 factors with eigen values greater than one were retained. These 5 factors could explain about 92% of the variations in the 5 variables. When all the 300 respondents were combined together in analyzing the reasons for possessing after Advantages of breastfeeding for baby and mother breastfeeding practices, 5 factors were extracted explaining about 92% of variations in the 5 variables.

It makes evident that the attitude of before and after Awareness on government policy and programmes to promote the breastfeeding techniques was significantly associated with the variables of National Maternity Benefit Scheme (NMBS), Rajiv Gandhi Scheme for empowerment of adolescent girls (RGSEAG) – SABLA, Breastfeeding Promotion Network of India(BPNI), World Alliance for Breastfeeding Action (WABA), Baby friendly hospital, Ayush in infant feeding, Integrated Child Development Services Scheme, World Breastfeeding Week was first celebrated in 1992, World Breastfeeding Week (WBW) celebrating every 1-7 August, 2013, World Breastfeeding Week (WBW) theme is 'Breastfeeding Support: Closed to Mothers, since the calculated χ^2 is more than the critical values. Hence, the null hypothesis is rejected and it is statistically significant.

It makes evident that the attitude of before and after Suggestion for successful breastfeeding was significantly associated with the variables of Breast Feeding Education and Timely Counselling should be given to all the mother, Training should be imparted by health care staff, Compulsory breastfeeding must be given to infant for first six months, Encourage breastfeeding on demand, Don't give artificial nipples or pacifiers to breastfeeding infants, Provide milk expression machine at affordable cost, Keep mothers and infants together and Breastfeeding techniques is necessary to address youth at colleges to spread, since the calculated χ^2 is more than the critical values. Hence, the null hypothesis is rejected and it is statistically significant.

CONCLUSION

Researcher indicated that most of the students were not aware of Breastfeeding techniques but after conducting the Nutrition Education Programme the knowledge level of the students increases effectively. The investigator included that breastfeeding is one of the most important determinants of child survival, birth spacing, and prevention of childhood infections. The researcher also concluded that the advantages and duration of breastfeeding needs to be provided for the community as a whole, practices such as discarding the colostrums and early/late weaning should be discouraged and community-based health education programs is needed. Enthusiastic support and involvement in the promotion and practice of breast-feeding is essential to the achievement of optimal infant and child health, growth and development.

RECOMMENDATIONS

RECOMMENDATION

As a saying goes “students are the pillar of the nation and mothers are the maker of a good and sound nation” it is high time to pay attention in building the right student and mother for achieving the right path to success. The students in particular should be taught more on handling the real life situation that lies ahead of them instead of only the theoretical knowledge that ends up in the classroom. Students in particular should be given knowledge on the benefits of breastfeeding, how to breastfeed a new born child and how important is breastfeeding to both mother and the child. Specialist should be called in from time to time to share their expertise on breastfeeding so that the students can have a clear and sound knowledge on breastfeeding. The administration of the concerned College or University should pay utmost attention to encourage students to gain knowledge relating to their health in a wider context.

Parents should know that breast milk is the only natural food for the baby. They should be aware that it protects the baby from infection and diseases and also provides health benefits to both mother and the baby. They should be reminded that it comes for free, saves money, comes at the right temperature and also a builds a strong emotional bond between mother and the baby. Breastfeeding also gives the mother a great sense of achievement. Parents should be taught that certain health related issues arises out of not breastfeeding the baby.

Government and Educational Institution are considered to be the driving force in disseminating the right knowledge to the mankind for its beautiful and meaningful existence. They should play a pivotal role in giving the best knowledge to its people. The government should time to time revise their schemes and programme relating to health of the people of all ages. Special attention should be given to the womenfolk on issues relating to their health which includes breastfeeding awareness campaign, organising breastfeeding consultation groups to newly giving birth couples, issuing kits and equipments for newly born babies. The government should pay utmost attention in the accessibility to the health clinics, equipped with the latest equipments during the course of the maternity as rural population occupies maximum groups inaccessible to such facilities. The issues pertaining to the health of the baby and the mother should be brought up in a top level discussion to attain a healthy and a prosperous nation.

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APPENDICES

APPENDIX- I

An Interview Schedule to elicit Knowledge and Attitude on Breastfeeding Techniques among College Students

I. Personal Information of the students

Date:

1. Name of the interviewee:
2. Address: _____

   _____

   Phone/Mobile: _____

   Email id: _____
3. Place of Residence: Rural Urban
4. Religion: Hindu ☐ Muslim ☐ Christian ☐ Others ☐
5. Community:

   Scheduled Caste (SC) ☐ Schedule Tribe (ST) ☐ Backward Caste (BC) ☐

   Other Caste (OC) ☐
6. Age in years: 20-22 ☐ 23-25 ☐ 26 above ☐
7. Educational Qualification: Under Graduate ☐ Post Graduate ☐
8. Subject/Year: _____
9. Family type: Nuclear family ☐ Joint family ☐
10. Size of the family: Small(4 members) ☐ Large (More than 4 members) ☐ .
11. Monthly income of the family (in □):

    1000-9000 ☐ 10,000-19,000 ☐ 20,000-25000 ☐ Above25000 ☐
12. Source of income of the Family:

Agriculture ☐ Business ☐ Private Sector ☐ Government ☐

II. Infrastructure Facilities (in your locality)

Aspects	✓ **(Tick)**
Housing	
Own House	
Rented House	
Educational facilities	
Play school/centres	
Anganwadi	
Primary School	
High School	
University	
Communication Facilities(at home)	
Mobile	
Newspaper	
Radio	
Television	
Computer/laptop with internet connection	
Drinking water facilities	
Tape (soft)water from River	
Hard/Pore well	
Health	
Primary Health Centre	
Government Hospital	
Private Hospital	
Clinic	
Drainage	
Open	
Underground	
No drainage	
Toilet	
Public toilet	
Common toilet	
Separate/own toilet	

III. Health and Nutritional status of the students

1. Your weight:
2. Your height:
3. Blood group:
4. How your maintain your health
   a) Yoga: ☐
   b) Meditation: ☐
   c) Going to fitness centre: ☐
   d) Regular walking and exercise: ☐
   e) Others specify: ☐

IV. Health problems of the students

Health Problems	Yes	No
Irregular periods		
Severe headache		
Dizziness		
Anaemia		
Asthma		
Allergy		

V. Food Pattern of the Student

1. Food habit of the students
   a. Vegetarian ☐
   b. Non-Vegetarian ☐
   c. Ova Vegetarian ☐
2. Food intake patterns of the students

Food items	**Frequency**		
	Daily	**Weekly**	**Seldom**
Milk and dairy products			
Vegetables			
Fruits			
Deep fat fried foods			
Baking Foods			
Sweets			
Beverages			
Meat group and substitutes:			
Junk/ fast foods			

VI. Awareness on Breastfeeding

(1-NO, 2- YES)

Particulars	**Yes**	**No**
Have you ever seen anyone breastfeed their baby		
Awareness on Breastfeeding		
Source of information		
Family members		
Print media		
Electronic media (Radio, TV)		
College/NSS/CSS Camp		
Celebration of World Breast Feeding day		
Attended the training/educational experience on breastfeeding		
Clinical experience with breastfeeding		
Conducted breastfeeding research		
Attended lifestyle nutrition course		
Breastfeeding taught in other nutrition courses		
Attending breastfeeding seminars/conference/workshop		

VII. Basic Knowledge on Breastfeeding practices

(5- Strongly Agree, 4-Agree, 3- Strongly Disagree, 2- Disagree, 1- Undecided)

Breastfeeding Practices	Strongly Agree	Agree	Strongly Disagree	Disagree	Undecided
Colostrum is the breast milk that produce in the first few days after delivery					
Colostrums is thick and yellowish and clear in colour					
Breastfeeding should be initiated immediately after birth regardless of the type of delivery (normal or caesarian) & place of birth (home or hospital)					
Breastfeeding is the natural continuation of feeding from umbilical cord ,when the baby was inside the mother's uterus					
Mother's milk is the first food for the baby					
Underweight baby must be breastfeed every 11/2 hour					
Breastfeeding prevents childhood obesity					
Foremilk is the milk that is produced early in a feed					
Hindmilk is the milk that is produced later in a feed					
Engorgement of the breast occurs due to					
Baby is not feeding					
Infrequent feeding					
Feeding of artificial milk					
Prevent of engorgement of breast by					
Frequently empting and breastfeeding					
Massage may reduce breast engorgement					
Not feeding in the night					
Stop breast feeding					
Care of the sore nipple is by					
Washing the breast with the plain water and keep it dry					
Washing the breast with soap and water					
Proper techniques of breastfeeding					

VIII. Awareness on Newborn Feeding

Aspects	SA	A	SDA	DA	UD
A normal full term infant is born with instinctive reflex ability to breastfeed effectively					
Newborns can instinctively find the nipple without help and attach correctly to the breast					
A newborn's heart rate is stabilized by skin-to-skin contact					
Separation of a newborn from the mother at birth can cause harmful stress to the baby					
Mothers breastfeed less today because of technological advances					
Infant formula is just as good as breast milk					
Mothers with tuberculosis or HIV infection can breastfed babies					
Procedure taken by the mother while breastfeeding					
Should be clear knowledge on breastfeeding					
Should be keeping the breast clean					
Colostrum should be given to the baby					
Mother should take medicine for breastfeeding problems according to doctor advice					
Most babies do not need complementary foods before six months of age					

IX. Attitude on Breastfeeding by the college students

Aspects	SA	A	SD	DA	UD
The mother can breastfeed successfully, regardless of size of her breast					
The quantity of milk produced by the mother does not depend on the size of her breast					
Breastfeeding gives satisfaction to the mother					
Breastfeeding is painful					
It is acceptable that the mother breastfeeds in front of family & friends					
Breastfeeding affects the beauty of the mother					
Breastfeeding helps in birth spacing					
Taboos and beliefs of the society					
Lactating mothers should not use perfumes and flowers while breastfeeding					
The mother should not breastfeed when the baby suffers from diarrhea					
Exclusive Breastfeeding makes mother to be weak					
Commercial formula feeds are necessary within 6 months					
Others must not see the mother and baby while breastfeeding					
If baby is teething should stop breastfeeding completely					
If a mother has mastitis should stop breastfeeding completely					
Mothers who have small breast do not produce enough milk to feed their baby					
Breastfeeding in public is against the law					
Food pattern for Lactating Mother					
High calorie diet must be taken by all mothers at the time of lactation					
Spicy foods should not be taken by all mothers at the time of lactation					
Breastfeeding mother should not take tobacco and alcohol					
Mother can breastfeed & eat different foods					
Healthy food must be taken by the mothers for sufficient milk secretion					

X. Indicators of successful breastfeeding

Procedure	**S A**	**A**	**SD**	**DA**	**UD**
Holding the baby while breastfeeding					
Baby's body close to mothers					
Baby face facing the mother breast					
Baby's nose opposite to the nipple					
Baby chin touching the breast and nose close to breast					
Baby's stays attached to breast					
Mother should keep secure and confident hold					
Face to face attention from mother					
Correct attachment					
Mouth wide open					
Chin touching the breast and nose close to breast					
Lower lip turned outwards					
Block part of the breast not visible below the lower lip					
Large block portion of breast and nipple including milk collecting ducts are inside baby's mouth					
Indicators of successful breastfeeding in babies					
Audible and visible swallowing					
Sustained rhythmic suck					
Relaxed arms and hands					
Moist mouth					
Soaked / heavy nappies					
Indicators of successful breastfeeding in women					
Breast softening					
No compression of the nipple at the end of the feed					
Mother feels relaxed and sleepy					

XI. Advantages of breastfeeding for baby and mother

Aspects	**SA**	**A**	**SD**	**DA**	**UD**
Baby					
Good for health and perfect nutrition					
Increases the baby's intelligence					
Breastfeeding increased the immunity of the baby					
Breast milk prevent the child from the cavalai diseases					
Protects against onset of adult diseases (diabetes, high blood pressure)					
Reduces the risk of lung infection among babies					
Protected from allergy and diseases compared to formula milk					
Mother					
Helps to reduce the extra fat and body weight					
Maintains the shape of the body					
Prevent breast engorgement					
Reduces risk of ovarian cancer					
Reduces risk of breast cancer					
Frequent breastfeeding Prevents diabetic mellitus					
Breastfeeding helps the mother & baby to develop a special bonding					

XII. Awareness on government policy and programmes to promote the breastfeeding techniques

(1- NO, 2-YES)

Programmes / policies	**YES**	**NO**
National Maternity Benefit Scheme (NMBS)		
Rajiv Gandhi Scheme for empowerment of adolescent girls (RGSEAG) – SABLA		
Breastfeeding Promotion Network of India(BPNI)		
World Alliance for Breastfeeding Action (WABA)		
Baby friendly hospital		
Ayush in infant feeding		
Integrated Child Development Services Scheme		
World Breastfeeding Week was first celebrated in 1992.		
World Breastfeeding Week (WBW) celebrating every 1-7 August		
2013 World Breastfeeding Week (WBW) theme is **'Breastfeeding Support: Closed To Mothers**		

XIII. Suggestion for successful breastfeeding

(1-NO, 2-YES)

Details	YES	NO
Breast Feeding Education and Timely Counseling Should be given to all the mother		
Training should be imparted by health care staff		
Compulsory breastfeeding must be given to infant for first six months		
Encourage breastfeeding on demand		
Don't give artificial nipples or pacifiers to breastfeeding infants		
Provide milk expression machine at affordable cost		
Keep mothers and infants together		
Breastfeeding techniques is necessary to address youth at colleges to spread		

ANNEXURE- II

INSTITUTIONAL HUMAN ETHICS COMMITTEE

Avinashilingam
Institute for Home Science and Higher Education for Women
University
(Estd. u/s 3 of UGC Act 1956)

2nd January 2014

To
Dr. S. Rajalakshmi,
Assistant Professor,
Department of Home Science Extension Education,
Avinashilingam Institute for Home Science and
Higher Education for Women,
Coimbatore – 641 043.

Dear Madam,

Ref: Your proposal AUW.IHEC. 2013:30 entitled "Imparting breast feeding techniques among women" submitted for approval of the IHEC on 6th December 2013

The Institutional Human Ethics Committee of our University hereby grants approval to your research proposal AUW.IHEC. 2013:30 entitled "Imparting breast feeding techniques among women" submitted by you. The Approval number for the same is AUW/IHEC-13-14/XMT-04.

We wish you all the best in your research endeavours.

Regards,

Dr.P.R.Padma
Member Secretary

Institutional Human Ethics Committee