BARRIERS AND FACILITATORS PROMOTING IYCF PRACTICES AMONG WORKING MOTHERS IN URBAN VADODARA – A PILOT STUDY

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RIDDHI PATHAK
B.Sc. (FCSC) PHN

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BY

RIDDHI PATHAK

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CERTIFICATE

This is to certify that the research work presented in this thesis has been carried out independently by **Ms. Riddhi Pathak** under the guidance of Dr. Shruti Kantawala in pursuit of a Masters Degree in Foods and Nutrition (Public Health Nutrition) and this is her original work.

Dr. Shruti Kantawala
(Research Guide)

Prof. Meenakshi Mehan
Head, Department of Foods and Nutrition
Faculty of Family and Community Sciences
The Maharaja Sayajirao University of Baroda
Vadodara - 390002

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CONTENT

LIST OF FIGURES

LIST OF TABLES

ACRONYMS

ANC	-	Antenatal Care
BPNI	-	Breastfeeding Promotion Network of India
CF	-	Complementary Food
CFI	-	Child Feeding Index
CNNS	-	Comprehensive National Nutrition Survey
DHS	-	District Health Survey
EBF	-	Exclusive Breastfeeding
EIBF	-	Early Initiation of Breastfeeding
GNR	-	Global Nutrition Report
GOI	-	Government of India
IBFAN	-	International Baby Food Action Network
ILO	-	International Labour Organization
IYCF	-	Infant and Young Child Feeding
MAD	-	Minimum Acceptable Diet
MBA	-	Maternity Benefit Act
MDD	-	Minimum Diet Diversity
MICS	-	Multi-Indicator Cluster Survey
MMF	-	Minimum Meal Frequency
ML	-	Maternity Leave
NFHS	-	National Family Health Survey
PNC	-	Postnatal Care

RSOC	-	Rapid Survey on Children
SES	-	Socioeconomic Status
SIDS	-	Sudden Infant Death Syndrome
TIBF	-	Timely Initiation of Breastfeeding
UNICEF	-	United Nations Children's Fund
UN	-	United Nation
WHA	-	World Health Assembly
WHO	-	World Health Organization

ABSTRACT

Introduction: Childhood malnutrition continues to be a major public health problem in the world. By 2020, 144 million children under five years old are stunted, 47 million are wasted, and 38 million are overweight. The burden of childhood malnutrition is greatest in LMIC, especially in Africa and Asia. While the prevalence of childhood stunting and wasting is slowly declining, the prevalence of childhood overweight and obesity increases. This progress is inadequate to reach the target of the World Health Assembly by 2025 and the Sustainable Development Goals by 2030. Adherence to the WHO guidelines for infant and young child feeding (IYCF) practice in low- and middle-income countries (LMIC) is unsatisfactory. Optimal IYCF practices are essential for a child's growth and development. A child's first two years of life are considered a "critical window of opportunity" for the prevention of growth faltering. Amongst, all proven preventive health and nutrition interventions, IYCF has the single greatest potential impact on child survival. Women's empowerment has been noticed as a key factor mediating intra-household resources to achieve optimal IYCF practice. Women's employment improves household income and can increase resources available for food expenditure. However, employed women face time constraints that may influence caregiving and infant and young child feeding (IYCF) practices. As economic and social trends shift to include more women in the labor force in low- and middle-income countries (LMICs), many developing countries, including India, are now alive to the needs of working women. To support breastfeeding and early childhood development, new mothers need time away from work. The International Labor Organization's (ILO) Convention C183 gives women the right to 14 weeks of paid maternity leave along with work breaks and appropriate nursing space upon their return to work. The Maternity Benefits Act, 1961 (the latest amendment in 2017) is one of the welfare programs for working women in India. A current understanding of the association between maternal employment and IYCF is needed. Thus, the current study planned to seek the barriers and facilitators among **working mothers** of infants regarding Infant and Young Children Practices (0-12 months) and awareness regarding MBA among the study population.

Methods: A pilot study was conducted among working mothers of infants (0 – 12 months) in urban Vadodara. The entire study was divided into two phases: Phase I**:** Formative Research to assess the socioeconomic status, IYCF practices, and awareness about Maternity Benefit Act (MBA) among the working mothers. By using

the snowball sampling technique, a total of 256 working mothers of infants (0 – 12 months) from the organized and unorganized sector were interviewed using a semi-structured questionnaire with telephonic and face to face interview. The data were collected on socioeconomic status, obstetric history, and IYCF practices – Early initiation of breastfeeding, Exclusive breastfeeding, Complementary feeding, and Maternity Benefit Act (MBA). Phase II: Development of Brochure for creating awareness about IYCF and Maternity Benefit Act.

Results: A total of 256 working mothers were enrolled in the study, of which, 64.5% of mothers were from the organized sector and 35.5% from the unorganized sector. The majority of working mothers of the organized sector (38.2%) belonging to the Upper Middle class and mothers from the unorganized sector (61.5%) were from the Upper Lower class according to Kuppuswami's classification, and the difference was statistically significant. As many as 40% of mothers from the organized sector were professionally working, and 48.3% from the unorganized sector were Skilled Workers and Shop & Market Sales Workers. Almost 98% of children irrespective of the sector were Ever Breastfed. Unfortunately, only 43% of children had initiated breastfeeding within 1 hour, of which 36.4% were from the organized and 55% were from the unorganized sector. The prevalence of early initiation of breastfeeding within one hour was more observed in women who had normal delivery (62.5%) than in cesarean delivery (24%). A significant difference was seen for early initiation of breastfeeding and Prelacteal feeding practices between the two-sector based on the place of delivery. Among 256 children, 44% of children were exclusively breastfed for the first two days after birth which was significantly more prevalent in the unorganized (59.3%) than the organized sector (35.2%). A significantly greater number of children from the organized sector (35.2%) than the unorganized sector (18%) were bottle-fed. Sector-wise and age group wise significant difference was found for bottle feeding practice as more children from the organized sector (35.2%) compared to unorganized (18%) and from age group, 6-12 months (41%) compared to age group 0-6 months (15.3%) were bottle-fed. Sector-wise significantly more children from the unorganized sector (40%) had exclusively breastfed till 6 months or more than 6 months of age which was less observed in the organized sector 31%. Nearly half of the children under 6 months of age were exclusively breastfed, of which more than half were from the unorganized and 42% were from the organized sectors. 44.4% male and 53% female

children were exclusively breastfed under 6 months. 118 children who belonged to under 6 months of age, among them 48.3% were fed exclusively and 48.3% were on mixed feeding. Compared to the organized sector (68.1%) more children from the unorganized sector (82.4%) had continued breastfeeding for 12 months. The prevalence of mixed feeding was 42% of which more children were from the organized (47.3%) than the unorganized sector (32%). Mixed milk feeding under six months was more observed in the organized sector (54.5%) compared to the unorganized sector (37%).

Most of the children from age group 6-12 months (97.1%) were introduced to complementary feeding. However, 6% of children from age group 0-6 months were also introduced to complementary foods. 27 children were found who received complementary feeding before or after recommended age, among them, nearly 37% (slightly more than one third) of the mothers had mentioned their working status as one of the reasons for the early introduction of complementary feeding followed by 30% had stated breast milk was insufficient. 67.4% of children had met MMF of which 73% were from the organized and 58% from the unorganized sector. With regard to MDD and MAD with 8 food groups (breast milk was one of the food groups), 35% (organized:34.1%, unorganized:36%) and 27% (organized:26.1%, unorganized:28%) had met MDD and MAD respectively. The prevalence of consumption of unhealthy or processed food was more found in the unorganized sector (54%) as compared to the organized sector (36.4%). A significant difference was seen for awareness about MBA among two-sector as maximum working mother were not aware of MBA, only 29% working mother which was from the organized sector were aware.

Identified barriers & facilitators for early initiation of breastfeeding were caste, higher education of mothers, Occupation of mother, type of delivery, support for early initiation, Mother facing difficulty were the Barriers found for early initiation of breastfeeding whereas monthly income, education of both father & mother, place of delivery, counselling and mother have prior experience facilitates early initiation of breastfeeding. Normal delivery, counselling during ANC visit, delivery placed at government hospital, mother having prior experience and early initiation of breastfeeding within 1 hour facilitated the mother to exclusive breastfed their children.

Conclusion:

Industrialization and Globalization has significantly contributed in improving the status of women from housewife to a career woman. Maternity Benefit Act is a great initiative taken by the Government for every woman to work even after childbirth. Concerning IYCF practices, followed by the working mothers, lack of sustained support and motivation of mothers, particularly working mothers (especially in the organized sector) are major contributors to poor IYCF practices. Awareness regarding MBA was also poor among the working mothers. Thus, emphasizing a need for IYCF education program during ANC visits with the mothers especially primi mothers. The interactions between health-care providers and the nursing mothers should be more frequent to ensure sustained correct infant and child care practices. Lactation Management Counseling should be strengthened during Ante-natal and Post-natal visits to promote IYCF practices.

INTRODUCTION

Good nutrition is an important basis of health and well-being, especially for children as their bodies need to grow, develop and reach their physical and mental potential. As per the Convention on the Right of the Child , every infant and child has the right to good nutrition. (Dadzie, 2019)

Infant and Young Child nutrition has been engaging the attention of scientists and planners since long for the very simple reason that growth rate in the life of human beings is maximum during the first year of life and infant feeding practices comprising of both the breastfeeding as well as complementary feeding have major role in determining the nutritional status of the child. (National Guidelines on Infant and Young Child Feeding, Food and Nutrition Board, GOI, 2004). WHO and UNICEF jointly recommended major IYCF practices which are:

1. Early initiation of breastfeeding within 1 hour of birth;
2. Exclusive breastfeeding for the first 6 months of life; and
3. Introduction of nutritionally-adequate and safe complementary (solid) foods at 6 months together with continued breastfeeding up to 2 years of age or beyond.
   (Source: https://www.who.int/en/news-room/fact-sheets/detail/infant-and-young-child-feeding)

WHO and UNICEF jointly developed the Global Strategy for the Infant and Young Child Feeding to revitalize world attention to the impact that feeding practices have on the nutritional status, growth and development, health, and thus very survival of infants and young children. The Global Strategy is based on the evidence of nutrition's significance in the early months and years of life, and of the crucial role that appropriate feeding practices play in achieving optimal health outcomes. Lack of breastfeeding and especially exclusive breastfeeding during the first half year of life are important risk factor for infant and childhood morbidity and mortality that are only compounded by inappropriate complementary feeding. The lifelong impact includes poor school performance, reduced productivity, and impaired intellectual and social development. (World Health Organization, 2003)

Early nutrition deficits are also linked to long-term impairment in growth and health. Malnutrition during the first 2 years of life causes stunting, leading to the adult being several centimetres shorter than his or her potential height. There is evidence that

adult who were malnourished in early childhood have impaired intellectual performance. They may also have reduced capacity for physical work. If women were malnourished as children, their reproductive capacity is affected, their infants may have lower birth weight, and they have more complicated deliveries.(World Health Organization, 2009)

Globally, among children under 5 year of age, 149 million (21.9%) are stunted, 49.5 million (7.3%) are wasted, 40.1 million are overweight. Notably, Asia is home to more than half of the world's stunted children (81.7 million, 54.8%). (GNR, 2020)

Globally, Infant and young child feeding practices remain poor. Fewer than half (44.4%) of all new-borns are put to the breast within the first hour of birth (known as early initiation), while only 42.2% of infants under 6 months of age are exclusively breasted. Around two-thirds (69.7%) of children aged 12–15 months and less than half (43.9%) of children aged 20–23 months are breastfed. When it comes to solid food, only 69.5% of infants aged 6–8 months eat any solid food at all. Of children aged 6–23 months, only roughly half (53.1%) get the recommended minimum number of meals, with fewer than one in three children (29.3%) receiving the minimum diet diversity. This means that fewer than one in five (18.9%) eat a minimum acceptable diet. (GNR, 2020). This has been depicted in Figure 1.1

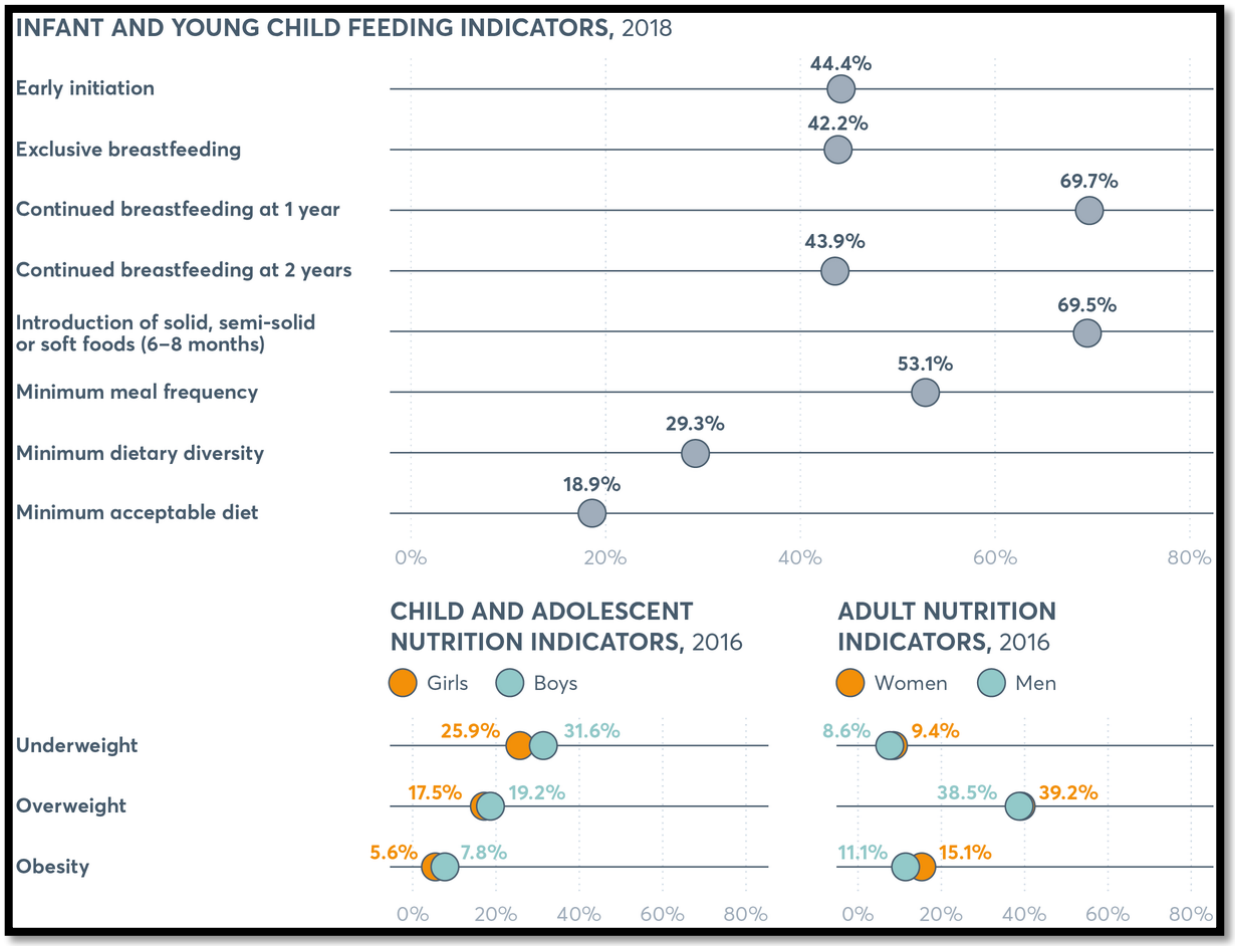
Over one-third of child deaths worldwide occur due to undernutrition, with one-half of the child malnutrition deaths worldwide occurring in India, making childhood malnutrition an ongoing public health priority. In India, the National Family Health Survey in 2015-16 found that 29% of urban children under 5 years were underweight and 31% were stunted, with children living in informal settlements or slums had higher rates of malnutrition than those in other urban areas. (Athavale et al., 2020).

According to the Lancet review of Child and Maternal Malnutrition in India, of the 1.04 million under-5 deaths in India, 68.5% can be attributed to malnutrition, with the prevalence of stunting and wasting at 39% and 33% respectively. (Athavale et al., 2020)

1) Early initiation of breastfeeding

The World Health Organization (WHO) recommends early initiation of breastfeeding (EIBF) as it stimulates breast milk production, fosters bonding between the mother and new-born, reduces neonatal mortality, and increases the duration of breastfeeding. (CNNS, 2016-18)

Figure: 1.1 Global prevalence of infant and young child feeding indicators, child and adolescent and adult nutrition indicator



(Source: Global Nutrition Report, 2020)

Provision of mother's breast milk to infants within one hour of birth is referred to as "Early initiation of breastfeeding" and ensures that the infant receives the colostrum, or first milk, which is rich in protective factors. Colostrum is the special milk that is secreted in the first 2–3 days after delivery. It is produced in small amounts, about 40–50 ml on the first day but is sufficient for the infant at that time. Colostrum is rich in white cells and antibodies, especially sIgA, and it contains a larger

percentage of protein, minerals and fat soluble vitamins (A, E and K) than later milk. Vitamin A is important for protection of the eye and for the integrity of epithelial surfaces, and often makes the colostrum yellowish in colour. Colostrum provides important immune protection to an infant when he or she is first exposed to the micro-organisms in the environment, and epidermal growth factor helps to prepare the lining of the gut to receive the nutrients in milk. It is important that infants receive colostrum, and not other feeds, at this time. Other feeds given before breastfeeding is established are called prelacteal feeds. (World Health Organization, 2009).

Early initiation of breastfeeding lowers the mother's risk for excess post-partum bleeding and anaemia. Exclusive breastfeeding boosts mother's immune system, Delays next pregnancy and reduces the insulin needs of diabetic mothers. Breastfeeding can help protect a mother from breast and ovarian cancers and osteoporosis. (Food and Nutrition Board, GOI, 2004).

In South Asia, merely 41 % of new-borns are breastfed within 1 h of birth. Several South Asian countries have some of the worst early initiation of breastfeeding practices in the world; the rates in Pakistan, India, Bangladesh and Nepal are only 29, 41, 47 and 45 % respectively. (Sharma & Byrne, 2016). Although India has made some progress in increasing EIBF rates in the past decade, evidence from regional areas indicated that the proportion of mothers who put their babies to the breast within the first hour of birth remains below the expected level, ranging from 36% to 42%.(Senanayake et al., 2019).

At country level, between NFHS-3 (2005-06) and NFHS-4 (2015-16) there has been an increase in early initiation of breastfeeding from 23.4 to 41.6 % (1.7% increase per year). State- wise analysis reveals that there has been improvement from NFHS-3 all over India, except in Uttarakhand, Himachal Pradesh, and Tamil Nadu. The NFHS-4 also shows that 21% new-borns receive prelacteal feeds. While around 79% mothers had institutional delivery only 41.6 % succeeded in initiating breastfeeding within an hour.

At state level, between NFHS-4 and NFHS-5 (2019-20) there has been decrease in early initiation of breastfeeding from 49.9 to 37.8 %.

2) Exclusive breastfeeding till 6 month of age

Modern science and technology has not been able to produce a better food for young infants than mother's milk. Breastfeeding is the best way to satisfy the nutritional and psychological needs of the baby. Mother's milk is designed for easy digestion and absorbed by the baby. Same is the case with regard to fat and calcium in human milk which are also easily absorbable. The milk sugar – lactose in mother's milk provides ready energy. In addition, a part of it is converted into lactic acid in the intestines which destroys harmful bacteria present there and helps in absorption of calcium and other minerals. (Food and Nutrition Board, GOI, 2004).

Breast milk contains all the nutrients an infant needs in the first six months of life including fat, carbohydrates, proteins, vitamins, minerals and water and exclusive breastfeeding during this period is sufficient and beneficial for health, growth and development. Exclusive breastfeeding is considered a key intervention for the reduction of early infant morbidity and mortality and the WHO recommends exclusive breastfeeding for the first six months of life. As breast milk is significant source of energy and key nutrients, the WHO recommends continued breastfeeding beyond the six-month period, along with provision of nutritionally adequate and safe complementary foods. (CNNS, 2016-18).

Exclusive breastfeeding for the first 6 months of life meets the energy and nutrient needs of the vast majority of infants. No other foods or fluids are necessary. Several studies have shown that healthy infants do not need additional water during the first 6 months if they are exclusively breastfed, even in a hot climate. Breast milk itself is 88% water, and is enough to satisfy a baby's thirst. (World Health Organization, 2009).

Globally, less than 40% of infants under 6 months of age are exclusively breastfed. Developing countries report an exclusive breastfeeding prevalence of 36% among infants younger than 6 months. However, there is a much lower prevalence of exclusive breastfeeding among professional working mothers in developing

countries. A study in Nigeria found the exclusive breast- feeding rate among female doctors to be 11.1%. A recent study in Ghana found the prevalence of exclusive breastfeeding among city-dwelling working mothers to be as low as 10.3%.(Abekah-Nkrumah et al., 2020). Between 2005 and 2016, past national studies from India reported an improvement in EBF prevalence by 9.0% (from 46.0 to 55.0%). However, national data often mask significant variations across the regions. For example, findings from discrete sub-national studies have shown that EBF varied widely in India, ranging from 36.0% in Meghalaya to 77.0% in Chhattisgarh.(Ogbo et al., 2019).

At country level, data from NFHS-4 indicate that during 0-6 months, 54.9% women exclusively breastfeed their infants (improvement of 1% per year since NFHS-3). Most of the states except Arunachal Pradesh, West Bengal, Kerala, Karnataka, Chhattisgarh, and Uttar Pradesh showed an improvement. Median duration of exclusive breastfeeding increased from 2 months to 2.9 months.

At state level, between NFHS-4 and NFHS-5 there has been increase in exclusive breastfeeding from 55.8% to 65%.

3) Complementary feeding

To meet the growing nutritional needs of the baby, it is recommended to initiate complementary feeding from 6 months of age while continuing breastfeeding. After 6 months of age, breast milk alone is not enough to meet the nutritional demands of the growing infant. Therefore, timely and nutrient-dense complementary foods from 6 months of age are critical for optimum growth and development of the infant and young child. From the age of 6 months, an infant's need for energy and nutrients starts to exceed what is provided by breast milk, and complementary feeding becomes necessary to fill the energy and nutrient gap. If complementary foods are not introduced at this age or if they are given inappropriately, an infant's growth may falter. Even after complementary foods have been introduced, breastfeeding remains a critical source of nutrients for the young infant and child. It provides about one half of an infant's energy needs up to the age of one year, and up to one third during the second year of life. Breast milk continues to supply higher quality nutrients than complementary foods, and also protective factors. It is therefore

recommended that breastfeeding on demand continues with adequate complementary feeding up to 2 years or beyond (World Health Organization, 2009).

Infants are particularly vulnerable during the transition period when complementary feeding begins. Ensuring that their nutritional needs are met thus requires that complementary foods be:

- **Timely** – meaning that they are introduced when the need for energy and nutrients exceeds what can be provided through exclusive and frequent breastfeeding.
- **Adequate** – meaning that they provide sufficient energy, protein and micronutrients to meet a growing child's nutritional needs.
- **Safe –** meaning that they are hygienically stored and prepared, and fed with clean hands using clean utensils and not bottles and teats.
- **Properly fed** – meaning that they are given consistent with a child's signals of appetite and satiety, and that meal frequency and feeding method actively encouraging the child, even during illness, to consume sufficient food using fingers, spoon or self-feeding are suitable for age.

Dietary diversity is a proxy for nutrient adequacy of the diet. Insufficient dietary diversity and meal frequency play a key role in nutritional deficiencies among infants and young children, leading to increased risks of childhood morbidity and mortality. The three core indicators of minimum dietary diversity, minimum meal frequency, and minimum acceptable diet are recommended by the WHO to assess the quality of complementary feeding practices for children aged 6 to 23 months & is given in Table 1.1

Globally, 5.9 million under-five children's deaths occur annually; of which 50% deaths were caused directly or indirectly by malnutrition. Inappropriate complementary feeding practices are considered to be the leading cause of malnutrition. In Ethiopia, complementary food is not introduced in timely fashion for all children, and about 50% children received complementary food at 6-9 months and the proportion of children with minimum acceptable diet were only 4%. In Sidama (Zone in which Bensa district has been located), the proportion of mothers who initiate complementary food timely was 72.2%. However, the proportion of children who got minimum acceptable diet was only 10.9 %.(Birhanu et al., 2019).

Table 1.1: Amount of food offer to children based on age in months

AMOUNTS OF FOODS TO OFFER			
Age	**Texture**	**Frequency**	**Amount of food**
6-8 months	Start with thick porridge, well mashed foods Continue with mashed family foods	2-3 meals per day plus frequent breastfeeds Depending on the child's appetite 1-2 snacks may be offered	Start with 2-3 tablespoonful per feed increasing gradually to ½ of a 250 ml cup
9-11 months	Finely chopped or mashed foods, and foods that baby can pick up	3-4 meals plus breastfeeds Depending on the child's appetite 1-2 snacks may be offered	½ of a 250 ml cup/bowl
12-23 months	Family foods, chopped or mashed if necessary	3-4 meals plus breastfeeds Depending on the child's appetite 1-2 snacks may be offered	¾ to one 250 ml cup/bowl
If baby is not breastfed, give in addition: 1-2 cups of milk per day, and 1-2 extra meals per day			

At country level, Data from NFHS-4 indicate that, 10% of infants receive complementary feeding before 6 months, 58% infants get complementary feeds after 8 months. Between NFHS-3 and NFHS-4 there has been a 10% point decline in infants initiating complementary feeding between 6-8 months. Only 9.6% children 6-23 months (1 out of 10) were reported to have received minimum acceptable diet, i.e. children get a variety of at least 4 food groups to ensure nutrient intake e.g. fruits, vegetables, grains, pulses, oils etc. and with minimum meal frequency.

At state level, between NFHS-4 and NFHS-5 there has been decrease in children aged 6-8 months receiving solid or semi-solid food and breast milk from 49.4% to

42%. Whereas total children age 6-23 months receiving an adequate diet has been increases from 5.2% to 5.9%.

Importance of Breastfeeding

Optimal Infant and Young Child Feeding practices – especially early initiation and exclusive breastfeeding for the first six months of life – help ensure young children the best possible start to life. Breastfeeding is nature's way of nurturing the child, creating a strong bond between the mother and child. It provides development and learning opportunities to the infant, stimulating all five senses of the child – sight, smell, hearing, taste, touch. Breastfeeding fosters emotional security and affection, with a lifelong impact on psychosocial development. Special fatty acids in breast milk lead to increased intelligence quotient (IQs) and better visual acuity. A breastfed baby is likely to have an IQ of around 8 points higher than a non – breastfed baby. (Food and Nutrition Board, GOI, 2004)

Breastfeeding plays a role in decreasing mothers' risk for breast cancer and reduces the risk of non-communicable diseases, such as type 2 diabetes and prevalence of overweight / obesity. Breastfeeding also helps to increase children's IQ and promotes a strong bond between the mother and infant. Finally, breastfeeding is directly linked to the attainment of at least four of the Sustainable Development Goals (SDGs) i.e. health, nutrition, poverty and inequity reduction. According to WHO, suboptimal breastfeeding (specifically non-exclusive breastfeeding) and inadequate complementary feeding contributes to stunting, wasting and childhood overweight. (BPNI/IBFAN Asia 2018).

Exclusive breastfeeding can delay the return of fertility, and accelerate recovery of pre-pregnancy weight. Mothers who breastfeed exclusively and frequently have less than a 2% risk of becoming pregnant in the first 6 months postpartum, provided that they still have amenorrhoea. (World Health Organization, 2009).

Factor affecting IYCF practices

Established in 2000, the Millennium Development Goals raised global attention to women's employment by promoting women's participation in the labor force as a strategy for improving health and alleviating poverty in low and middle-income

countries (LMICs). Promotion of women's employment is important for gender equity, women's empowerment, and continued economic development. Women's employment can have many positive impacts on the household; for example, earned income from maternal employment may increase household food expenditures, improve financial stability, and increase investments in human capital (e.g., education). Employed women are likely to spend their earnings on nutrition-enhancing purchases and allocate their income towards their children. However, constraints on women's time imposed by employment may pose a potential challenge to caregiving and infant and young child feeding (IYCF) practices.(Oddo & Ickes, 2018).

In India, there are many barriers to optimal feeding practices at the level of the community, the work place and the health facilities. These include lack of supportive work environment, inadequate skills of health care providers in health facilities, lack of counselling during ante-natal period and later during first six months in the community for exclusive breastfeeding, pre-lacteal feeding and associated myths and misconceptions, caesarean deliveries, use of infant formula when it is not medically indicated, breastfeeding problems and perceived insufficiency of breast milk. There is enough evidence to address these barriers through policy support, comprehensive programming in the health facilities and community support structures at district and block level. (BPNI/IBFAN Asia 2018).

According to one literature the factors associated with timely or early initiation of breastfeeding are: Geographical, Socioeconomic, Individual and Health-specific. The social and economic circumstances of a woman and the household have much influence on the timing of breastfeeding initiation in the South Asian context, pertinently the education of mother, **occupation of mother**, household wealth and family size and family type.(Sharma & Byrne, 2016).

Findings of another study also showed that postnatal follow-up, **occupation of mother**, exposure to public media (like radio, television), and mother's decision-making role on family income were predictors of complementary feeding practices.(Molla et al., 2017). One article also suggests that two major factors influence exclusive breastfeeding among working mothers are the practice of

exclusive breastfeeding (knowledge and understanding of exclusive breastfeeding, and experience in exclusive breastfeeding) and **workplace factors (length of maternity leave,** closing time, absence of maternity policy in organizations, inadequate institutional support and family work-life balance). (Abekah-Nkrumah et al., 2020).

Maternal employment is associated with improved complementary feeding practices among children as indicated by diet quality and meal frequency across 50 LMICs and in several regions.(Oddo & Ickes, 2018).

Barriers and Facilitator promoting IYCF practices in INDIA

Over the last two decades, the global public health community established that working outside the home was negatively associated with breastfeeding. Studies have found that breastfeeding incidence and duration were lower among employed, working-age women. (Lauer et al., 2019). The barriers and facilitators for IYCF practices have been given in Table1.2

A study conducted in the U.S. on working mothers suggested that the proportion of employed mothers who stopped breastfeeding early than recommended was higher than ever, showing only 25% of mothers with children under the age of one who had returned to work could continue breastfeeding their children for one month or longer. The percentage of working mothers who continued breastfeeding for six months, on the other hand, fell from 96% in 1983 to 31% in 2008 in Pakistan. (Chen et al., 2019).

Table 1.2: Barriers and Facilitators for IYCF practices

Barriers	Facilitators
Illiterate/poor education level	Education
Inadequate services taken during pregnancy and lactation	Counselling during antenatal and postnatal check up
Stress	Behaviour of mother
Working mother Co-worker at workplace	**Working mother** Co-worker at workplace

Negative environment at the workplace	Supportive environment at the work place **Maternity leave (MBA)**
Negative emotional support from family member	Encouraging family member
Cultural belief	Support from health professional
Physiological difficulties	Policies

Source: (Johnston & Esposito, 2007)

Employment has a profound effect on breastfeeding. A woman entering employment is three times more likely to stop breastfeeding than her stay-at- home.(Sathe, 2016). Prior studies suggest that income earned from maternal employment is associated with the purchase of higher-quality foods whereas within LMICs, maternal employment has been associated with a lower probability of preparing foods, less time spent on childcare, and a higher probability of purchasing prepared foods.(Oddo & Ickes, 2018).

Women who return to full-time employment six to twelve weeks postpartum were more than 50% less likely to meet their breastfeeding intentions, and women who return to full-time employment less than 6 weeks postpartum were more than twice as likely to not meet their breastfeeding intentions, compared to women who do not work. (Lauer et al., 2019).
A woman's breastfeeding duration is also influenced by the existence and quality of maternity leave including its length, paid or unpaid status. (Lauer et al., 2019).

Worldwide, literature suggests that policies in favor of maternity leave are effective in increasing the practice of exclusive breastfeeding in the first six months of children's life. (Rimes et al., 2019). Prior research on maternal employment and breastfeeding is mixed: some studies report that employed women are less likely to exclusively breastfeed or breastfeed for a shorter duration of time, whereas others find a greater likelihood of longer-duration breastfeeding among infants of working mothers. Although **most countries have maternity protection** legislation, just over half meet the International Labor Organization 14-week minimum leave with greater

inadequacies in the informal work sector. Thus, hundreds of millions employed mothers experience inadequate maternity policy coverage, of whom over three-quarters live in Africa and Asia. (Oddo & Ickes, 2018)

Maternity protection

Maternity is the one which keeps the women away from work for long affecting their earning capacity and also it is related to the child's health. Therefore, it becomes mandatory to provide maternity benefit to the women employee. Maternity Benefits should aim to regulate employment of women employees in certain establishments for certain periods before and after childbirth and provides for maternity and certain other benefits. (Admane, 2020).

Maternity protection is recognized as an essential pre-requisite for women's rights and gender equality, with the right to maternity protection enshrined in International Human Rights Instruments. Lack of maternity protection and supportive enabling environment pushes women into high degrees of vulnerability. Maternity protection is a significant intervention that recognizes women's reproductive rights whether they are in the formal or in the informal sector or "non-workers". (Bala, 2017).

The primary legislation presiding over maternity welfare in India is the Maternity Benefit Act, 1961. The Maternity Benefit Act, 1961 is a pivotal legislation in India for providing maternal protection to working women in India. The most recent amendment to the law was in 2017 when crucial amendments to the Act, including increased maternity leave from 12 weeks to 26 weeks, maternity leave for adoptive mothers and the 'work-from-home' option, were confirmed by both houses of Indian Parliament and the President by March 27th, 2017. In India, The Maternity Benefit Act, 1961 extends to the whole of the Indian Union and applies to every factory, mine, plantation and circus industry including any such establishments belonging to the government but excluding all the establishments covered under the provisions of the Employees State Insurance Act, 1948. (Bala, 2017).

Key Highlight of Maternity Benefit (Amendment) Act 2017

1) Paid Maternity Leave

   Paid maternity leave stands increased to 26 weeks as against 12 weeks. Further, the Act previously allowed pregnant women to avail this maternity benefit for only 6 weeks prior to the date of expected delivery. Now this period is increased to 8 weeks before the birth of the child.

2) No increased benefit for third child

   The increased Maternity Benefit is only available for the first two children. The Amendment provides that a woman having two or more surviving children shall only be entitled to 12 weeks of Maternity Benefit of which not more than 6 shall be taken prior to the date of the expected delivery.

3) Adoption/ Surrogacy

   A woman who adopts a child below the age of 3 months, or a commissioning mother (biological mother, who uses her egg to create an embryo implanted in any other woman), will be entitled to maternity benefit for a period of 12 weeks from the date the child is handed over to the adopting mother or the commissioning mother

4) Crèche Facility

   Every establishment having 50 or more employees are required to have a mandatory crèche facility within a prescribed distance from the establishment, either separately or along with other common facilities. The woman is also to be allowed 4 visits a day to the crèche, which will include the interval for rest allowed to her.

5) Prior Intimation

   Every establishment will be required to provide the woman, at the time of her initial appointment, information about every benefit available under the Act.

The object of the Maternity Benefit Act, 1961 is to protect the dignity of motherhood by providing for the full and healthy maintenance of a woman and her child when she is not working.

With the amendment in place, India stands third along with Serbia after Norway (46 weeks), Bulgaria (46 weeks) in terms of length of fully paid maternity leave. These amendments to the existing Act were made in concurrence with the guidelines of the World Health Organization, which recommended exclusive breastfeeding for the first six months of a child's life. A report by Indian Women's Network of the

Confederation of Indian Industry, reveals that 37% of working women in India opted out of their jobs due to maternity or childcare issues.(Bala, 2017).

Maternity leave mandates have been shown to effectively increase EBF. Hence, investing in maternity protection for working women in the informal sector can be considered a mechanism of social justice that creates better conditions for women in more vulnerable sectors to exercise their choice and protect their right to breastfeed. In addition, maternity leave can protect women from economic losses and gender discrimination. Among the informally employed, maternity leave may be a mechanism to reduce structural inequities. Therefore, maternity protection contributes to the fulfilment of several sustainable development goals (ie, SDG 1, SDG 3, SDG 5, SDG 8, and SDG 10). (Vilar-compte et al., 2019).

Investing in maternity leave can exert positive impacts on women's and children's health and on the economy of the country. By protecting exclusive breastfeeding, there would be decrease in maternal and child morbidity and mortality, increase in the children's intelligence quotient (IQ) and school performance, thus indirectly contributing to alleviating poverty.(Rimes et al., 2019).

RATIONALE OF THE STUDY

Extensive studies have been done on practices regarding exclusive breast feeding (EBF) and Complimentary Feeding (CF) among mothers but there is a lack of evidence regarding EBF and CF practices followed among working mothers as well as barriers and facilitators affecting the IYCF practices among them. There is paucity of information about the knowledge about Maternity Benefit Act among working mothers of Gujarat. There is also inconsistent and scarce information from previous studies regarding the relationship between maternity leave and breastfeeding duration among working mothers of Gujarat. Thus, there is a need to assess barriers and facilitators to promote IYCF practices along with the knowledge about MBA among working mothers. The present study has thus been planned with the following broad & specific objective

BROAD OBJECTIVE

To identify the barriers and facilitators among working mothers of infants regarding Infant and Young Children Practices (0-12 months).

SPECIFIC OBJECTIVE

- To assess the IYCF practices followed by the working mothers of organised and unorganised sectors
- To identify the barriers and facilitator in optimal IYCF practices followed by working mothers
- To create awareness about benefits of breastfeeding among working mothers
- To create awareness about provision of maternity leave for improving breastfeeding practices.

REVIEW OF LITERATURE

This chapter comprises the literature review based on Infant Young Child Feeding Practices among working mother. In which prevalence of IYCF at Global and National level among working mother of children aged between 0-5 years has been included.

In 2002, the World Health Organization and UNICEF adopted the *Global Strategy for infant and young child feeding*. The strategy was developed to revitalise world attention to the impact that feeding practices have on the nutritional status, growth and development, health, and survival of infants and young children. WHO and UNICEF's global recommendations for optimal infant feeding as set out in the *Global Strategy* were: Exclusive breastfeeding for 6 months (180 days) and Nutritionally adequate and safe complementary feeding starting from the age of 6 months with continued breastfeeding up to 2 years of age or beyond.

1) TIMELY INITIATION OF BREASTFEEDING (TIBF)

TIBF is the percentage of children born in the last 2 years who were breastfed within the first hour of birth. The prevalence of TIBF in Eastern and Southern Africa is 59% compared with a global prevalence of 39%. A systematic review of 18 studies conducted in Asia, Africa and South America showed that the prevalence of TIBF ranges from 11.4% to 83.3%. A recent national survey report from 53 WHO European region countries showed that the prevalence of TIBF ranges from 5% to 84%. TIBF has been associated with the place of residence and delivery, educational status and postnatal advice on breast feeding, unemployment benefit and social welfare, maternal age and socioeconomic status, marital status and breast feeding exposure, parity, antenatal care follow-up and post- natal care follow-up. (Habtewold et al., 2017).

In terms of breastfeeding practices, India has come a long way since the decline in 70s and 80s of the last century. Analysis of data on time trends in infant feeding practices between NFHS-2 and NFHS-4 shows that there has been an increase in early initiation of breastfeeding and exclusive breastfeeding up to 6 months. Between NFHS-3 and 4, there has been an increase in early initiation of breastfeeding from 23.4 to 41.6%, (1.7% increase per year). State wise analysis reveals that there has been improvement from NFHS-3 levels, except in Uttarakhand, Himachal Pradesh, and Tamil Nadu. The NFHS-4 also shows that 21%

newborns receive pre-lacteal feeds. While around 79% mothers had institutional delivery, only 41% succeed breastfeeding within an hour. (Gupta & Thakur, 2018).

Importance of Early initiation of Breastfeeding

Breastfeeding also has a number of benefits for maternal health. Initiation of breastfeeding immediately after delivery helps

- To contract the uterus, expel the placenta, and reduce bleeding.
- Breastfeeding may also lead to a more rapid return to pre-pregnancy weight.
- Exclusive breastfeeding may delay the return of fertility, thus reducing exposure to the risks associated with short birth intervals.

In the longer term, mothers who breastfeed, especially for a longer duration, tend to be at lower risk of pre-menopausal breast cancer and ovarian cancer. (UNICEF 2011)

Early initiation of breastfeeding (EIBF, defined as the provision of only breast milk to the new-born within the first hour of birth) has been well-documented to reduce the risk of neonatal mortality. The protective effect of EIBF is based on the immunological components of the breast milk, the improvement in exclusive breastfeeding and the avoidance of Prelacteal foods that deprive new-borns of colostrum, rich in nutrients and immunoglobulins needed to fight disease. Despite the evidence supporting the protective effect of EIBF, the prevalence of EIBF remains low (an average of 50%) in many developing countries. One study found that the odds of timely initiation of breastfeeding were highest in the North-East, South, East and West of India compared to the Northern region, irrespective of rural-urban residence. (Senanayake et al., 2019). This skin-to-skin contact provide immense benefits to both, the mother and the child. It can contribute a great deal to reduce neonatal infections and impacts infant mortality by 1.79 times. It also helps in emotional bonding and maintenance of baby's temperature. (Gupta & Thakur, 2018). In relation to initiation of breast feeding right after birth, Edmond et al.(2006) indicated that 16% of the neonatal deaths could be saved if all infants were breastfed from day 1 and 22% if breast feeding started within the first hour.(Regassa, 2014).

Many deliveries take place in hospitals or maternity facilities, and health care practices in these facilities have a major effect on infant feeding. To encourage breastfeeding from the time of childbirth, to prevent difficulties from arising and to

overcome difficulties should they occur, mothers need appropriate management and skilled help. Support and counselling should be available routinely during antenatal care, to prepare mothers; at the time of birth to help them initiate breastfeeding for that The Baby-friendly Hospital Initiative (BFHI) was launched in 1992 with the aim of transforming maternity facilities to provide this standard of care. Hospitals become baby-friendly by implementing the Ten Steps to Successful Breastfeeding.

- The ten steps to successful breastfeeding.

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within one half hour of birth.
5. Show mothers how to breastfeed and how to maintain lactation even if they should be separated from their infants.
6. Give new born infants no food or drink other than breast milk, unless medically indicated.
7. Practice rooming in allow mothers and infants to remain together – 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial treats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

2) EXCLUSIVE BREASTFEEDING TILL 6 MONTHS

Exclusive breast feeding is defined as the proportion of infants who exclusively breast fed during the first 0–5 months after birth. The prevalence of exclusive breast feeding in Eastern and Southern Africa is 42% compared with a global prevalence of 37%. The prevalence of exclusive breast feeding in 53 WHO European region countries ranges from 21% to 30%. Furthermore, the prevalence of exclusive breast feeding is 38–62% in India, 42–44% in Iran and 53% in Guatemala. Exclusive breast feeding has been associated with the number of children, maternal and child age, educational and marital status, wealth index, antenatal and postnatal care follow-up,

place of delivery, sex of new-born, birth order, family income, parents' education and employment, mode of delivery and TIBF. (Habtewold et al., 2017)

Data from NFHS- 4 indicate that during 0-6 months, 54.9% women exclusively breastfeed their infants (improvement of 1% year as compared to NFHS-3). Most of the states except Arunachal Pradesh, West Bengal, Kerala, Karnataka, Chhattisgarh and UP, had shown an improvement. Median duration of exclusive breastfeeding increased from 2 months to 2.9 months; exclusive breastfeeding rate at 6 months has gone up from 26 to 41%. (Gupta & Thakur, 2018). A national study based on the analysis of the 1992 and 2006 India Demographic and Health Surveys (DHS) indicated that the differences in EBF prevalence may be due to the impact of socio demographic (higher maternal education, low household wealth status and older maternal age, ≥35 years), health service (≥4 antenatal care visits) and community (urban residence) factors. (Ogbo et al., 2019).

Importance of Exclusive Breastfeeding

According to the available scientific evidence, globally breastfeeding could save lives of more than 820,000 children and 20,000 women annually. It can also save more than 300 billion dollars for the nations every year, the money spent on healthcare costs of not breastfeeding and not achieving potential gains in earning capacity. According to a study by the World Bank (2018), the return on every dollar invested in reaching the global nutrition targets (Increase the rate of exclusive breastfeeding in the first 6 months to at least 50%) of exclusive breastfeeding is $35. (BPNI/IBFAN Asia 2018)

An analysis in Lancet 2016 concluded that scaling up breastfeeding (exclusive for first six months and continued for 12 months) to nearly universal levels could prevent nearly 50% of diarrhoea episodes and 1/ 3rd of respiratory infections. It could save lives of more than 820,000 children worldwide. Breastfed children perform better on intelligence tests and are less likely to be obese or overweight and they are less prone to diabetes later in life. Breastfeeding makes an important contribution to women’s health by reducing cancers. (Gupta & Thakur, 2018).

Breast feeding is an optimal source of nutrition, important child survival strategy, and is effective intervention for preventing early malnutrition. Studies indicate that

during the first 6 months, exclusive breast feeding produces higher survival rates than partial breast feeding. Studies have confirmed that human breast milk is the best form of nutrition for neonates and infants. Expert panels including the World Health Organization, the American Academy of Paediatrics, and the American Dietetic Association recommend that babies should be breastfed exclusively for the first 6 months. Breast milk is not only the best nutrient for babies but also contains certain antibodies that can guard infants from various infections. (Regassa, 2014).

Benefits of Breastfeeding

Breastfeeding has been proven to be the most optimal nutrition for infants. This is due to immunologic, hormonal and growth advantages which make for a protective and optimal nutrition for a child. Immunologic protection is provided by antibodies present in the breast milk which can promote quick recovery from illness. Oligosaccharides inhibit the binding of pathogens and toxins to host receptors, thus preventing infection. In addition to the obvious benefit of immediate energy, breast milk has been shown to improve neurodevelopment, namely improve cognition. The participating women also benefit from reduced rates of ovarian and breast cancer and diabetes due to breastfeeding. It is, therefore, very evident, that breastfeeding is almost essential for maternal and infant health benefits. (Lassi et al., 2020).

The economic benefits of breastfeeding are also important to highlight. A lack of breastfeeding or poor breastfeeding practices lead to high health care costs for the household and the health services due to increased child morbidity, as well as the health care costs to deal with consequences of not breastfeeding, including long term consequences related to obesity and chronic diseases. The much higher mortality associated with not breastfeeding also represents a drain on country‘s economies. When infant illness due to lack of breastfeeding requires mothers to miss work, households, employers and the economy are all affected. A lack of breastfeeding also impacts human capital development. In addition, artificial feeding leads to additional expenditure and workload for households. (UNICEF 2011).

✓ **Benefit of Breastfeeding**

- ***For the baby***
  - Improve growth and nutritional status
  - Less likely to die

- Increase bonding
- Less diarrhoea and respiratory infection
- Less ear infection, GI disorder, skin condition and SIDS
- Lower risk of chronic disease (diabetes, heart disease, asthma, cancer)
- Lower risk of overweight/obesity
- Improve cognitive and motor development

- ***For the Mother***
- Mother less likely to become pregnant in early months
- Faster maternal recovery and weight loss post-partum
- Lower risk of maternal cancers (ovarian and breast cancer)
- Less post-partum depression

3) TIMELY INITIATION OF COMPLEMENTARY FEEDING

TICF is defined as the proportion of infants aged 6–8 months who started additional solid or semi-solid or soft foods along with breast milk. The prevalence of TICF is 63.6% in Egypt, 57% in Nigeria, 39.2% in Pakistan, 84% in Sri Lanka and 55% in India. TICF has been associated with antenatal and postnatal care follow-up, household income, educational and employment status, maternal and child age, parental confidence, limited access to mass media, and religion, exclusive breast feeding and no siblings.(Habtewold et al., 2017).

In Nigeria Only 21% of breastfed children get the smallest amount of adequate complementary feeding diet. However, in Ethiopia, only 4.2% of breastfed children of 6-23 months of age have a minimum acceptable diet. (Parikh et al., 2019).

Data from NFHS-4 indicate that, 10% of infants receive complementary feeding before 6 months and only 42% of infants get complementary feeds at 6-8 months. Between NFHS-3 and 4, there has been a 10% decline in infants receiving complementary feeds in 6-8 months. Only 9.6% children 6-23 months (1 out of 10) were reported to have received minimal acceptable diet, i.e. children get variety of at least 4 food groups to ensure nutrient intake e.g. fruits, vegetables, grains, pulses, oils etc. and with minimal meal frequency. Among breastfed children, 32% consumed other liquids/milks, 38% ate fruits and vegetables and 13% consumed foods made from beans/lentils. (Gupta & Thakur, 2018). NFHS-3 data from Karnataka have reported that only 42% children aged 6–23 months are fed the

recommended minimum times per day and 34% are fed from the appropriate number of food groups. Only 24% are fed according to all three recommended practice.(DB et al., 2016).

Importance of timely initiation of Complementary Feeding

Physiologically, breast milk can only provide nutrition till a certain age at which point the infants' diet requires the addition of solid food. This point comes at six months age. It then becomes necessary to increase the nutrient intake to ensure optimal growth and development. It is important to note that early nutrition can have irrepairable consequences as after the age of two, stunting and other growth deficiencies can be very difficult to reverse. Currently, the rates of continued breastfeeding drop from 74% at 12 months to 46% at 24months of age. One third of children aged 4 to 5 months are incorrectly already on complementary feeding while conversely one fifth of 10–11 month olds are exclusively on breastfeeding. Additionally, it was found that nearly one third of children ages 6–23 months were receiving a minimally diverse diet. This outlines the importance and need of providing infants with required nutrition through proper complementary feeding practices. (Lassi et al., 2020).

There is strong evidence that the promotion of appropriate complementary feeding practices reduces the incidence of stunting and leads to better health and growth outcome. Therefore, as an effective intervention strategy for malnutrition, WHO and United Nation for Child Fund (UNICEF) recommended introduction of adequate complementary foods at 6 months with continued breastfeeding for 2 years of age or beyond. And this will have a potential to improve the nutritional status of children in developing countries. (Kassa et al., 2016)

Globally, 5.9 million under five children's deaths occur annually; of which 50% death ere caused directly or indirectly by malnutrition. Inappropriate complementary feeding practices are considered to be the leading cause of malnutrition. (Birhanu et al., 2019).

Collectively, malnutrition is responsible for more ill health than any other cause – good health is not possible without good nutrition. All forms of malnutrition are associated with various forms of ill health and higher levels of mortality. Under nutrition explains around 45% of deaths among children under five, mainly in low

and middle-income countries. Despite reductions in stunting, 150.8 million children (22.2%) under five years of age are stunted, 50.5 million children under five are wasted and 20 million new-born babies are estimated to be of low birth weight, while 38.3 million children under five years of age are overweight. there have been reductions in the number of children affected by stunting since 2000, overweight among children under five years of age has increased over time. There has been progress made in reducing stunting in children under five years of age, Rates have been slowly but steadily declining with global prevalence falling from 32.6% in 2000 to 22.2% in 2017. Regionally, Asia has declined from 38.1% to 23.2%, Latin America and the Caribbean from 16.9% to 9.6%, and Africa from 38.3% to 30.3%. (GNR,2018).

Location and education show contrasting inequalities for stunting and wasting versus overweight as depicted in Figure 2.1. Stunting and wasting prevalence is higher among children in rural areas and with less educated mothers, whereas the reverse is seen for overweight, which is higher for children in urban areas and with more educated mothers. Such wealth, location and education gaps are evident even in mostly low- and lower-middle income settings. (GNR, 2020).

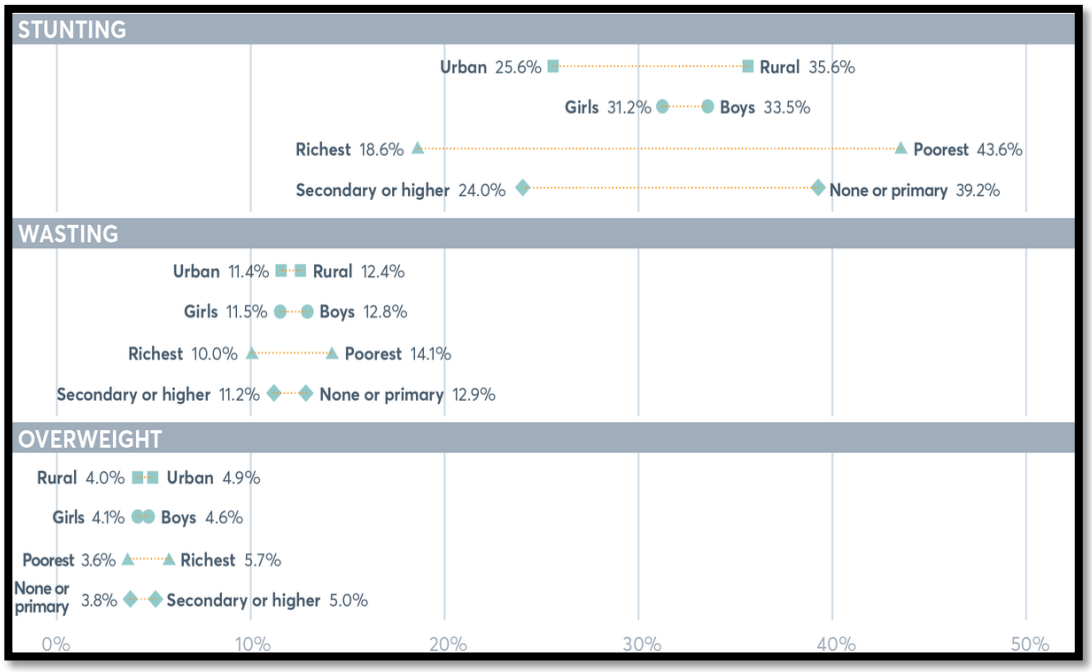
During the period of complementary feeding, children are at high risk of under nutrition. Complementary foods are often of inadequate nutritional quality, or they are given too early or too late, in too small amounts, or not frequently enough. Premature cessation or low frequency of breastfeeding also contributes to insufficient nutrient and energy intake in infants beyond 6 months of age. The Guiding principles are explained in more detail in the paragraph below.

- Guiding principles for complementary feeding of the breastfed child.

1. Practice exclusive breastfeeding from birth to 6 months of age, and introduce complementary foods at 6 months of age (180 days) while continuing to breastfeed.
2. Continue frequent, on demand breastfeeding until 2 years of age or beyond.
3. Practice responsive feeding, applying the principles of psychosocial care.
4. Practice good hygiene and proper food handling.
5. Starts at 6 months of age with small amounts of food and increase the quantity as the child gets older, while maintaining frequent breastfeeding.

6. Gradually increase food consistency and variety as the infant grows older, adapting to the infant's requirements and abilities.
7. Increase the number of times that the child is fed complementary foods as the child gets older.
8. Feed a variety of nutrient rich foods to ensure that all nutrient needs are met.

Figure 2.1: Inequalities in stunting, wasting and overweight in children under 5, by urban-rural location, sex, wealth and education



(Source : Global Nutrition Report, 2020)

9. Use fortified complementary foods or vitamin mineral supplements for the infant, as needed.

10. Increase fluid intake during illness, including more frequent breastfeeding, and encourage the child to eat soft, favourite foods. After illness, give food more often than usual and encourage the child to eat more.

Importance of Optimal Feeding

Optimal feeding practices include initiation of breastfeeding within an hour of birth, exclusive breastfeeding for the first six months, continued breastfeeding for two years or beyond, along with adequate and appropriate complementary feeding beginning after six months. India's progress in each of these critical areas and current/reviewed status with a focus on policy and programmes that assist women in

removing barriers to optimal feeding practices at home, at work and in the health facilities, The World Health Assembly (WHA) set targets on nutrition including increasing global rates of exclusive breastfeeding from 38% in 2012 to 50% 2025. India is committed to achieve these WHA (WHA, 2012) and Sustainable Development targets. Policy, strategy and programme initiatives needed to achieve the WHA targets are discussed. (Gupta & Thakur, 2018).

The World Health Organization (WHO-2018) recommends exclusive breastfeeding for the first six months of life and the addition of complementary feeds from six months onwards, with continued breastfeeds till at least two years of age. Apart from exclusive breastfeeding initially, time of introduction, content, and consistency of complementary feeds are critical for early nutrition. The early introduction of complementary feeds before the age of six months can lead to displacement of breast milk and increased risk of infections, besides the babies being physiologically immature. Similarly, inadequate and inappropriate complementary feeding with unhygienic practices practices leads to recurrent and persistent infections and malnutrition which is followed by growth retardation, immunodeficiency, and eventually fatal outcomes. This is a concern for Indian scenario, where previous studies have suggested inability to maintain exclusive breastfeeding and late introduction of complementary feed. Breastfeeding though is a natural act; it is a behavior that needs to be learned. Mothers and other caregivers need active assistance for optimum breastfeeding practices.(Gandhi & Shah, 2020).

Optimal IYCF ensures a child is protected from both under and over nutrition and their consequences later in life. An analysis of several studies has shown that breastfeeding may have a protective effect on the prevalence of obesity and is a cost-effective obesity intervention. In addition to protecting against obesity, breastfed infants have a lowered risk of several chronic conditions later in life compared to artificially-fed infants, including asthma, diabetes, heart disease, and cardiac risk factors such as hypertension and high cholesterol levels, as well as cancers such as childhood leukaemia and breast cancer later in life. UNICEF 2011). Optimal feeding practices are very essential for babies not because they are vulnerable but because it is the critical time when brain grows faster and maximum e.g. 80-85% brain growth takes place during first two years. (Gupta & Thakur, 2018).

However, even within LMICs, approximately only 37% of infants younger than 6 months are exclusively breast fed. Just scaling up and promoting breast feeding to a universal level could possibly prevent 823 000 annual deaths in children under the age of 5 years and 13.8% of these under 2 years of age. After 6 months of age, energy–and–nutrient dense foods that can be easily eaten and digested should be added to infants' diet in order meet their dietary demands. Both breast feeding and appropriate complementary feeding are pivotal for child growth and the prevention of disease and malnutrition.1 Breast feeding coupled with complementary feeding has the potential to reduce mortality among children under the age of 5 years by 19%.(Rabbani et al., 2020).

Optimal nutrition is critical during infancy and early childhood. Adequate diets and related feeding practices are essential to ensure health, growth and development of children to their full potential. Infant diets vary between countries, within countries and within wealth groups. UNICEF collates data on eight core infant and young child feeding (IYCF) indicators – four relating to breastfeeding and four to complementary feeding. In 2016, analysis of these indicators showed comparable data on breastfeeding for high and low-income countries, showing that high-income countries have shorter breastfeeding duration than do low-income and middle-income countries. Global data shows that fewer than half (42.4%) of all new-borns are put to the breast within the first hour of birth. It also shows that only 40.7% of babies are exclusively breastfed up to the age of six months. Fewer than half of children aged 20 to 23 months (45.1%) get any breast milk. When it comes to solid food, the picture is even more dismal. Fewer than one in five children (15.6%) aged 6 to 24 months eat a minimally acceptable diet. Only two thirds (68.5%) of infants aged 6 to 8 months eat any solid food at all, and more than half (51.2%) of children aged 6 to 24 months do not get the recommended minimum number of meals. (GNR, 2018).

In 2017, UNICEF further disaggregated the core set of IYCF indicators by sex, urban/rural, wealth quintile, maternal education and region in the country (Figure 2.2 & Figure 2.3). This data disaggregation shows there are differences across the IYCF indicators with urban/rural and with wealth. Between urban and rural areas, rural areas have better continued breastfeeding (at 1 and 2 years), exclusive breastfeeding,

and early initiation of breastfeeding compared with urban areas. Yet urban areas emerge as better than rural in indicators that track minimum acceptable diet, minimum dietary diversity, minimum meal frequency and introduction to solids and semi-solid foods.

Figure 2.3 shows socio demographic inequalities in the prevalence of IYCF indicators by urban rural location, sex, wealth and education. Data availability varies by indicator, ranging from 70 to 85 countries, mostly representing low-income and lower-middle-income countries.

Maternal employment as a barrier and facilitator for IYCF practices

According to census 2011, female contribute to 48.5% of Indian population. Traditionally, Indian women had been home makers. In late decades, with the spread of education and better awareness, along with increasing cost of living, women have shifted from home to career. Like many other countries, India has provided a stage for growth and development for women. However, women in India are still seen as the family manager back home. This attitude of the society has put dual responsibilities on women.(Kadale et al., 2018).

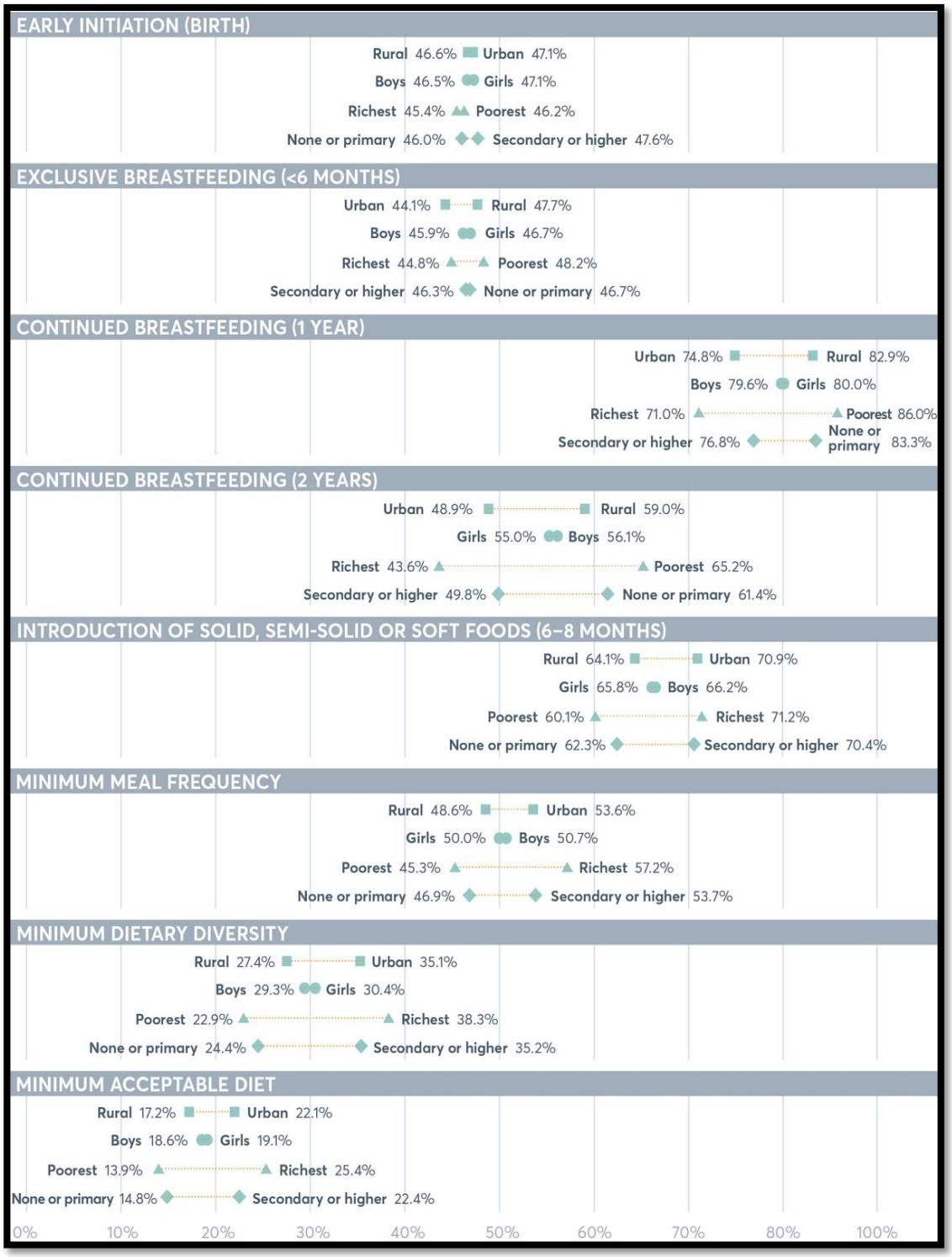
The World Health Organization (WHO) recommends exclusive breastfeeding (EBF) until six months as an optimal way of feeding infants. However, this recommendation can be challenging for employed mothers. Evidence has shown the continuation of breastfeeding is often negatively affected by the mother's return to work. Mothers who are not employed in full-time work, generally breastfeed for a longer period compared to those who are employed. (Gebrekidan et al., 2020).

Figure 2.4 illustrates the factors influencing IYCF practices.

Figure 2.2: How infant and young child feeding practices differ across wealth quintiles, and urban and rural areas.

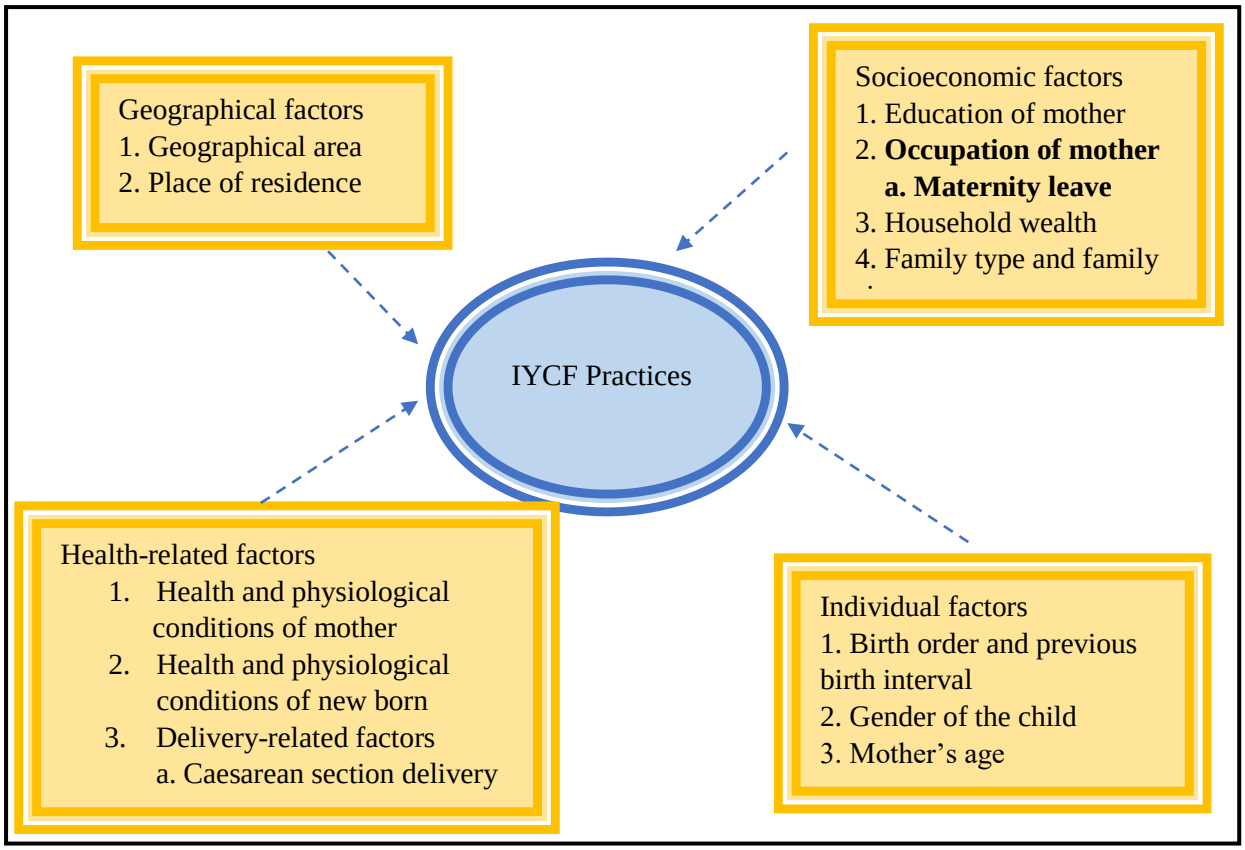
Source: Global Nutrition Report, 2018

Figure 2.3: Inequalities in infant and young child feeding indicators by urban-rural location, sex, wealth and maternal education



Source: Global Nutrition Report, 2020

Figure 2.4: Factor affecting IYCF practices



Source : (Sharma & Byrne, 2016)

EBF has some correlates which affect both the health of child and mother. One of these factors is maternal employment. According to Vanessa M. Oddo and colleagues (2018), particularly in low and middle – income countries (LMICS), maternal employment is the main reason for termination of EBF among employed mothers. Also, studies from Brazil, Ecuador, Ghana, Kenya, and Democratic Republic of Congo concluded that the short duration of maternal leave is highly correlated with cessation of EBF among employed women than housewives. Enabling factors such as paid maternity leave, part-time work arrangement, facilities for expressing and storing breast milk, and breastfeeding breaks for successful EBF among employed mothers were mentioned in 2004 National strategy for Child and Infant Feeding in Ethiopia.(Kebede et al., 2020)

Early marriage of parents, less educated parents, male child, Christian religion, working mother, less number of antenatal visits, operative delivery, late initiation of breastfeeding, not feeding colostrum, lack of knowledge about EBF, and poor

counselling of mother regarding EBF were identified as barriers to EBF.(Istiyaq Ahmad, 2017). Taiwan study found 88.8% (635 of 715) initiated breastfeeding at the beginning of maternity leave, but the continuing breast- feeding rate rapidly decreased after returning to work (49.8% [356 subjects] continued to breastfeed for at least 1 month after returning to work). Almost 39% (635 - 356 = 279) of working mothers discontinued breastfeeding within 1 month of returning to work. (Tsai, 2014)

The dietary diversity of young children may be affected, either positively through increased economic capacity of the mother to buy a wider variety of foods, or negatively as a result of the reduced time that working mothers have to prepare a variety of foods. (Aria Kekalih, 2019).

Mother's occupation is effective factor for knowledge of food security, and working mothers have a higher level of information than unemployed mothers since working mothers have greater exposure to higher levels of information. It is in line with previous research conducted by Firdisa (2018) stating that mothers' education level, age and occupation have a significant influence on the mothers' knowledge of complementary feeding, attitudes and nutritional status of infants/young children.(Pratiwi et al., 2019)

Studies suggest that income earned from maternal employment is associated with the purchase of higher-quality foods. Within LMICs, maternal employment has been associated with a lower probability of preparing foods, less time spent on childcare, and a higher probability of purchasing prepared foods.(Oddo & Ickes, 2018).

In Ghana, studies on maternal work and exclusive breastfeeding in parts of the country have looked into exclusive breastfeeding practice of formal sector working mothers, and have found that mothers in this sector are unable to practice exclusive breastfeeding as recommended by the WHO due to conditions prevalent at their work places.(Nkrumah, 2017).

Women's empowerment is one of the key factors mediating intra-household resources towards optimal child-care behaviours and better nutritional outcomes. Initial evidence indicates that women who are more empowered are more likely to provide their young children with appropriate breast feeding and complementary

feeding practices such as giving complementary foods at the appropriate age, increasing the number of meals and feeding with nutritious foods.(Na et al., 2015).

Employment has a profound effect on breastfeeding, A woman entering employment is three times more likely to stop breastfeeding than her stay at home counterpart.(Boralingiah et al., 2016). Studies have shown that one of the barriers to breastfeeding is mothers' work status and conditions at the workplace.(Mona & R Reddy, 2018). Although most countries have maternity protection legislation, just over half meet the International Labor Organization 14-week minimum leave with greater inadequacies in the informal work sector. Thus, hundreds of millions employed mothers experience inadequate maternity policy coverage, of whom over three-quarters live in Africa and Asia. (Oddo & Ickes, 2018). Maternity protection is recognized as an essential pre-requisite for women's rights and gender equality, with the right to maternity protection enshrined in International Human Rights Instruments. Lack of maternity protection and supportive enabling environment pushes women into high degrees of vulnerability. Maternity protection is a significant intervention that recognizes women's reproductive rights whether they are in the formal or in the informal sector or "non-workers". (Bala, 2017).

MBA as a Facilitator for Working Mother

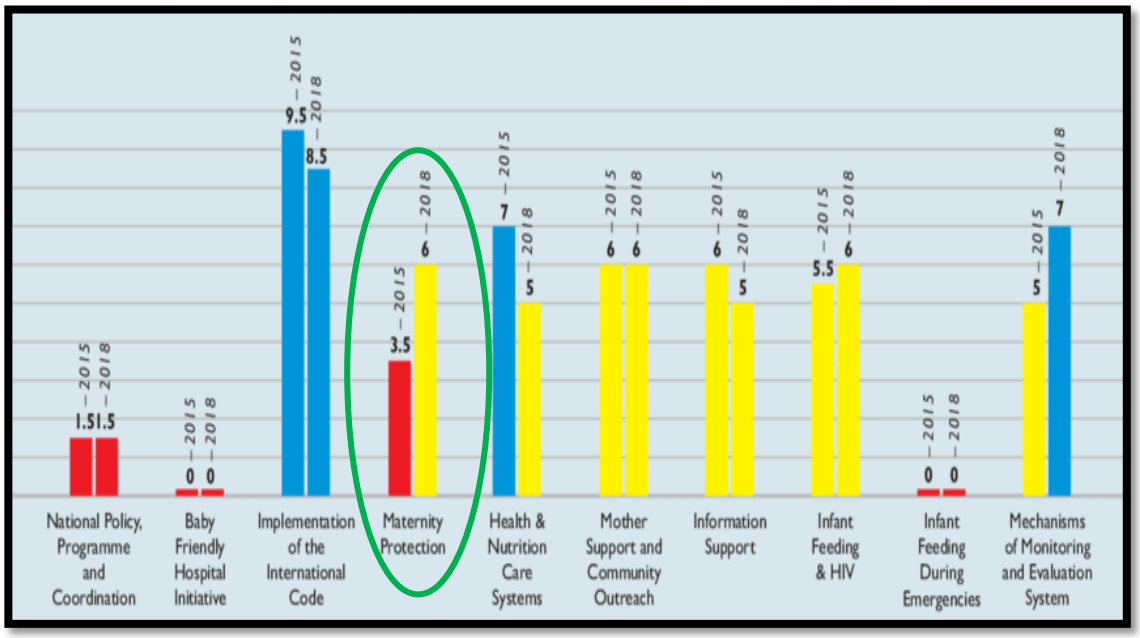
The WBT has 15 indicators: Indicators 1-10 deal with Infant and Young Child Feeding (IYCF) policy and programmes and 11-15 deal with IYCF practices, Maternity protection is one of the indicator from infant Young Child Feeding policy and programmes. This is a critical indicator that looks at work place support, maternity leave, breastfeeding breaks in the formal sector and informal sector, as well as paternity leave, health protection to women and discrimination against them at the work place for an enabling environment for women to breastfeed successfully. India scored 3.5/10 in 2015, which has gone up to 6 in 2018 because of the revision of the Maternity Benefit Act (MBA) of 1961 in 2017.This has increased maternity leave for women working in the formal sector from 12 weeks to 26 weeks. (BPNI/IBFAN Asia 2018).

The Maternity Benefit Act, 1961 extends to the whole of the Indian Union and applies to every factory, mine, plantation and circus industry including any such

establishments belonging to government but excluding all the establishments covered under the provisions of the Employees State Insurance Act, 1948. The Act also applies to Shops and Commercial Establishments in which 10 or more persons are employed or were employed on any day of the preceding 12 months, and establishments wherein persons are employed for the exhibition of equestrian, acrobatic and other performances. (Bala, 2017). Approximately 85% of the Indian workforce is categorised as unorganized sector worker. The National commission on enterprises in Unorganised Sector (NCEUS) argues that, unorganised sector workforce do not get social protection like employment security, work security and social security. The government enacted Unorganised Workers Social Security Act (UWSSA), 2008 to provide at least minimum level of social protection that would enable them to endure income and health related shocks, say out of poverty and ultimately allow them to lead dignified life.(Rajeshri & Admane, 2020).

To support breastfeeding and early childhood development, new mothers need time away from work. The International Labor Organization's (ILO) Convention C183 gives women the right to 14 weeks of paid maternity leave along with work breaks and appropriate nursing space upon their return to work. ILO further recommends that countries enact legislation providing 18 weeks of maternity leave with 100% pay, covered by public funds. Currently, only 11% of countries meet this recommended standard. The Collective target for 2030 is to have at least 25% of countries following the ILO recommendation. The ILO target should be considered a minimum. Preferably, mothers should have paid leave for a period of 6 months or more after birth and fathers should have paid paternity leave. (Global Breastfeeding Scorecard, 2019).

Figure 2.5: Trends in score for policy and programme indicators for India on a scale of ten over 2015 - 2018



(Note: Colours Red, Yellow, Blue to Green indicate grade of performance, according to the IBFAN Asia WBTi guideline.)

(Source: 5th Report of Assessment of India's Policy and Programmes on Infant and Young Child Feeding, Breastfeeding Promotion Network of India (BPNI)/IBFAN Asia 2018)

Investing in maternity leave can exert positive impacts on women's and children's health and on the economy of the country. By protecting exclusive breastfeeding, there would be decrease in maternal and child morbidity and mortality, increase in the children's intelligence quotient (IQ) and school performance, thus indirectly contributing to alleviating poverty.(Rimes et al., 2019).

According to survey it was found that maternity leaves and benefits and job protection after pregnancy increases labour participation of women in the workforce and researchers say that they find no negative impacts on the productivity of the organization but due to poor enforcement of law, many categories of women are not able to enjoy these benefits. Although maternity benefits is universally applicable but their actual implementation is questionable as women workers are not receiving proper benefits even they are statutory according to rules. Employers consider maternity benefits as burden and so avoid recruiting females in the organization. (Satpathy & Agarwal, 2014).

Impact of Maternity leave on feeding practices

Mothers who were given easier jobs or concession during pregnancy could complete exclusive breastfeeding for 6 months effectively. (Kadale et al., 2018). ML and maternity protection strategies are among the interventions described as successful in breastfeeding promotion. According to the International Labor Organization (ILO), ML is defined as one part of what is recognized as the legislative provisions of maternity protection, which includes ML, benefits, employment protection, health protection, breastfeeding arrangements at work, and childcare. (Navarro-Rosenblatt & Garmendia, 2018).

Hawkins et al. found that women who had not returned to work by 6 months after birth had a higher prevalence of exclusive breastfeeding, but other studies showed mixed results. (Navarro-Rosenblatt & Garmendia, 2018).

Having a longer ML was a protective factor for breastfeeding duration. Studies that reported ML of more than 3 months had overall three times the likelihood of maintaining breastfeeding at 3 months after birth compared to returning to work within 3 months after birth. Women who had ML of 6 months were 50% more likely to maintain their breastfeeding until the sixth month after birth. (Navarro-Rosenblatt & Garmendia, 2018).

In China, a study in 2014 suggested that the length of maternity leave, the intensity of occupation, and the establishment of lactation rooms at workplace were notably associated with total length and overall rate of breastfeeding.

Global Prevalence of IYCF Practices among working mothers:

The United Nation (UN) declared 2016-2025 the UN Decade of Action on Nutrition, the breastfeeding target chosen was to improve global EBF rates to above 50% for infants aged 6 months. However, optimal breastfeeding goes beyond the first 6 months of life and includes sustained breastfeeding for 2 years and beyond, with addition of nutritious complementary feeds from 6 months of age.(Horwood et al., 2020).

The World Health Assembly (WHA) adopted a resolution in 2012 to set global nutrition targets that included increasing exclusive breastfeeding from 38% in 2012 to 50% in 2025. In 2017, the Global Breastfeeding Collective has been formed to achieve these targets. WHO and UNICEF lead the Collective, with 20 international networks/organizations as its members including IBFAN. (BPNI/IBFAN Asia 2018).

Studies in developing countries have revealed poor dietary diversity practices among working mothers, although the evidence for this is contradictory in the middle and high income countries. (Aria Kekalih, 2019).

A cross sectional study was conducted from February to March 2015 among permanently employed mothers of children working in both government and non-governmental organizations in Dukem town, Central Ethiopia where only 2% of them received exclusive breastfeeding within the first 6 months of children's age.(Kebede et al., 2020).

A study titled frequency of Breastfeeding among working women of Multan was conducted from 2017 to 2018. The frequency of exclusive breastfeeding was observed 44.5%.(Ijaz et al., 2019). Another study with the main objective to examine the practices and barriers of breastfeeding among women working in tertiary level hospital of Nepal was conducted from December 2017 to June 2018 where 51% and 47% women stated work as a barrier for not exclusively breastfeeding and early complementary feeding respectively. Also observed colostrum was fed by 94% women, Prelacteal feeding was given by 7%, and 57% initiated breastfeeding within one hour of birth, 11% were exclusively breastfed for six months.(Singh et al., 2019).

A study conducted by Manzione et al., 2019 to examine the relationship between maternal employment status and minimum meal frequency (MMF) among children (0-23 months) in Tanzania. Around 82% of respondent's children met MMF and low rates of EBF as 9%. (Manzione et al., 2019). In Uganda, 2017 a descriptive cross sectional study was conducted among professionals working mother of children aged 0-23 months. The prevalence of early initiation of breastfeeding was 60%, exclusive breastfeeding was 42%, and 40% introduce complementary feeding at 6 month of age.(Kyampire et al., 2018).

Departments of Health Services and Program in Nutritional Sciences and Global Health, University of Washington conducted study which included DHS datasets with the aim to investigate the associations between maternal employment and IYCF practices among 50 LMICS and by world region. The study showed the rate of EBF was 12.01%, MMF was 45.64%, MDD was 28.12% among children aged 6-23 months.(Oddo & Ickes, 2018).

In Nigeria, a cross sectional study was conducted among bankers in Mainland Local Government in Lagos State where the prevalence of EBF was found 28.5%. (Osibogun et al., 2018). Another cross – sectional study was conducted to identify the features of maternal work associated with exclusive breastfeeding in Effutu Municipal in the Central Region of Ghana. The rate of EIBF was 67% & EBF was 72% among children 0-7 month of age.(Nkrumah, 2017).

A study conducted in Northwest Ethiopia with the aim to assess the extent of exclusive breast feeding practice and associated factors among employed and unemployed mothers with children of age 7-12 months in Gondar town found that the EBF was practiced only by 20% of employed mother which is lower than unemployed mother 48.0%.(Chekol et al., 2017).

A study done by Aroona Sabina et al. to determine the prevalence of exclusive breast feeding in working women of Pakistan, study investigated 41.5% children of age 3-24 months received EBF till 6 months of age.(Sabin et al., 2017).

The Table 2.1 gives the overview of the global prevalence of IYCF practices.

Table 2.1: Global prevalence of IYCF Practices

Author	Place	IYCF practices	Age group	Working Mother / not
(Dagher et al., 2016)	USA	EIBF - 81% (at childbirth) EBF - 33%	Follow up at 6 week, 12 week, 6 months	Working mother
(Dun-Dery & Laar, 2016)	Ghana	EIBF - 91% EBF - 10.3%	6 - 24 months	Working Mother
(Na et al., 2015)	Sub-Saharan Africa	MMF - 33.5 - 59.5% MDD - <35% MAD - 3.7 - 18.3%	6 - 23 months	Working mother
(Ogunba, 2015)	South-western Nigeria Osun state	EBF - 24% CF- 37.30%	0 - 24 months	Working mother
(Danso, 2014)	Ghana	EBF - 48%	professional working mothers, aged 40 or younger	Working Mother
(Gladzah, 2013)	Ghana-Accra	EBF - 68%	6 months - 10 year	Working Mother

National Prevalence of IYCF Practices among working mothers:

According to RSOC 2013-14 report, at country level total 44.6% children aged 0 – 23 months breastfed immediately/within an hour of birth among them 44.2% belong to rural area and 45.6% belong to urban area. Overall 64.9% children aged 0 – 5 months who were exclusively breastfed among them 65.1% belonged to rural area and 64.2% belonged to urban area. Overall 50.5% children aged 6 – 8 months were fed complementary foods among them 47.1% were from rural area and 58.1% urban area. Total Breastfed children (6 – 23 months) who were fed a minimum number of times was 36.3% and who had a minimum dietary diversity was 19.9%. (RSOC).

According to CNNS 2016-18, at national level 57.1% male and 56.1% female children 0 – 23 months of age were breastfed within one hour of birth, 57.7% male and 58.4% female children 0 – 5 months of age were exclusively breastfed, timely initiation of complementary feeding among children 6 – 8 months was 53.0% male and 53.2% female. Among breastfed children 6 – 23 months who received minimum dietary diversity was 17.2% male and 18.4% females. The minimum meal

frequency was 50.9% in males and 49.1% females. The minimum acceptable diet was 7.6% in male and 9.1% female. Among non – breastfed children 6 – 23 months, minimum dietary diversity was 37.2% in males and 34.1% female. And the minimum meal frequency was 34.4% male and 44.2% female, Also the minimum acceptable diet was 2.1% in males and 9.3% in females. Among all children 6 – 23 months who received minimum dietary diversity was 20.6% male and 21.4% female, minimum meal frequency was 43.2% male and 40.5% female & minimum acceptable diet was 6.4% for male and 6.5% in females. (CNNS).

A comparative study was done to assess the level of Knowledge and practices on Infant Feeding Practices among Working and Non-Working Mother with children below 1 year of age at selected areas in Puducherry. Only 20% of working mother breast fed their baby exclusively.(Abisha, 2019). Manisha Dutta and Mousumi Gogoi carried out study at Assam to find out the child feeding practices among the mothers (tea garden workers) of children aged six months to two years, revealed that 98% of mothers breast fed the child within 1 hour of the child birth, 95% of mother exclusively breast fed the child for 6 months and 98% of them received complementary foods at 6 months of age.(Dutta & Gogoi, 2019).

In Bengluru, a cross sectional analytical study carried out to assess the prevalence of breastfeeding practices among women working in software companies in Whitefield, study highlights the rate of early initiation of breastfeeding within 1 hour of birth and exclusive breastfeeding was practiced by 8.91% and 90.27% respectively.(Mona & R Reddy, 2018). A study in Karnataka found exclusive breastfeeding was practiced by 17.5% working mother of infants aged less than 6 month.(Chhetri et al., 2018). Study of Breastfeeding practices in children living in East district of Sikkim found Exclusive breast feeding was practiced more among mothers who were not working (62.9%) as compared to working mothers (9.9%). (Rai & Bhutia, 2018).

Department of Community Medicine, M.I.M.E.R. Medical College, Pune, Maharashtra carried out study among 152 working mother whose children aged below 18 year of age from varied state of India with maximum mothers belonging to Maharashtra. The study found 31.88% mothers exclusive breastfeed their youngest child till 6 month of age.(Kadale et al., 2018). A study in Mysore observed the rate

of EIBF and EBF was done by 33.60% and 15.90% working mothers of children 13-24 months of age.(Boralingiah et al., 2016).

In the study conducted at Maharashtra with the aim to study socio-demographic factors affecting breast feeding practices in sugarcane workers (Group A) and paramedical staff (Group B), observed exclusive breast feeding for 6 months or more was done by 47(94%) from Group A and 16(8%) from Group B. Breastfeeding was initiated within ½ hour by 7(14%) mother in Group A and 43(86%) in Group B.(Boralingiah et al., 2016).

The study conducted in the age group of children (12-36 months) in urban and rural area of Manglore taluk – Karnataka, revealed the rate of early initiation of breast feeding was 50% in rural and 42.8% in urban, exclusive breast feeding under 6 months was 47.8% in urban and 45.6% in rural, Introduction of solid and semi-solid foods 90.0% in rural and 92.0% in urban and minimum meal frequency 83.3% rural and 81.9% urban were almost same in both urban and rural areas and minimum dietary diversity was 21.3% in rural and 37% in urban, minimum acceptable diet 20% and 31.9% were poor in both the areas.(Javalkar, 2019).

The study aimed to assess the breast feeding and infant feeding practices among mothers of infants aged 0- 12 months in Nellore – Andhra Pradesh found EIBF was done by 50%.(Kishore & Junapudi, 2018).

An overview of some studies on IYCF practices are summarised in Table 2.2

Table 2.2: National Prevalence of IYCF Practices

Author	Place	IYCF practices	Age group	Working Mother / not
(Rathaur et al., 2017)	Uttarakhand	EIBF - 46.4% EBF - 30.66% CF - 53.12%	0 - 11 months	Not Working Mother
(Ahmad et al., 2017)	Uttar Pradesh	MDD - 42.6% MMF - 50.9% MAD - 35.6%	6 - 23 months	Not Working Mother
(Ashoka A. et al., 2016)	Davangere city, Karnataka	EIBF - 60% EBF - 11%	Follow up at 6, 10, 14, 18, & 24 months	Working Mother
(Shubha DB et al., 2016)	Davangere city, Karnataka	EBF - 16% MMF - 58% MDD - 79%	6 - 23 months	Working Mother
(Kumar, 2014)	New Delhi	EIBF - 54% EBF - 38% CF - 39%	6 months - 2 year	Working Mother

Regional Prevalence of IYCF Practices among working mothers

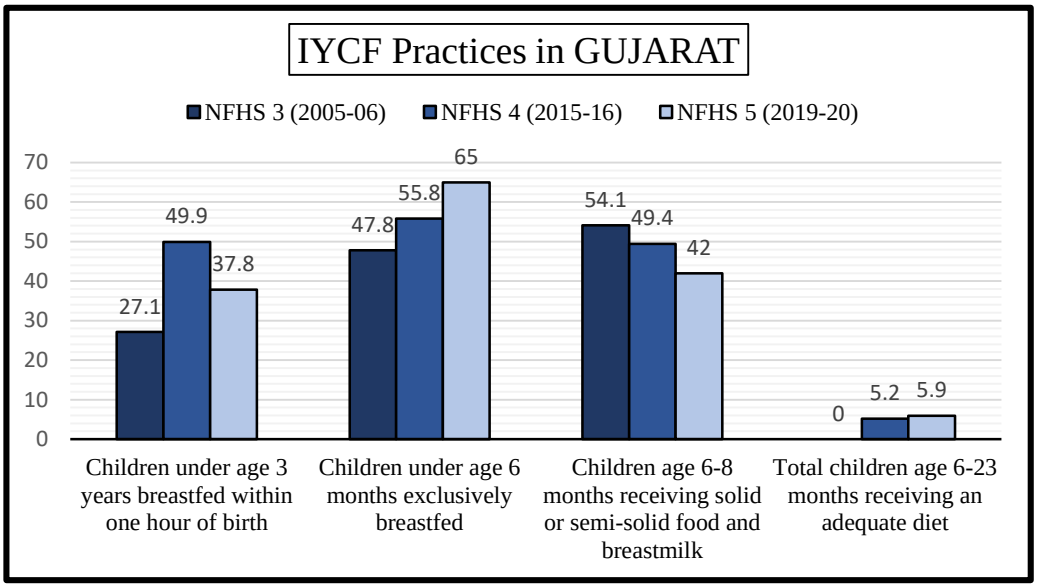
Malnutrition was associated with perinatal care practices and infant feeding practices. Efforts are needed to promote early initiation of breastfeeding, exclusive breastfeeding for 6 months and age-appropriate complementary feeding among infants.(Gandhi et al., 2014)

According to NFHS - 3 (2005-06) and NFHS - 4 (2015-16) there has been decline in stunting from 51.7% to 38.5% among children under 5 years, between NFHS - 4 TO NFHS - 5 (2019-20) there has been increases in prevalence of stunting from 38.5% to 39.0%. In terms of children under 5 years of age who are wasted there has been an increase from 18.7% (NFHS – 3) to 26.4% (NFHS – 4). The current scenario of wasting in Gujarat is 25.1% (NFHS – 5). Between NFHS – 3 and NFHS – 4 prevalence of children who were underweight decreased from 44.6% to 39.3% and according to the data from NFHS – 5 the prevalence of underweight was 39.7%.

Data from NFHS-4 suggest that in India, less than 55% of children under 6 months of age are exclusively breastfed and about 40% are breastfed within one hour of birth. The results being very similar for Gujarat where only 56% of infants are exclusively breastfed and 50% of infants are initiated with breastfeeding within one hour of birth. (Nagar et al., 2019).

The prevalence of IYCF practices in Gujarat have been depicted in Table 2.3 & figure 2.6

Figure 2.6: Prevalence of IYCF Practices in Gujarat



In Anand, a community-based cross sectional study was conducted among mothers of 330 infants of age 6 months to 1 year showed that exclusive breastfeeding was done by 49.70%.(Ahmad, Khalique, Khalil & Maroof, 2017). A study carried out by Kantawala S and Shah (2020) to assess the dietary diversity score of complementary foods consumed by children (6 – 23 months) in urban Vadodara, revealed that 54% of the children were fed with colostrum immediately after birth, rate of exclusive breastfeeding up to 6 months was 40.9%, 54.3% children received complementary foods at 6 months of age and only 36.4% of children were able to meet MDD. (2020).

A Departmental study carried out by Gandhi and Mehta at Narmada – aspirational District of Gujarat among children aged 6 - 23 months found timely initiation of complementary feeding was 81.1% & 38.3% of children received MDD. (2020). 52% children of Vadodara received early initiation of breast feeding in a study conducted by Nambiar and Das (2019). Another study carried out in Vadodara found rate of early initiation of breastfeeding and exclusive breast feeding was 45% and 76.70% respectively among children less than 6 months of age.(Davara et al., 2016).

In Jamnagar, 65% women had initiated breastfeeding within one hour of delivery, 69.6% were exclusively breastfed and 58.5% received complementary food at 6 month of age among children under one year of age.(Unadkat et al., 2017). Rawal et al. found 38.1% of newborn received breastfeeding within one hour of birth among 840 children in the age group of 0 to 5 years.(Raval,2011).

A Departmental study was carried out by Chandodkar . and Shah at Padara rural Block of Vadodara District observed only 10.1% children met MDD among children of 7 – 59 months of age. (2017). Another study aim was to assess the factors affecting IYCF practices among 300 mothers having children aged 0 – 23 months in Ahmedabad showed 88% mothers started early initiation of breastfeeding and 66% were giving exclusive breast feeding.(Rana et al., 2016).

Nambiar V and Khanna carried out a study at rural Vadodara among children aged 0 – 3 years showed that the rate of early initiation of breastfeeding was 54.2%, exclusive breastfeeding 30.6% and timely introduction of complementary feeding 73%. (2016). Another Departmental study conducted by Gandhi and Patni found 71.60% of children (0 – 24 months) among rural Vadodara received complementary food at completion of 6 months of age. (2016).

Table 2.3: Regional Prevalence of IYCF Practices

Author	Place	IYCF practices	Age group	Working Mother / not
(Chandwani et al., 2015)	Dabhoda	EIBF - 94.20% EBF - 95% CF - 59.80% MMF - 95.60% MDD - 28.30% MAD - 28.30%	0 - 23 months	Not working mother
(Nambiar V & Motiwala Q, 2015)	Vadodara (Block – Kanwat)	CF - 53%	Children under 5 year of age	Not working mother
(Nair S & Vora H, 2014)	Vadodara (Block – Sankheda)	EIBF - 70.4% CF - 47%	Children below 2 year of age	Not working mother
(Seksaria & Sheth, 2014)	Chikhli Taluka	CF – 26.56%	Children between 6 – 30 months	Not working mother
(S. J. Gandhi et al., 2014)	Navsari	EIBF – 56.4% EBF – 36.2% CF – 97.5%	Children between 12 – 23 months	Not working mother

Awareness about Maternity Benefit Act among working mothers

In United State study was carried out with the goal to describe and quantify the parental leave experiences of a nationally representative sample of emergency physicians (EP). The data showed 17% of women and 21% of men were unaware of whether there was a formal maternity leave policy at their current place of employment. (MacVane et al., 2017).

A study conducted at Bhubaneswar, Odisha found only 28% of mothers were fully aware and 68% were partially aware about MBA with source of awareness being company manual and print media.(Patnaik et al., 2014). Another study carried out at west Nagpur, Maharashtra, India showed that women employee in the construction company were totally unaware about what benefit they are getting under Maternity Act. Around 4% women workers were aware about the Act (Admane, 2020). In chennai a study on maternity benefit and its effectiveness in construction industry observed that only 14.1% of women were aware about maternity benefits and 9.4% were aware about Maternity benefit scheme. (Gopalakrishnan, 2017). A study carried out among 12 Employer's, 32 Male employees and 64 Female employees from different city Bengluru, Gurugram, Hyderabad, Mumbai & Pune found approximately 75% of employers are aware about Maternity Benefit Act (Principal) 1961, but only 58 % employers are aware about its amendment. (Bala, 2017)

Thus Overall the review suggests that we need to find out the prevalence of IYCF practices, barriers and facilitators along with creating the awareness about the MBA.

METHODS AND MATERIAL

Infant feeding practices have significant effects on both mother and child. Breastfeeding is the best and complete food for the growth and development of infants. According to the World Health Organization, “early initiation of breastfeeding should be started within 1 h of birth, exclusive breastfeeding should be practiced till 6 months of age, and complementary feeding should be started at 6 months, along with breastfeeding till 2 years of age to achieve optimum growth and development (Mona & Reddy, 2018)

WHO recommends exclusive breastfeeding for six months and a diet with complementary foods up to two years and beyond. Breastfeeding contributes to well-being of both mother and child. But, for employed women, who have to get back to work, after the end of maternity leave, breastfeeding becomes a challenging task.(Kadale et al., 2018)

The social and economic circumstances of a woman and the household have much influence on timing of breastfeeding initiation in the South Asian context, pertinently the education of mother, occupation of mother, household wealth and family size and family type.(Sharma & Byrne, 2016)

A woman often plays a dual role, of a home-maker and a breadwinner. Achieving harmony in these two respective roles is nothing less than a battle for her. A working mother can be defined as a woman with an ability to combine a career with added responsibility of raising a child. The problems might be different in mothers from low socio-economic status for whom, doing a job may be essential due to economic reasons.(Kadale et al, 2018)

MATERNAL EMPLOYMENT AS A BARRIERS AND FACILITATORS

In several qualitative studies, mothers often cite employment as a key barrier to continued exclusive breastfeeding whereas maternal employment is associated with improved complementary feeding practices among children as indicated by diet quality and meal frequency across 50 LMICs and in several regions. Prior literature indicating that maternal employment specifically, and increased maternal income more broadly,

are associated with increased household food expenditures and improved dietary quality (Oddo & Ickes, 2018)

With this background a pilot study was undertaken to study the Barriers and Facilitators promoting IYCF practices among working mothers in Urban Vadodara . The Broad Objective of the study was To identify the barriers and facilitators among working mothers of infants regarding Infant and Young Children Practices (0-12 months). The specific objectives were

- To assess the IYCF practices followed by the working mothers
- To identify the barriers and facilitators in optimal IYCF practices followed by working mothers
- To create awareness about benefits of breastfeeding among working mothers
- To create awareness about provision of maternity leave for improving breastfeeding practices

This chapter describes the details of the study design, sample selection, methods and materials used for data collection.

The entire study was divided into two phases:

Phase I: Formative Research to assess the socioeconomic status, IYCF practices and awareness about Maternity Benefit Act (MBA) among the working mothers

Phase II: Brochure development & dissemination of information to the study population

Locale of the study: The locale of the study was Urban Vadodara

Study population: The working mothers of the infants aged 0-12 months residing in urban Vadodara formed the study group. For the purpose of present study 256 working mothers who had infants between 0-12 months of age were selected.

Study approval: This study was approved by the Institutional ethics committee for human research (IECHR) under protocol no. IECHR/FCSC/2020/61 before the commencement of the study (Annexure 3.1). Mothers were explained in detail about the study and verbal consent was obtained from them (Annexure 3.2).

PHASE 1: FORMATIVE RESEARCH

The broad objective of this phase was to Assess IYCF Practices among working mothers having infants (0-12 months). The Specific Objectives were

- To assess the IYCF practices followed by working mother of infants aged 0-12 months.
- To identify barriers and facilitators in optimal IYCF practices followed by working mother.

The data on Infant and Young Child Feeding Practices followed by working mothers of infants (0-12 months) was collected **from both the organized and unorganized sector**. Mothers who verbally gave consent to participate were interviewed using semi-structured questionnaire via telephonic and face to face interview. The data were collected on socioeconomic status, obstetric history, and IYCF practices – Early initiation of breastfeeding, Exclusive breast feeding, Complementary feeding and Maternity Benefit Act (MBA)

➢ **Definition of Organized and Unorganized structure:**

- ***Organized sector:***

It is broadly understood as the employment segment, which has access to rights such as social security. Organized work force in the Indian case needs to be understood as those workers who have regular, contractual, hired employment and enjoy a relatively high rate of wages, which are sufficient to provide social security, emanating from sustained productivity per worker. (Kavitha & Santhi, 2012).

- ***Unorganized sector:***

The unorganized/informal sector is one that "consists of all unincorporated private enterprises owned by individuals or households engaged in the sale and production of goods and services operated on a proprietory or partnership basis and with less than ten total workers". (Kavitha & Santhi, 2012)

The unorganized sector is further classified into various segments.

1. Unorganized non-agricultural workers:

- Daily Wage workers in non-agricultural sector
- Self-employed workers in the non-agricultural sector
- Women workers in non-agricultural sector

2. Other disadvantaged workers (Migrant, Child and Bonded Labour)
3. Agricultural workers

Inclusion and Exclusion Criteria:

- A working mother of an infant 0-12 months of age who gave consent to participate in the study were included in the study.
- A mother who was not working and working mother who did not give consent to participate were excluded from the study.

Sample size calculation

The sample size was determined based on the prevalence of exclusive breastfeeding observed in the comparative study to assess the level of knowledge and practice on infant feeding practices among working and non-working mothers at selected areas in Puducherry by adopting the formula: (Mabal Abisha, 2019).

$n = Z^2\alpha / 2 \times PQ / \sum^2$

Where, P = Prevalence rate of EBF (among working mother) = 20% = 0.2

Q = 1 – P, = 0.8

α = level of Significance (type 1 error) $Z^2 \alpha / 2 = 4$

$\sum$ = Allowable error 5%

Then (n) = 4 x 0.2 x 0.8 / 0.0025 = 256 (Total)

Sampling technique

Owing to the Pandemic situation, the study employed the snowball technique for the enrollment of the participants of the study. Social media platform (such as whatsApp status) was used to inquire from known groups to share/suggest contact number of working mother whom they knew. The contact number of working mother was obtained from them. The Process was continued till the required sample size of 256 was achieved.

Questionnaire designing

A semi-structure pretested questionnaire was developed in epicollect software by investigator. The questionnaire was developed to elicit information regarding socioeconomic status of the family, obstetric history, IYCF practices – Early initiation of breastfeeding, Exclusive breast feeding, Complementary feeding and maternity benefit act (MBA). (Annexure 3.3)

Data collection and tool

The working mothers were interviewed telephonically from organized sector and from unorganized sector. Few were interviewed telephonically and only those who were not comfortable with telephonic interview were interviewed face to face to obtain the required information. The tools that were used for collecting the data is shown in Table 3.1.

1. **Socio-Economic Status:**

Socioeconomic status is widely recognized as one of the important factors affecting the health condition of an individual or a family.

- **Kuppuswamy's scale:**

The modified Kuppuswamy scale is commonly used to measure SES in urban and rural areas. This scale was devised by Kuppuswamy in 1976 and consists of a composite score which includes the education and occupation of the Family Head along with income per month of the family, which yields a score of 3–29. This scale classifies the study populations into five SES, as upper class, upper-middle-class, lower middle class, upper lower and lower socio-economic class. (Sheikh Mohd Saleem, 2020) (Annexure 3.4)

2. **Obstetric History:**

Information regarding type of delivery, the outcome of current delivery, place of delivery, counseling received during ANC and PNC were gathered by using a semi-structured questionnaire by the investigator through the telephonic interview.

3. IYCF practices:

WHO and UNICEF jointly developed the Global Strategy for Infant and Young Child Feeding to revitalize world attention to the impact that feeding practices have on the nutritional status, growth and development, health, and thus the very survival of infants and young children. (*Global strategy for infant and young child feeding*, 2003)

The WHO and UNICEF recommend three major feeding practices:

1) Early initiation of breastfeeding within 1 hour of life
2) Exclusive breastfeeding for the first 6 months of life
3) Introduction of nutritionally-adequate and safe complementary (solid) foods at 6 months together with continued breastfeeding up to 2 years of age or beyond.

- Indicator:

3.1 Ever breastfed: Percentage of children born in last 24 months who were ever breastfed

3.2 Early initiation of breastfeeding: Percentage of children born in the last 24 months who were put to the breast within one hour of birth

3.3 Colostrum: is the special milk that is secreted in the first 2–3 days after delivery. It is produced in small amounts, about 40–50 ml on the first day

3.4 Exclusive breastfed for the first two days after birth: Percentage of children born in last 24 months who were fed exclusive with breast milk for the first two days after birth

3.5 Exclusive breastfeeding under 6 months**:** Percentage of infants 0-5 months of age who fed exclusively with breast milk during the previous day.

3.6 Mixed milk feeding under 6 months: Percentage of infants 0-5 months of age who were fed formula and/or animal milk in addition to breast milk during the previous day

3.7 Complementary feeding: CF is defined as the process starting when breast milk is no longer sufficient to meet the nutritional requirements of infants, and therefore other foods and liquids are needed, along with breast milk. The target range for complementary feeding is generally taken to be 6 to 23 months of age, 1 even though breastfeeding may continue beyond two years.

3.8 Introduction of solid, semi-solid or soft foods 6-8 months: Percentage of infants 6-8 months of age who consumed solid, semi-solid or soft foods during the previous day

3.9 Minimum dietary diversity (MDD): Percentage of children 6-23 months of age who consumed foods and beverages from at least five out of eight defined food groups during the previous day

The 10 foods groups used for calculation of this indicator were:

a) Grains and cereals
b) Legumes and pulses
c) Dairy product
d) Flesh foods
e) Eggs
f) Vitamin-A rich fruits and vegetables
g) Other fruits and vegetables
h) Breast milk
i) Roots and tubers
j) Nuts and oil seeds

3.10 Minimum meal frequency (MMF): Percentage of children 6-23 months of age who consumed solid, semi-solid of soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more during the previous day

3.11 Minimum acceptable diet (MAD): Proportion of children 6-23 months of age who had both minimum meal frequency and diet diversity (in both BF and non-BF children)/ Percentage of children 6-23 months of age who consumed a minimum acceptable diet during the previous day

3.12 Egg and/or flesh food consumption 6-23 months: Percentage of children 6-23 months of age who consumed egg/or flesh food during the previous day

3.13 Unhealthy food consumption 6-23 months: Percentage of children 6-23 months of age who consumed selected sentinel unhealthy foods during the previous day

3.14 Zero vegetable or fruit consumption 6-23 months: Percentage of children 6-23 months of age who did not consume any vegetables or fruits during the previous day

3.15 Bottle feeding: Percentage of children 0–23 months of age who were fed from a bottle with a nipple during the previous day

3.16 Infant feeding area graph : Percentage of infants 0–5 months of age who were fed exclusively with breast milk, breast milk and water only, breast milk and non-milk liquids, breast milk and animal milk/formula, breast milk and complementary foods, and not breastfed during the previous day

Maternity Benefit Act:

A Questionnaire was also developed regarding awareness about the maternity benefit act, provision of maternity leave, type of maternity leave, and breastfeeding practices followed by working mothers.(Annexure 3.3)

The experimental plan is represented pictorially in Figure 3.1

Figure 3.1: Experimental plan of Phase 1

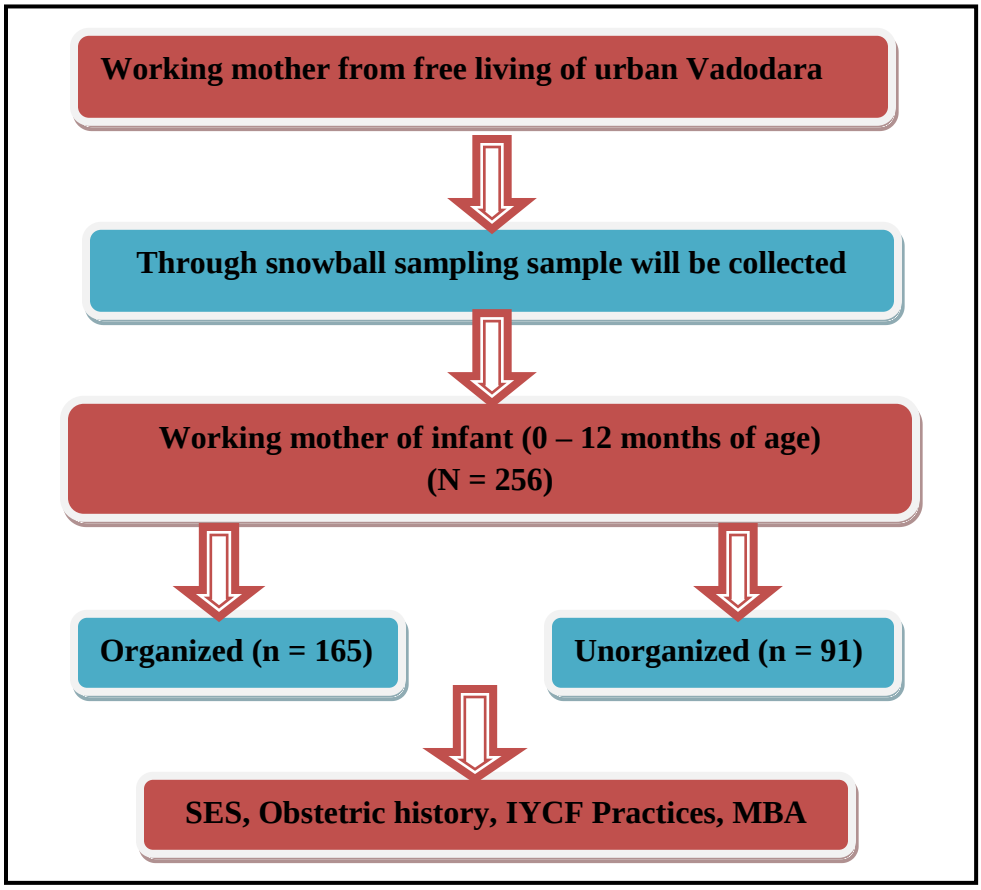


Table 3.1: Tools and Techniques

INDICATOR	PROCEDURE
Socio-Economic Status (SES)	Pre-tested semi-structured questionnaire (Annexure 3.3)
Obstetric History	Pre-tested semi-structured questionnaire (Annexure 3.3)
IYCF practices ● Early initiation of breastfeeding ● Colostrum feeding ● Exclusive breastfeeding till 6 months of age ● Age appropriate initiation of complementary feeding	Semi-structured questionnaire on Early initiation of Breastfeeding, Exclusive Breastfeeding, Complementary feeding (Annexure 3.3)
Maternity Benefit Act ● Awareness about MBA ● Provision of maternity leave from workplace	Semi-structured questionnaire (Annexure 3.3)

PHASE 2: DEVELOPMENT OF BROCHURE FOR CREATING AWARENESS ABOUT MBA

Based on the findings and observations emerging from the first phase of the study, an attempt was made to develop brochure to create awareness about MBA. Brochure are a great way to package information in a simple eye-catching manner.

The Broad Objective was to Develop and Provide Brochure to create awareness among study population.

Specific Objective:

- To create awareness about benefit of breastfeeding among working mothers and
- To create awareness about provision of maternity leave for improving breastfeeding Practices

A Trifold brochure was developed to create awareness regarding IYCF practices and MBA. The content included the following

1. What are the IYCF practices

2. What is the meaning of exclusive breast feeding and complementary feeding,

3. Frequency of breastfeeding and complementary feeding,

4. Advantage of exclusive breastfeeding,

5. Things to remember when starting/initiating complementary feeding

6. Major highlights of MBA.

7. Human Milk Bank

The developed brochure was given to all the participants and they were explained the content in it. (Annexure 3.5)

Data collection procedure, management, and analysis

Data was collected by using pre-tested semi-structured questionnaires through epicollect software (Telephonic interview). Data was simultaneously auto entered into a spreadsheet of epicollect which was kept safe and confidential at the central level. Data were analyzed using appropriate statistical tools. Result has been presented in tabular and/or graphical form. All tests were considered significant at $p<0.05$ level. By using SPSS (version 21) Chi – square test was performed to find the association between different variables and two set up.

RESULTS AND DISCUSSION

This chapter represents the major findings of the study, following the specific objectives of the study. The overall objective of the study was to assess the IYCF practices and awareness about the Maternity Benefit Act among working mothers of children aged 0-12 months of age. The study outcomes are discussed in this chapter. The results of the study broadly presented in 3 sections in line with the objectives of the study

SECTION I: To assess the IYCF practices followed by the working mothers of organized and unorganized sectors

SECTION II To identify the barriers and facilitators in optimal IYCF practices followed by working mothers

SECTION III: To create awareness about the benefits of breastfeeding among working mothers and the provision of maternity leave for improving breastfeeding practices.

SECTION I: TO ASSESS THE IYCF PRACTICES FOLLOWED BY THE WORKING MOTHERS OF THE ORGANIZED AND THE UNORGANIZED SECTORS

Socio-Demographic Information from both the Sector

Table 4.1 shows the demographic profile of the working mothers from organized and unorganized sectors. A total of 256 working mothers were enrolled in the study of which 165 mothers were from the organized sector and 91 from the unorganized sector. Demographic information revealed that 94% of the mothers were Hindus followed by 3% Jain, 2% Muslim, and 1% Christian. According to caste classification, 56.2% of mothers belonged to the General category accompanied by 22.7% OBC, 10.9% ST and 10.2% in the SC category. The majority of the mothers in the organized sector belonged to the General category (69.7%) while mothers from the unorganized sector belonged to OBC (32.9%), General (31.9%), and ST category (18.7%) and the difference was statistically significant. Around 38.3% of mothers lived in the extended family followed by 35.9% in joint family and 25% of the mothers lived in the nuclear family. The distribution was similar in both sectors. The majority of the mothers in the study were in the age range of 26-30 years (43.8%), among them 51.5% were in the organized sector and 29.7% in the unorganized sector. In the unorganized sector, 47.25% of mothers belonged to 19-25 years of age. Only 6.64% of mothers were more

than 36 years of age. A significant difference was seen in the age of the mothers in the two sectors as more younger mothers were there from the unorganized sector.

Table 4.1: Socio Demographic Information from both the Sector

Category	Organized sector		Unorganized sector		Total		Chi Square (P value)
	n = 165	%	n = 91	%	N= 256	%	
Religion							
Hindu	151	91.5	89	97.8	240	93.8	7.230 (0.065)
Muslim	5	3.0	0	0.0	5	2.0	
Jain	7	4.3	0	0.0	7	2.7	
Christian	2	1.2	2	2.2	4	1.6	
Other	0	0.0	0	0.0	0	0.0	
Caste							
SC	11	6.7	15	16.5	26	10.2	34.853 (0.000***)
ST	11	6.7	17	18.7	28	10.9	
OBC	28	16.9	30	32.9	58	22.7	
General	115	69.7	29	31.9	144	56.2	
Type of family							
Nuclear	40	24.3	26	28.5	66	25.8	3.384 (0.184)
Joint	55	33.3	37	40.7	92	35.9	
Extended	70	42.4	28	30.8	98	38.3	
Age of mother							
19-25	15	9.1	43	47.2	58	22.7	48.754 (0.000***)
26-30	85	51.5	27	29.7	112	43.8	
31-35	52	31.5	17	18.7	69	26.9	
>36	13	7.9	4	4.4	17	6.6	
Total Monthly Income							
Don't Know	14	8.5	0	0.00	14	5.5	107.590 (0.000***)
≥199,862	6	3.6	0	0.00	6	2.3	
99,931-199,861	13	7.9	0	0.00	13	5.1	
74,755-99,930	8	4.8	0	0.00	8	3.1	
49,962-74,755	47	28.5	3	3.30	50	19.5	
29,973-49,961	28	17.0	6	6.6	34	13.3	
10,002-29,972	41	24.9	37	40.7	78	30.5	
≤10,001	8	4.8	45	49.4	53	20.7	
Living in Type of House							
Own House	140	84.85	69	75.82	209	81.64	3.187 (0.074)
Rented/Govt. House	25	15.15	22	24.18	47	18.36	

*: p<0.05, **: p<0.01, ***: p<0.001

Education of working mother

Education of mother is one of the major factors which affect IYCF practices followed by them. As shown in Table 4.2 of the total mothers, only 3% of working mothers were illiterate who were from the unorganized sector (8.8%). In organized sector majority of them had Profession or Honours degree (37.6%) and around 40% were graduates, 20% had done intermediate or diploma, 8.5% received High school certificate and only 3% had Middle school certificate whereas in unorganized sector majority i.e. 32% mothers had received Middle school certificate followed by 27.5% had Primary school certificate, 13.2% had High school certificate, 12% had done graduate, 4.4% and 2.2% had done intermediate or diploma and Profession or Honours respectively.

Table 4.2: Educational Qualification of Working Mothers

Category	Organized sector		Unorganized sector		Total		Chi Square (P value)
	n = 165	%	n = 91	%	N=256	%	
Educational qualification of working mother							
Profession or Honours	62	37.6	2	2.2	64	25.0	145.662 (0.000***)
Graduate	51	30.9	11	12.1	62	24.2	
Intermediate or diploma	33	20.0	4	4.4	37	14.4	
High school	14	8.5	12	13.2	26	10.2	
Middle school	5	3.0	29	31.8	34	13.3	
Primary school	0	0.0	25	27.5	25	9.8	
Illiterate	0	0.0	8	8.8	8	3.1	
Educational qualification of father							
Profession or Honours	52	31.5	6	6.6	58	22.7	136.754 (0.000***)
Graduate	78	47.3	7	7.6	85	33.2	
Intermediate or diploma	13	7.8	6	6.6	19	7.4	
High school	11	6.7	4	4.4	15	5.9	
Middle school	11	6.7	37	40.7	48	18.7	
Primary school	0	0.0	29	31.9	29	11.3	
Illiterate	0	0.0	2	2.2	2	0.8	

*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Table 4.3: Occupation of Working Mothers

Category	Organized sector		Unorganized sector		Total		Chi Square (P value)
	n = 165	%	n = 91	%	N=256	%	
Occupation of mother							
Legislators, Senior Officials & Managers	6	3.6	0	0.0	6	2.3	182.137 (0.000***)
Professionals	66	40.0	0	0.0	66	25.8	
Technicians and Associate Professionals	51	30.9	1	1.1	52	20.3	
Clerks	17	10.3	0	0.0	17	6.6	
Skilled Workers and Shop & Market Sales Workers	25	15.2	44	48.3	69	27.0	
Skilled Agricultural & Fishery Workers	0	0.0	0	0.0	0	0.0	
Craft & Related Trade Workers	0	0.0	6	6.6	6	2.3	
Plant & Machine Operators and Assemblers	0	0.0	0	0.0	0	0.0	
Elementary Occupation	0	0.0	40	44.0	40	15.6	
Occupation of father							
Legislators, Senior Officials & Managers	18	10.91	1	1.10	19	7.42	110.766 (0.000***)
Professionals	78	47.27	8	8.79	86	33.59	
Technicians and Associate Professionals	23	13.94	5	5.49	28	10.94	
Clerks	4	2.42	0	0.00	4	1.56	
Skilled Workers and Shop & Market Sales Workers	36	21.82	37	40.66	73	28.52	
Skilled Agricultural & Fishery Workers	3	1.82	1	1.10	4	1.56	
Craft & Related Trade Workers	0	0.00	0	0.00	0	0.00	
Plant & Machine Operators and Assemblers	0	0.00	7	7.69	7	2.73	
Elementary Occupation	1	0.61	30	32.97	31	12.11	
Unemployed	2	1.21	2	2.20	4	1.56	

*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Occupation of Mothers

Looking at the occupational status of mothers (Table 4.3), in the organized sector majority of the mothers were Professional worker (40%), 31% were Technicians and Associate Professional, 15.2% were skilled workers, shop and market sales workers, 10.3% were clerks, only 3.6% were Legislators, Senior officials, and managers. In the unorganized sector, 48.3% of mothers were skilled workers, shop and market sales workers, followed by 44% of mothers who had an elementary occupation, 6.6% were craft & related trade workers, only 1% of the mothers were technicians and associate professionals.

Sanitation and Hygiene Practices Main Source of Drinking Water

All the households had safe drinking facilities available, with most of the household having piped water facilities available inside their house, followed by 26% who had borewell or tube well and 25% had a piped water outside the house but inside their yard. 7% used a public tap as a source for drinking water facilities (Table 4.4). A significant difference was seen in the facilities provided in the two sectors as 43% of households from the organized sector had piped water inside the house as the main source of drinking water, 33% had tube well/bore well, 16% had piped water outside the house but inside the yard, and 7% used bottled water for drinking. In the unorganized sector, 41% of households had piped water outside the house, but inside the yard, 26% had piped water inside the house, 19% and 12% had public tap and tube well/bore well respectively, there was no one from both the sector who used rainwater as drinking water.

With respect to the treatment of water to make it safe for drinking, out of a total of 226 households, 61.50% used water filter, 25% used boiled water, 11% strained the water through a cloth, and 2% of the household had added bleach/chlorine into the water. Drinking water treatment was also significantly different in both the sectors as the majority used water filter (82%) in the organized sector; whereas households in the unorganized sector boiled the water (45%) or strained it through cloth (30%). All the households (100%) from the organized sector had toilet facilities at their home while (91%) of the households in the unorganized sector had toilet facilities.

Table 4.4: Source of Drinking Water

Category	Organized		Unorganized		Total		Chi Square (P value)
	n =165	%	n = 91	%	N = 256	%	
Main source of drinking water							
Piped water inside the house	71	43.0	24	26.4	95	37.1	59.448 (0.000***)
Piped water outside the house but inside the yard	26	15.8	37	40.6	63	24.6	
Public tap	1	0.6	17	18.7	18	7.0	
Bottled water	12	7.3	2	2.2	14	5.5	
Tube well/Bore well	55	33.3	11	12.1	66	25.8	
Rainwater collection	0	0.0	0	0.0	0	0.0	
Treat water in any way to make it safer to drink							
Yes	148	89.7	78	85.7	226	88.3	0.899 (0.343)
No	17	10.3	13	14.3	30	11.7	
Treated water by							
Boil	21	14.2	35	44.9	56	24.8	84.614 (0.000***)
Add bleach/chlorine	2	1.4	3	3.8	5	2.2	
Strain it through a cloth	3	2.0	23	29.5	26	11.5	
Use water filter	122	82.4	17	21.8	139	61.5	
Toilet facility available or not							
Yes	165	100.0	83	91.2	248	96.9	14.973 (0.000***)
No	0	0.0	8	8.8	8	3.1	

*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Use of mass media as a Source of Information

In terms of using mass media for information, 39% of household in the organized sector had all four type of mass media (TV, Radio, Newspaper, and Mobile phone), 33.3% used TV and Mobile phone, 17% had TV, Newspaper and Mobile phone for seeking information, 4.8% had only Mobile phone, 4.2% had TV, Radio and Mobile phone and 1.8% had Newspaper and Mobile phone. Although in the unorganized sector, 65% had stated that they had TV and Mobile phone, followed by 15.4% who had a Mobile phone, 11% had TV, Newspaper and Mobile phone, 5.5% had all four type of mass media, and 2.2% had TV, Radio and Mobile phone. Only one household had none out of four types of mass media (Table 4.5).

Table 4.5: Use of Mass Media as a Source of Information

Category	Organized		Unorganized		Total		Chi Square (P value)
	n =165	%	n = 91	%	N = 256	%	
Type of mass media							
TV, Radio, Mobile phone	7	4.2	2	2.2	9	3.5	50.346 (0.000***)
TV, Newspaper, Mobile phone	28	17.0	10	11.0	38	14.8	
TV, Mobile phone	55	33.3	59	64.8	114	44.5	
Newspaper, Mobile phone	3	1.8	0	0.0	3	1.2	
Mobile phone	8	4.8	14	15.4	22	8.6	
All of the above	64	38.8	5	5.5	69	27.0	
None of the above	0	0.0	1	1.1	1	0.4	

*: p<0.05, **: p<0.01, ***: p<0.001

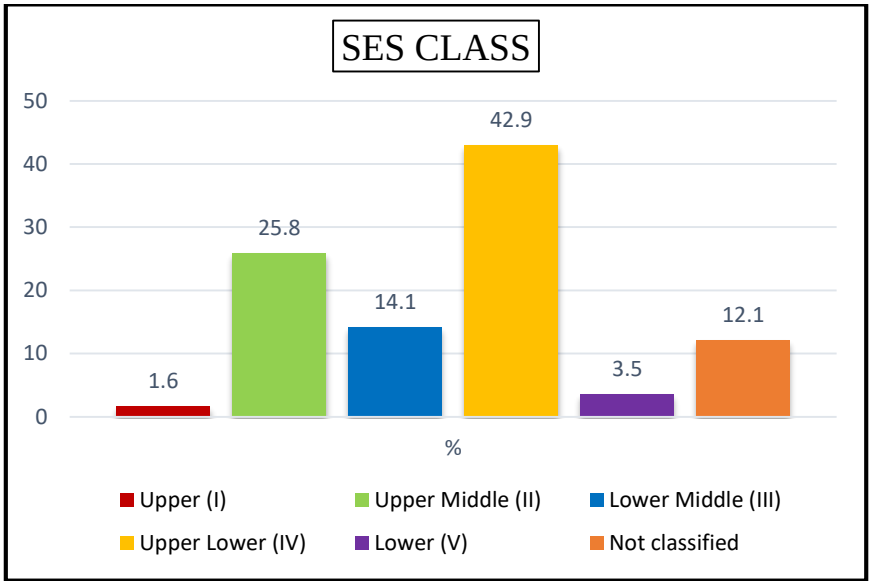
Socio Economic Status of Working Mother

Table 4.6 represents the socio-economic status of working mothers based on Kuppuswami's classification, which comprises monthly family income, educational qualification, and occupation of the head of the family. The score was calculated for each household to classify the SES of the family. According to Kuppuswami's classification in the organized sector, 38% and 33% family belonged to the Upper Middle (II) and the Upper Lower (IV) class respectively, followed by 18% belonging to the Lower Middle (III), 2% to Upper (I) class. However, more than half of the families (61%) from the unorganized sector belonged to the Upper lower (IV) class, and the rest of them belonged to the Lower (10%), the Lower Middle (6%), and the Upper middle (3%) class. None of the mothers from the organized belonged to Lower (V) class and from the unorganized sector to the Upper (I) class. Data could not be ascertained from nearly 12% of the mothers in both sectors.

Table 4.6: Socio Economic Status of Working Mother

Category	Organized sector		Unorganized sector		Total	
	n = 165	%	n = 91	%	N=256	%
Socio-economic class (Kuppuswami's classification)						
Upper (I)	4	2.4	0	0.0	4	1.6
Upper Middle (II)	63	38.2	3	3.3	66	25.8
Lower Middle (III)	30	18.2	6	6.6	36	14.1
Upper Lower (IV)	54	32.7	56	61.5	110	42.9
Lower (V)	0	0.0	9	9.9	9	3.5
Not classified	14	8.5	17	18.7	31	12.1

Figure 4.1: Socio Economic Status of Working Mother



Obstetric History of Working Mothers among two sectors

The data from Table 4.7 shows the obstetric history of the working mothers from both sectors. Only 41% had a normal vaginal delivery, while 59% had a cesarean delivery. A significant difference was seen in the two sectors, as a greater number of mothers from the organized sector had cesarean delivery while in the unorganized sector, more mothers had a normal delivery. 87% of the mothers had full-term delivery, and 13% had preterm as an outcome of delivery. No significant difference was seen in the outcome of delivery among the sectors. Majority (71%) of the deliveries were done in a private hospital, of which the number of deliveries was significantly higher in the organized sector (88%), as compared to the unorganized sector (39%). Around one-fourth of the deliveries took place in Government hospitals, of which more than half (55%) were from unorganized sectors. However, none of the mothers had reported

delivery at home, and ten deliveries at trust hospital. The majority of the mothers (97.3%) revealed that they had received more than 4 Antenatal Care (ANC) check-ups, but 8% of the mothers from the unorganized sector had received less than 4 ANC check-ups. 50% of the mothers responded that they had received counseling during ANC check-ups, a significantly higher number of mothers from the unorganized sector (64%) as compared to 43% mothers from the organized sector. 85% of the mothers had gone for Postnatal Care (PNC) check-ups, and significantly more mothers from the organized sector had received more than 4 PNC care and counseling during Postnatal visits.

Obstetric History of working mother based on place of delivery

Table 4.8 reveals that a higher proportion of a normal delivery had taken place at the government hospital (74%) followed by Trust hospitals (40%) and least in the private (28.7%) hospitals. On the contradictory, higher proportion of cesarean delivery at a private hospital (71%) and a Trust hospital (60%) as compared to a government hospital (26.2%). A significant difference was seen for the type of delivery among the different delivery places. The majority of the mother had delivered a full-term baby irrespective of the delivery place. 97.3% of mothers had received four or more ANC check-ups, remaining 3% had received less than four. Nearly half of the mothers reported receiving counseling during ANC visits. A significantly higher number of the mother who visited government hospital for ANC (74%) had received counseling compared to the mothers who visited a private and trust hospital. 85% of mothers received PNC out of them, 90% had received less than 4 PNC, and only 10.1% more than 4. A significant difference was seen for receiving counseling during PNC. Compared to government and trust hospital, majority of the mother who visits PNC at the private hospital received counseling related feeding practices. Thus, indicating that type of institution facility affects the counseling related to feeding practices where govt hospitals are providing counseling to mothers regarding feeding practices in ANC check-ups and Private hospitals are providing counseling messages to the mother during Postnatal check-ups.

Table 4.7: Sector wise Obstetric History of Working Mothers

Category	Organized sector		Unorganized sector		Total		Chi Square (P value)
	n = 165	%	n = 91	%	N = 256	%	
Type of delivery							
Normal	46	27.88	58	63.74	104	40.63	31.264 (0.000***)
Caesarean	119	72.12	33	36.26	152	59.38	
Outcome of Delivery							
Full term	142	86.06	82	90.11	224	87.50	0.879 (0.348)
Pre term	23	13.94	9	9.89	32	12.50	
Place of delivery							
Private hospital	145	87.88	36	39.56	181	70.70	68.849 (0.000***)
Government hospital	15	9.09	50	54.95	65	25.39	
Home	0	0.00	0	0.00	0	0.00	
Trust	5	3.03	5	5.49	10	3.91	
No. of ANC attended							
< 4	0	0.0	7	7.7	7	2.7	13.049 (0.000***)
≥ 4	165	100	84	92.3	246	97.3	
Received counselling during ANC							
Yes	71	43.03	58	63.74	129	50.39	10.059 (0.002**)
No	94	56.97	33	36.26	127	49.61	
Had gone for PNC check – up							
Yes	153	92.73	64	70.33	217	84.77	22.785 (0.000***)
No	12	7.27	27	29.67	39	15.23	
No. of PNC attended							
< 4	137	89.5	58	90.6	195	89.9	0.058 (0.810)
≥ 4	16	10.5	6	9.4	22	10.1	
Received counselling during PNC							
Yes	110	71.9	39	60.9	149	68.7	2.518 (0.113)
No	43	28.1	25	39.1	68	31.3	

*: p<0.05, **: p<0.01, ***: p<0.001

Table 4.8: Obstetric History of working mother according to place of delivery

Category	Private		Govt.		Trust		Total		Chi Square (P value)
	n = 181	%	n = 65	%	n = 10	%	N = 256	%	
Type of delivery									
Normal	52	28.7	48	73.8	4	40.0	104	40.6	40.360 (0.000***)
Caesarean	129	71.3	17	26.2	6	60.0	152	59.4	
Outcome of Delivery									
Full term	159	87.8	57	87.7	8	80.0	224	87.5	0.536 (0.765)
Pre term	22	12.2	8	12.3	2	20.0	32	12.5	
No. of ANC visit									
< 4	2	1.1	5	7.7	0	0.0	7	2.7	8.096 (0.017*)
≥ 4	179	98.9	60	92.3	10	100.00	249	97.3	
Received counselling during ANC									
Yes	76	42.0	48	73.8	5	50.0	129	50.4	19.417 (0.000***)
No	105	58.0	17	26.2	5	50.0	127	49.6	
Had gone for PNC check – up									
Yes	166	91.7	43	66.2	8	80.0	217	84.8	24.376 (0.000***)
No	15	8.3	22	33.8	2	20.0	39	15.2	
No of PNC visit									
< 4	148	89.2	41	95.3	6	75.0	195	89.9	3.451 (0.178)
≥ 4	18	10.8	2	4.7	2	25.0	22	10.1	
Received counselling during PNC									
Yes	117	70.5	24	55.8	8	80.0	149	68.7	7.206 (0.027*)
No	49	29.5	19	44.2	0	0.0	68	31.3	

*: p<0.05, **: p<0.01, ***: p<0.001

Sector wise distribution of children

According to Table 4.9, there was statistically no significant difference was seen among children from the organized and the unorganized belonged to 0 – 6 months, 6 – 8 months, and 9 – 12 months of age. More than half of the children were the firstborn child. No statistical difference was seen among the gender of a child between the two set up. More than half (53%) of children had normal birth weight, which was between 2500-3000 gram. No significant difference was seen for the birth weight of the child among the two set up.

Table 4.9: Sector wise distribution of children

Category	Organized		Unorganized		Total		Chi Square (P value)
	n = 165	%	n = 91	%	N = 256	%	
Age category							
0–6 month	77	46.7	41	45.1	118	46.1	0.061 (0.804)
6-12 month	88	53.3	50	54.9	138	53.9	
Age in month							
0-6 month	77	46.7	41	45.1	118	46.1	0.363 (0.834)
6-8 month	38	23.0	24	26.4	62	24.2	
9 -12 month	50	30.3	26	28.6	76	29.7	
Birth order							
1	121	73.3	34	37.4	155	60.5	41.304 (0.000***)
2	43	26.1	44	48.4	87	34.0	
3	1	0.6	9	9.9	10	3.9	
4	0	0.0	4	4.4	4	1.6	
Gender of child							
Male	95	57.6	48	52.7	143	55.9	0.555 (0.456)
Female	70	42.4	43	47.3	113	44.1	
Birth weight of child							
< 2500	32	19.4	19	20.9	51	19.9	0.137 (0.934)
2500 – 3000	89	53.9	47	51.6	136	53.1	
>3000	44	26.7	25	27.5	69	27.0	

*: p<0.05, **: p<0.01, ***: p<0.001

Sector wise distribution of mother who face difficulty while Breastfeeding

Table 4.10 shows the difficulties reported by the mothers at the time of breastfeeding the baby. 16.8% of the mothers reported facing difficulties while breastfeeding their baby. Among the mothers who reported, 24.2% were from the organized sector and 3.3% from the unorganized sector. Thus, indicating more mothers from the organized sector reported the difficulties faced, and the difference was statistically significant. More number (61.5%) of the mothers from the unorganized sector had prior experience of breastfeeding as compared to 26.1% of the mothers from the organized sector, and the difference was statistically significant leading to a smaller number of mothers from the unorganized sector reporting the difficulties faced by them while breastfeeding their babies.

Table 4.10: Sector wise distribution of mother who faced difficulty while Breastfeeding

Category	Organized		Unorganized		Total		Chi Square (P value)
	n = 165	%	n = 91	%	N = 256	%	
Mother face any difficulty while Breastfeeding							
Yes	40	24.2	3	3.3	43	16.8	18.412 (0.000***)
No	125	75.8	88	96.7	213	83.2	
Have prior experience of Breastfeeding							
Yes	43	26.1	56	61.5	99	38.7	31.128 (0.000***)
No	122	73.9	35	38.5	157	61.3	

*: p<0.05, **: p<0.01, ***: p<0.001

❖ **Children who received Timely Initiation of Breastfeeding**

Early Initiation of Breastfeeding among both sectors

Table 4.11 highlights the relationship with the initiation of breastfeeding practices among mothers from both sectors. Initiation of breastfeeding within 1 hour of birth was more practiced by mothers from the unorganized sector (48%) compared to the organized sector (34%) due to prior experience of mothers. 9% of mothers had started breastfeeding after more than four days, of which, the majority of mothers were from the organized sector (11%). Although no significant difference was found in the initiation of breastfeeding between the two sectors, 64% of mothers from the unorganized sector had initiated within one day compared to 50% of mothers from the organized sector. Almost 2/3rd of mothers who initiated breastfeeding within one hour of birth, a majority had taken support of the family member, of which half and three fourth of them belonged to organized and unorganized sector respectively. Nearly 1/3rd of the mothers reported support from Nurses, the majority from the organized sector. Only one mother from the organized sector stated that she had taken the help of a lactation counsellor for initiation within one hour, and two of the mothers had done early initiation by themselves as they had prior experience of breastfeeding and the difference was statistically significant. C-section (49%) was the most revealed reason for late initiation of breastfeeding, followed by 24% of mothers who had feeding issue, and 17% stated that their baby was not well as the baby had breathing problem, low birth weight, sugar level issue so needs to put in the incubator so, they were not able to give breastfeeding within one hour of birth. In the organized sector, nearly 3/4 of the mothers gave formula milk, and 14% gave animal milk like goat's

milk, cow's milk till breastfeeding initiated, and one mother had also stated that she had given packaged milk like Amul Gold. However, in the unorganized sector, 47% and 21% of mothers had given formula milk and animal milk respectively, and 11% had given donor's milk as it was available from the Milk Bank at Government hospital. No one from the organized sector had given donors milk because most deliveries took place at a private hospital, and there was no such facility as the milk bank. 13% of babies received nothing till breastfeeding was initiated, most of them from the unorganized sector. Thus, the feed given in the two sectors was different, and the difference was statistically significant.

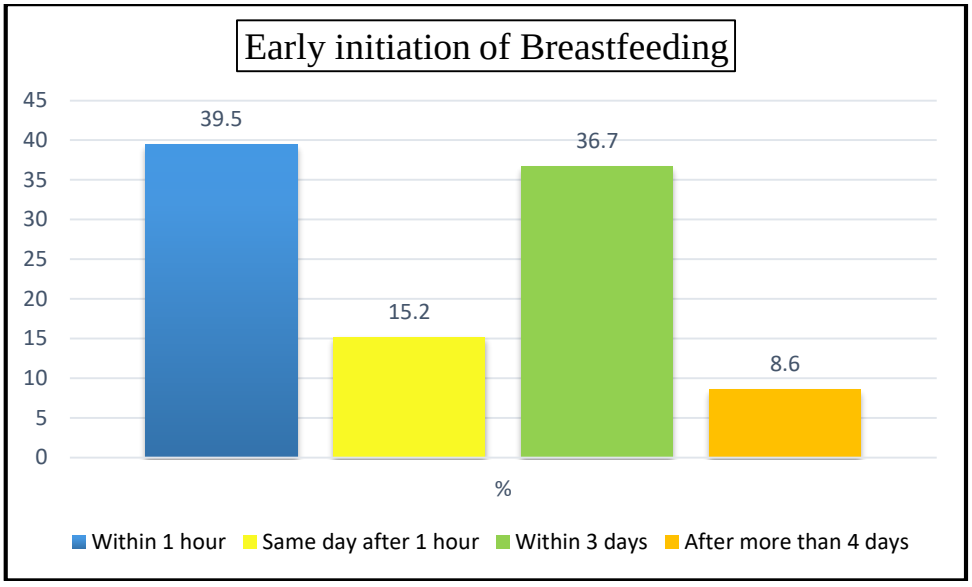
Table 4.11: Early Initiation of Breastfeeding among both sector

Category	**Organized sector**		**Unorganized sector**		**Total**		**Chi Square (P value)**
	n = 165	**%**	**n = 91**	**%**	**N = 256**	**%**	
Initiation of Breastfeeding							
Within 1 hour	57	34.5	44	48.4	101	39.5	6.636 (0.084)
Same day after 1 hour	25	15.2	14	15.4	39	15.2	
Within 3 days	65	39.4	29	31.9	94	36.7	
After more than 4 days	18	10.9	4	4.4	22	8.6	
If within 1hr who helped							
	n = 57	**%**	**n = 44**	**%**	**N = 101**	**%**	
Doctor	0	0.0	2	4.5	2	2.0	16.120 (0.002**)
Nurses	26	45.6	8	18.2	34	33.7	
Family member	29	50.9	33	75.0	62	61.4	
Lactation counsellor	1	1.8	0	0.0	1	1.0	
Mother herself	1	1.8	1	2.3	2	2.0	
Reason for late initiation of Breastfeeding							
	n = 108	**%**	**n = 47**	**%**	**N = 155**	**%**	11.744 (0.015*)
C – section	61	56.5	15	31.9	76	49.0	
Baby not well	16	14.8	10	21.3	26	16.8	
Mother not well	10	9.3	4	8.5	14	9.0	
Feeding	21	19.4	16	34.0	37	23.9	

issues							
Family ritual	0	0.0	2	4.3	2	1.3	
Feed given to child till breastfeeding initiated							
Animal milk	15	13.9	10	21.3	25	16.1	22.354 (0.000***)
Formula milk	81	75.0	22	46.8	103	66.5	
Donor's milk	0	0.0	5	10.6	5	3.2	
Packaged milk	1	0.9	1	2.1	2	1.3	
Nothing	11	10.2	9	19.1	20	12.9	

*: p<0.05, **: p<0.01, ***: p<0.001

Figure 4.2: Prevalence of Early Initiation of Breastfeeding



Sector wise distribution of Place of delivery and early initiation of Breastfeeding

According to Table 4.12 and 4.13, a statistical difference was observed in the relationship between delivery place and early initiation of breastfeeding and who helped to initiate breastfeeding in the organized sector. As in the organized sector, 30.3%, 73.3%, and 40% of mothers had started breastfeeding within one hour of birth whose delivery was at Private, Government, and Trust hospitals respectively. Compared to the organized sector there were a majority of mothers from the unorganized sector who started breastfeeding within one hour of birth, 39% were those

whose delivery was at a private hospital, 52% whose delivery in a government hospital, and 80% of those whose delivery was in Trust hospital.

When inquired about the help they received in initiating breastfeeding within 1 hour, 48% of the mothers said that they were supported by the nurses in a private hospital, whereas, 87% of mothers from the Government hospital and 67% from a Trust hospital stated that they were facilitated by their family members. Very few reported that they were supported by doctors and lactation counselors. 3% of the mothers reported that they themselves initiated breastfeeding within 1 hour. The difference was significant as the majority of the deliveries in the organized sector were in private hospitals whereas, in the unorganized sector, most of them were in Government hospitals.

Sector wise distribution of place of delivery and reason for late initiation of Breastfeeding

Table 4.14 highlights that in the organized sector from a private hospital, the majority (58%) of mother stated C-section as the reason for late initiation of breastfeeding, followed by 19% who had feeding issue, 14% specified that baby was not well as they had some breathing problem or were low birth weight and needs to put in an incubator. 9% of the mothers reported that they were not well or were not able to sit. Similar findings were observed in Trust hospital. However, the deliveries were few.

In the unorganized sector, irrespective of the delivery in private or Government hospitals, most of the mothers reported that they had feeding issues due to which they were not able to initiate breastfeeding, followed by C- section. 8% of the mothers also reported family rituals as the cause for delay in initiation of breastfeeding.

Table 4.12: Sector wise distribution of Place of delivery and early initiation of Breastfeeding

Category	Organized						Unorganized						Total					
	Private		Govt.		Trust		Private		Govt.		Trust		Private		Govt.		Trust	
	n=145	%	n=15	%	n = 5	%	n=36	%	n=50	%	n=5	%	N=181	%	N=65	%	N=10	%
Initiation of Breastfeeding																		
Within 1 hour	44	30.3	11	73.3	2	40.0	14	38.9	26	52.0	4	80.0	58	32.0	37	56.9	6	60.0
Same day after 1 hour	22	15.2	1	6.7	2	40.0	6	16.7	8	16.0	0	0.0	28	15.5	9	13.8	2	20.0
Within 3 days	61	42.1	3	20.0	1	20.0	13	36.1	15	30.0	1	20.0	74	40.9	18	27.7	2	20.0
More than 4 days	18	12.4	0	0.0	0	0.0	3	8.3	1	2.0	0	0.0	21	11.6	1	1.5	0	0.0
If within 1hr who helped																		
Doctor	0	0.0	0	0.0	0	0.0	1	7.1	1	3.8	0	0.0	1	1.7	1	2.7	0	0.0
Nurses	24	54.5	1	9.1	1	50.0	4	28.6	3	11.5	1	25.0	28	48.3	4	10.8	2	33.3
Family member	18	40.9	10	90.9	1	50.0	8	57.1	22	84.6	3	75.0	26	44.8	32	86.5	4	66.7
Lactation counselor	1	2.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	1.7	0	0.0	0	0.0
Mother herself	1	2.3	0	0.0	0	0.0	1	7.1	0	0.0	0	0.0	2	3.4	0	0.0	0	0.0

Table 4.13: Chi square value for Sector wise distribution of Place of delivery and early initiation of Breastfeeding

Category	Set up		Total
	Organized	Unorganized	
Initiation of BF			
Within 1 hour Same day after 1 hour Within 3 days More than 4 days	11.999 (0.024*)	4.510 (0.603)	17.992 (0.003**)
If within 1hr who helped			
Doctor Nurses Family member Lactation counsellor Mother herself	25.771 (0.001)	11.024 (0.166)	37.550 (0.000***)

*: p<0.05, **: p<0.01, ***: p<0.001

Regarding the feed given before breastfeeding was initiated, in both the sectors, irrespective of the place of delivery, a majority of the mothers reported giving formula milk to their babies (71% in private, 39% in Govt and 100% in Trust hospital), followed by animal milk (18% in private, 11% in Govt and 0% in Trust hospital). 18% of the mothers in the unorganized sector reported giving Donor's breastmilk to their babies.

Colostrum and Prelacteal feeding among both set up

According to Table 4.16, no significant difference was seen among the practices followed by working mothers from organized and unorganized sectors regarding colostrum feeding as 88% of the mothers gave colostrum to their child (90.3% mothers from organized and 83.5% from unorganized sector). Only 22% of the mothers reported giving Prelacteal to their child immediately after birth due to cultural beliefs. A higher proportion of mothers from both organized (75.2%) and unorganized (83.5%) had not fed any prelacteal feed to their baby because they had knowledge that Prelacteal was not good for health (62%) accompanied by 31% were advised by the doctor.

Table 4.14: Sector wise distribution of place of delivery and reason for late initiation of Breastfeeding

Category	Organized						Unorganized						Total					
	Private		Govt.		Other		Private		Govt.		Other		Private		Govt.		Other	
	n=101	%	n=4	%	n = 3	%	n=22	%	n=26	%	n=1	%	N=123	%	N=28	%	N=4	%
Reason for late initiation of Breastfeeding																		
C – section	59	58.4	0	0.0	2	66.7	8	36.4	6	25.0	1	100.0	67	54.5	6	21.4	3	75.0
Baby not well	14	13.9	2	50.0	0	0.0	4	18.2	6	25.0	0	0.0	18	14.6	8	28.6	0	0.0
Mother not well	9	8.9	1	25.0	0	0.0	1	4.5	3	12.5	0	0.0	10	8.1	4	14.3	0	0.0
Feeding issues	19	18.8	1	25.0	1	33.3	9	40.9	7	29.2	0	0.0	28	22.8	8	28.6	1	25.0
Family ritual	0	0.0	0	0.0	0	0.0	0	0.0	2	8.3	0	0.0	0	0.0	2	7.1	0	0.0
Feed given to the child till breastfeeding was initiated																		
Animal milk	15	14.9	0	0.0	0	0.0	7	31.8	3	12.5	0	0.0	22	17.9	3	10.7	0	0.0
Formula milk	76	75.2	2	50.0	3	100.0	12	54.5	9	37.5	1	100.0	88	71.5	11	39.3	4	100.0
Donor’s milk	0	0.0	0	0.0	0	0.0	0	0.0	5	20.8	0	0.0	0	0.0	5	17.9	0	0.0
Packaged milk	1	1.0	0	0.0	0	0.0	1	4.5	0	0.0	0	0.0	2	1.6	0	0.0	0	0.0
Nothing	9	8.9	2	50.0	0	0.0	2	9.1	7	29.2	0	0.0	11	8.9	9	32.1	0	0.0

Table 4.15: Chi square value for place of delivery and reason for late initiation of BF among two set up

Category	Set up		Total
	Organized	Unorganized	
Reason for late initiation of BF			
C – section	8.643 (0.100)	7.904 (0.617)	18.238 (0.009**)
Baby not well			
Mother not well			
Feeding issues			
Family ritual			
What was given to the child till breastfeeding was initiate			
Animal milk	16.477 (0.025)	14.690 (0.096)	41.645 (0.000***)
Formula milk			
Donor's milk			
Packaged milk			
Nothing			

*: p<0.05, **: p<0.01, ***: p<0.001

Sector wise distribution for place of delivery and Colostrum & Prelacteal feeding

According to the place of delivery, no statistical difference was observed among the practices followed by the mothers regarding colostrum and prelacteal feeding (Table 4.17 & 4.18). The cultural belief was the most common reason for giving prelacteal to the child in the unorganized sector. Other reasons given by mother was good for health or no specific reason for giving prelacteal as they said "aam j aapyu tu".

Table 4.16: Colostrum and Prelacteal feeding among both sector

Category	Organized sector		Unorganized sector		Total		Chi Square (P value)
	n = 165	%	n = 91	%	N = 256	%	
Colostrum Given							
Yes	149	90.3	76	83.5	225	87.9	2.538 (0.111)
No	16	9.7	15	16.5	31	12.1	
Prelacteal given							
Yes	41	24.8	15	16.5	56	21.9	2.401 (0.121)
No	124	75.2	76	83.5	200	78.1	
Reason of giving Prelacteal							
Cultural belief	39	95.1	14	93.3	53	94.6	2.461

Other	2	4.9	1	6.7	3	5.4	(0.292)
If no, then advised by							
Doctor	40	32.3	21	27.6	61	30.5	12.682 (0.027*)
AWW/ANM	1	0.8	3	3.9	4	2.0	
Family member	1	0.8	6	7.9	7	3.5	
Mother had knowledge	80	64.5	44	57.9	124	62.0	
Other reasons	2	1.6	2	2.6	4	2.0	

*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Initiation of Breastfeeding according to Age of mother

As regard to initiation of breastfeeding based on the age of the mother, no significant difference was observed (Table 4.19) as 39.5% of mothers had initiated breastfeeding within one hour of birth, of which nearly half (51.7%) were of the age between 19 – 25 years and 41% of them were aged 31 – 35 years. Mothers who didn't initiate BF within one hour, a majority had given formula milk (66.5%), and the least gave packaged milk (1.3%) such as Amul gold till breastfeeding initiated. Statistically, a significant difference was observed. About colostrum feeding, there was a significant difference observed contradictory to Prelacteal feeding.

Initiation of Breastfeeding according to Education of mother

Table 4.20 reveals based on the education of the mother no statistical difference was seen for early initiation of breastfeeding. 130 mothers had begun to give top milk (66% formula milk, 16.1% animal milk & 1.3% packaged milk) to their child which might increase the risk of morbidities especially diarrhea. It was a great observation that 3.5% of the mother had fed their baby with donor's breast milk in place of giving other top milk made a significant difference. A higher proportion of mothers had followed correct practices for colostrum and Prelacteal feeding

Table 4.17: Sector wise distribution for place of delivery and Colostrum & Prelacteal feeding

Category	Organized						Unorganized						Total					
	Private		Govt.		Trust		Private		Govt.		Trust		Private		Govt.		Trust	
	n=145	%	n=15	%	n = 5	%	n=36	%	n=50	%	n=5	%	n=181	%	n=65	%	n=10	%
Colostrum feeding																		
Yes	129	89.0	15	100.0	5	100.0	29	80.6	42	84.0	5	100.0	158	87.3	57	87.7	10	100.0
No	16	11.0	0	0.0	0	0.0	7	19.4	8	16.0	0	0.0	23	12.7	8	12.3	0	0.0
Prelacteal feeding																		
Yes	39	26.9	1	6.7	1	20.0	10	27.8	5	10.0	0	0.0	49	27.1	6	9.2	1	10.0
No	106	73.1	14	93.3	4	80.0	26	72.2	45	90.0	5	100.0	132	72.9	59	90.8	9	90.0
Reason for giving Prelacteal																		
Cultural belief	37	94.9	1	100	1	100.0	10	100.0	4	80.0	0	0.0	47	95.9	5	83.3	1	100.0
Other	2	5.1	0	0.0	0	0.0	0	0.0	1	20.0	0	0.0	2	4.1	1	16.7	0	0.0
If no, advised by																		
Doctor	36	34.0	2	14.3	2	50.0	7	26.9	11	24.4	3	60.0	43	32.6	13	22.0	5	55.6
AWW/ANM	1	0.9	0	0.0	0	0.0	0	0.0	3	6.7	0	0.0	1	0.8	3	5.1	0	0.0
Family member	1	0.9	0	0.0	0	0.0	2	7.7	4	8.9	0	0.0	3	2.3	4	6.8	0	0.0
Mother had knowledge	67	63.2	12	85.7	1	25.0	17	65.4	26	57.8	1	20.0	84	63.6	38	64.4	2	22.2
Other reasons	1	0.9	0	0.0	1	25.0	0	0.0	1	2.2	1	20.0	1	0.8	1	1.7	2	22.2

Table 4.18: Chi square value for Colostrum and Prelacteal feeding among two set up

Category	Organized	Unorganized	Total
Colostrum feeding			
Yes	2.444	1.225	1.441
No	(0.295)	(0.542)	(0.487)
Prelacteal feeding			
Yes	3.044	5.849	9.766
No	(0.218)	(0.054)	(0.008**)
Reason for giving Prelacteal			
Cultural belief	2.718	2.344	3.366
Other	(1.000)	(0.095)	(0.343)
If no, advised by			
Doctor	14.983	9.477	20.850
AWW/ANM	(0.103)	(0.029*)	(0.004**)
Family member/ Relatives			
Mother have knowledge			
Other reasons			

*: p<0.05, **: p<0.01, ***: p<0.001

Table 4.19: Distribution of initiation of Breastfeeding according to Age of Mother

Category	Age of Mother										Chi Square (P Value)
	19-25		26-30		31-35		>36		Total		
	n=58	%	n= 112	%	n=69	%	n=17	%	N=256	%	
Initiation of Breastfeeding											
Within 1 hour	30	51.7	40	35.7	28	40.6	3	17.6	101	39.5	16.874 (0.051)
Same day after 1 hour	3	5.2	18	16.1	14	20.3	4	23.5	39	15.2	
Within 3 days	22	37.9	43	38.4	23	33.3	6	35.3	94	36.7	
More than 4 days	3	5.2	11	9.8	4	5.8	4	23.5	22	8.6	
Feed given to the child till breastfeeding was initiated											
Animal milk	9	32.1	10	13.9	4	9.8	2	14.3	25	16.1	26.198 (0.014*)
Formula milk	12	42.9	54	75.0	27	65.9	10	71.4	103	66.5	
Donor's milk	3	10.7	1	1.4	1	2.4	0	0.0	5	3.2	
Packaged milk	1	3.6	0	0.0	1	2.4	0	0.0	2	1.3	
Nothing	3	10.7	7	9.7	8	19.5	2	14.3	20	12.9	
Colostrum feeding											
Yes	42	72.4	103	92.0	66	95.7	14	82.4	225	87.9	19.195 (0.000***)
No	16	27.6	9	8.0	3	4.3	3	17.6	31	12.1	
Prelacteal feeding											
Yes	11	19.0	30	26.8	12	17.4	3	17.6	56	21.9	2.857 (0.414)
No	47	81.0	82	73.2	57	82.6	14	82.4	200	78.1	

*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Figure 4.3: Prevalence of Colostrum and Prelacteal Feeding

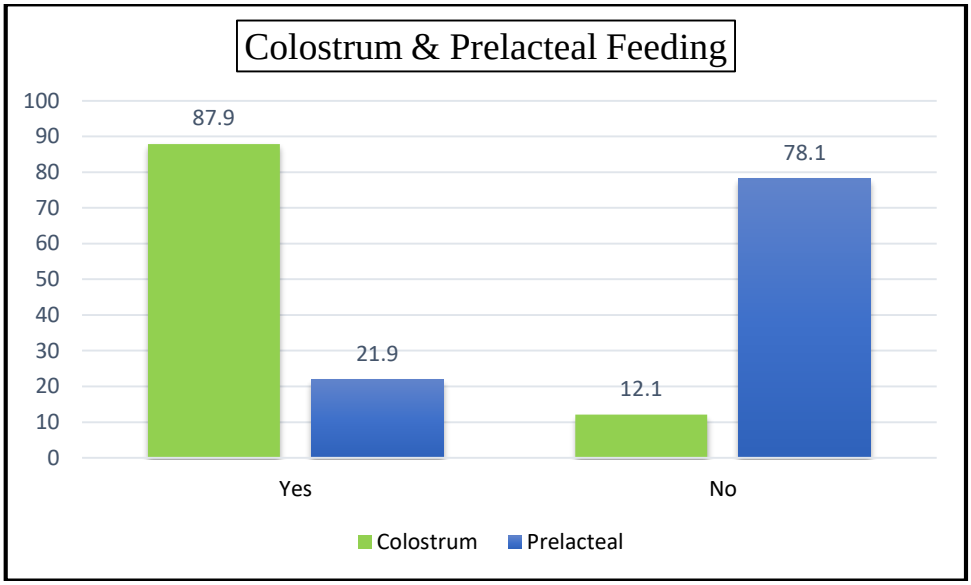


Table 4.20: Distribution of initiation of BF according to Education of mother

Category	Education of Mother																Chi Square (P Value)
	Post-graduate or professional degree		Graduate degree		Intermediate or post-high school diploma		High school certificate		Middle school certificate		Primary school or literate		Illiterate		Total		
	n=64	%	n=62	%	n=37	%	n=26	%	n=34	%	n=25	%	n=8	%	N=256	%	
Initiation of BF																	
Within 1 hour	16	25.0	23	37.1	15	40.5	12	46.2	20	58.8	13	52.0	2	25.0	101	39.5	22.669 (0.204)
Same day after 1 hour	9	14.1	12	19.4	5	13.5	3	11.5	4	11.8	5	20.0	1	12.5	39	15.2	
Within 3 days	32	50.0	20	32.3	13	35.1	10	38.5	7	20.6	7	28.0	5	62.5	94	36.7	
More than 4 days	7	10.9	7	11.3	4	10.8	1	3.8	3	8.8	0	0.0	0	0.0	22	8.6	
Feed given to the child till breastfeeding was initiated																	
Animal milk	6	12.5	5	12.8	3	13.6	6	42.9	1	7.1	0	0.0	4	66.7	25	16.1	65.329 (0.000***)
Formula milk	41	85.4	28	71.8	13	59.1	6	42.9	9	64.3	5	41.7	1	16.7	103	66.5	
Donor's milk	0	0.0	0	0.0	1	4.5	1	7.1	1	7.1	2	16.7	0	0.0	5	3.2	
Packaged milk	0	0.0	1	2.6	0	0.0	1	7.1	0	0.0	0	0.0	0	0.0	2	1.3	

Nothing	1	2.1	5	12.8	5	22.7	0	0.0	3	21.4	5	41.7	1	16.7	20	12.9	
Colostrum feeding																	
Yes	57	89.1	55	88.7	33	89.2	23	88.5	28	82.4	22	88.0	7	87.5	225	87.9	1.169
No	7	10.9	7	11.3	4	10.8	3	11.5	6	17.6	3	12.0	1	12.5	31	12.1	(0.978)
Prelacteal feeding																	
Yes	18	28.1	19	30.6	6	16.2	6	23.1	4	11.8	1	4.0	2	25.0	56	21.9	11.722
No	46	71.9	43	69.4	31	83.8	20	76.9	30	88.2	24	96.0	6	75.0	200	78.1	(0.068)

*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Initiation of Breastfeeding according to Occupation of mother

Table 4.21 indicate based on the occupation of the mother. Early initiation of breastfeeding ranged between 8.6% (after more than four days) to 37% (within three days of birth). No significant difference seen in early initiation based on the mother's occupation. More than half of mothers had given formula milk followed by 16.1% had given animal milk (cow's milk, goat's milk). Significantly more mother fed their child with colostrum (88%) and not giving Prelacteal feeding (78.1%).

Initiation of Breastfeeding according to Type of delivery

Early or timely initiation of breastfeeding is closely linked with the type of delivery is statistically presented in Table 4.22. Children who received breastfeeding within one hour of birth were more observed in normal delivery (62.5%) compared to cesarean delivery (24%). Unfortunately, 48% started to receive BF within three days after birth because of C-section which was least in normal delivery (20.2%). So that significant difference was observed ($P<0.005$), and it indicates normal delivery leads to correct and timely initiation of breastfeeeding. No statistically significant difference was found for colostrum and Prelacteal feeding based on the type of delivery

Table 4.21: Distribution of initiation of Breastfeeding according to Occupation of mother

Category	Occupation of Mother																Chi Square (P Value)
	Legislators, Senior Officials & Managers		Professionals		Technicians and Associate Professionals		Clerks		Skilled Workers and Shop & Market Sales Workers		Craft & Related Trade Workers		Elementary Occupation		Total		
	n=6	%	n=66	%	n=52	%	n=17	%	n=69	%	n=6	%	n=40	%	N=256	%	
Initiation of BF																	
Within 1 hour	1	16.7	20	30.3	16	30.8	8	47.1	33	47.8	4	66.7	19	47.5	101	39.5	28.140 (0.060)
Same day after 1 hour	0	0.0	9	13.6	10	19.2	3	17.6	12	17.4	0	0.0	5	12.5	39	15.2	
Within 3 days	2	33.3	29	43.9	22	42.3	6	35.3	19	27.5	2	33.3	14	35.0	94	36.7	
More than 4 days	3	50.0	8	12.1	4	7.7	0	0.0	5	7.2	0	0.0	2	5.0	22	8.6	
What was given to the child till breastfeeding was initiated																	
Animal milk	0	0.0	6	13.0	4	11.1	2	22.2	7	19.4	1	50.0	5	23.8	25	16.1	41.536 (0.025*)
Formula milk	5	100.0	37	80.4	26	72.2	7	77.8	19	52.8	0	0.0	9	42.9	103	66.5	

Donor's milk	0	0.0	0	0.0	0	0.0	0	0.0	2	5.6	0	0.0	3	14.3	5	3.2	
Packaged milk	0	0.0	0	0.0	1	2.8	0	0.0	1	2.8	0	0.0	0	0.0	2	1.3	
Nothing	0	0.0	3	6.5	5	13.9	0	0.0	7	19.4	1	50.0	4	19.0	20	12.9	
Colostrum feeding																	
Yes	5	83.3	58	87.9	49	94.2	15	88.2	60	87.0	4	66.7	34	85.0	225	87.9	4.993
No	1	16.7	8	12.1	3	5.8	2	11.8	9	13.0	2	33.3	6	15.0	31	12.1	(0.545)
Prelacteal feeding																	
Yes	0	0.0	18	27.3	13	25.0	6	35.3	16	23.2	0	0.0	3	7.5	56	21.9	11.480
No	6	100.0	48	72.7	39	75.0	11	64.7	53	76.8	6	100.0	37	92.5	200	78.1	(0.075)

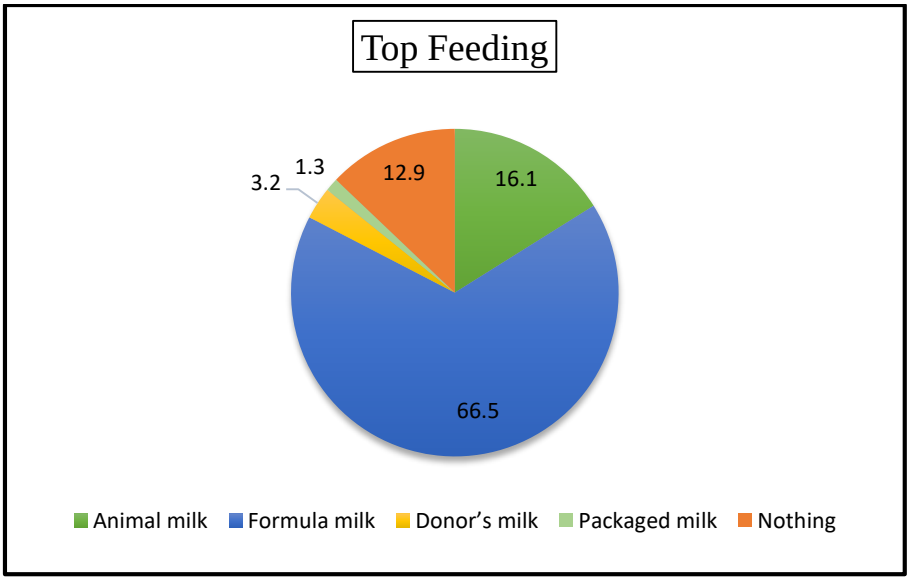
*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Table 4.22: Distribution of initiation of BF according to Type of delivery

Category	Type of delivery						Chi Square (P Value)
	Normal		Caesarean		Total		
	n=104	%	n=152	%	N=256	%	
Initiation of Breastfeeding							
Within 1 hour	65	62.5	36	23.7	101	39.5	43.329 (0.000)
Same day after 1 hour	15	14.4	24	15.8	39	15.2	
Within 3 days	21	20.2	73	48.0	94	36.7	
More than 4 days	3	2.9	19	12.5	22	8.6	
Feed given to the child till breastfeeding was initiated							
Animal milk	8	20.5	17	14.7	25	16.1	50.019 (0.000***)
Formula milk	19	48.7	84	72.4	103	66.5	
Donor's milk	1	2.6	4	3.4	5	3.2	
Packaged milk	0	0.0	2	1.7	2	1.3	
Nothing	11	28.2	9	7.8	20	12.9	
Colostrum feeding							
Yes	91	87.5	134	88.2	225	87.9	0.025 (0.874)
No	13	12.5	18	11.8	31	12.1	
Prelacteal feeding							
Yes	17	16.3	39	25.7	56	21.9	3.133 (0.077)
No	87	83.7	113	74.3	200	78.1	

*: p<0.05, **: p<0.01, ***: p<0.001

Figure 4.4: Prevalence of top feeding till breastfeeding was initiated



Initiation of Breastfeeding according to No. of ANC visit

Table 4.23 shows that 39.5% had received breastfeeding within one hour of birth, of which 43% were those who visited less than 4 ANC and 39.4% were those who visited more than 4 ANC. Based on the ANC visits, no statistical difference was seen for EIBF. There was more proportion of mothers who had visited more than 4 ANC than less than 4. Unfortunately, more mothers who received more than 4 ANC had followed incorrect feeding practices as giving top milk as compared to those who received less than 4 ANC.

Table 4.23: Distribution of initiation of Breastfeeding according to No. of ANC visit

Category	No of ANC visit						Chi Square (P Value)
	< 4		>4		Total		
	n=7	%	n=249	%	N=256	%	
Initiation of Breastfeeding							
Within 1 hour	3	42.9	98	39.4	101	39.5	0.718 (0.869)
Same day after 1 hour	1	14.3	38	15.3	39	15.2	
Within 3 days	3	42.9	91	36.5	94	36.7	
More than 4 days	0	0.0	22	8.8	22	8.6	
Feed given to the child till breastfeeding was initiated							
Animal milk	1	25.0	24	15.9	25	16.1	8.176 (0.147)
Formula milk	1	25.0	102	67.5	103	66.5	
Donor's milk	1	25.0	4	2.6	5	3.2	
Packaged milk	0	0.0	2	1.3	2	1.3	
Nothing	1	25.0	19	12.6	20	12.9	
Colostrum feeding							
Yes	5	71.4	220	88.4	225	87.9	1.410 (0.203)
No	2	28.6	29	11.6	31	12.1	
Prelacteal feeding							
Yes	1	14.3	55	22.1	56	21.9	0.267 (1.000)
No	6	85.7	194	77.9	200	78.1	

Initiation of Breastfeeding according to received Counselling related to feeding practices during ANC visit

More than one-third of mothers had initiated breastfeeding within one hour of birth (Table 4.24), nearly half of them positively replied about receiving counseling related to feeding practices during their ANC visit, and the remaining 31% had not received which, indicates a significant difference (P<0.05). As regards to feeding practices till breastfeeding initiated, top milk was more practiced by mother who didn't receive counseling during ANC, and the difference was statistically significant. Around 88% reported that they had given colostrum, and 78.1% had not given prelacteal feeds to their children.

Table 4.24: Distribution of initiation of Breastfeeding according to received Counselling related to feeding practices during ANC visit

Category	Receive counselling related to feeding practices						Chi Square (P Value)
	Yes		No		Total		
	n=129	%	n=127	%	N=256	%	
Initiation of Breastfeeding							
Within 1 hour	62	48.1	39	30.7	101	39.5	11.755 (0.008**)
Same day after 1 hour	22	17.1	17	13.4	39	15.2	
Within 3 days	37	28.7	57	44.9	94	36.7	
More than 4 days	8	6.2	14	11.0	22	8.6	
What was given to the child till breastfeeding was initiated							
Animal milk	7	10.4	18	20.5	25	16.1	14.324 (0.008**)
Formula milk	44	65.7	59	67.0	103	66.5	
Donor's milk	4	6.0	1	1.1	5	3.2	
Packaged milk	1	1.5	1	1.1	2	1.3	
Nothing	11	16.4	9	10.2	20	12.9	
Colostrum feeding							
Yes	115	89.1	110	86.6	225	87.9	0.386 (0.534)
No	14	10.9	17	13.4	31	12.1	
Prelacteal feeding							
Yes	23	17.8	33	26.0	56	21.9	2.490 (0.115)
No	106	82.2	94	74.0	200	78.1	

*: p<0.05, **: p<0.01, ***: p<0.001

Initiation of Breastfeeding according to Birth Weight of child

Table 4.25 highlights the initiation of breastfeeding based on the birth weight of the child. Statistically, no significant difference found for EIBF, top feeding as well as colostrum and Prelacteal feeding.

Table 4.25: Distribution of initiation of BF according to Birth Weight of child

Category	Birth weight of child								Chi Square (P Value)
	< 2500		2500 - 3000		>3000		Total		
	n=51	%	n=136	%	n=69	%	N=256	%	
Initiation of BF									
Within 1 hour	20	39.2	54	39.7	27	39.1	101	39.5	6.123 (0.410)
Same day after 1 hour	5	9.8	23	16.9	11	15.9	39	15.2	
Within 3 days	18	35.3	48	35.3	28	40.6	94	36.7	
More than 4 days	8	15.7	11	8.1	3	4.3	22	8.6	
What was given to the child till breastfeeding was initiated									
Animal milk	0	0.0	17	20.7	8	19.0	25	16.1	15.129 (0.083)
Formula milk	23	74.2	50	61.0	30	71.4	103	66.5	
Donor's milk	2	6.5	2	2.4	1	2.4	5	3.2	
Packaged milk	0	0.0	1	1.2	1	2.4	2	1.3	
Nothing	6	19.4	12	14.6	2	4.8	20	12.9	
Colostrum feeding									
Yes	42	82.4	122	89.7	61	88.4	225	87.9	1.908 (0.385)
No	9	17.6	14	10.3	8	11.6	31	12.1	
Prelacteal feeding									
Yes	9	17.6	32	23.5	15	21.7	56	21.9	0.752 (0.687)
No	42	82.4	104	76.5	54	78.3	200	78.1	

Initiation of Breastfeeding according to Birth order of child

Table 4.26 shows that majority of the children were firstborn children. 39.5% had received breastfeeding at a recommended time after birth among which the majority of children were second-born. Compared to the second, third, and fourth-born children, less proportion of the first-born children had received breastfeeding at a

recommended time after birth, and the difference was significant. Thus, highlighting a need for more focus on primi mothers. In terms of top feeding, a higher proportion of first-born children than the second born were fed with top milk like animal, formula, and packaged milk. However, it was encouraging to find that more second-born children (9.5%) had received donor's breast milk than first-born children (1%). Based on the birth order of the child, there were significant differences seen for top feeding. Correct feeding practices such as colostrum feeding and no prelacteal feeding gradually increased with the birth order of the child.

Table 4.26: Distribution of initiation of BF according to Birth order of child

Category	Birth order of child										Chi Square (P Value)
	1		2		3		4		Total		
	n=155	%	n=87	%	n=10	%	n=4	%	N=256	%	
Initiation of BF											
Within 1 hour	51	32.9	45	51.7	3	30.0	2	50.0	101	39.5	23.161 (0.006**)
Same day after 1 hour	18	11.6	19	21.8	2	20.0	0	0.0	39	15.2	
Within 3 days	67	43.2	20	23.0	5	50.0	2	50.0	94	36.7	
More than 4 days	19	12.3	3	3.4	0	0.0	0	0.0	22	8.6	
What was given to the child till breastfeeding was initiated											
Animal milk	18	17.3	6	14.3	0	0.0	1	50.0	25	16.1	35.669 (0.001**)
Formula milk	77	74.0	19	45.2	6	90.0	1	50.0	103	66.5	
Donor's milk	1	1.0	4	9.5	0	0.0	0	0.0	5	3.2	
Packaged milk	1	1.0	1	2.4	0	0.0	0	0.0	2	1.3	
Nothing	7	6.7	12	28.6	1	10.0	0	0.0	20	12.9	
Colostrum feeding											
Yes	133	85.8	80	92.0	10	100.0	2	50.0	225	87.9	8.756 (0.033*)
No	22	14.2	7	8.0	0	0.0	2	50.0	31	12.1	
Prelacteal feeding											
Yes	41	26.5	14	16.1	0	0.0	1	25.0	56	21.9	6.425 (0.093)
No	114	73.5	73	83.9	10	100.0	3	75.0	200	78.1	

*: p<0.05, **: p<0.01, ***: p<0.001

Initiation of BF according to Gender of child

As can be seen in Table 4.27, almost the same proportion of male and female children received breastfeeding within one hour as well as within three days of birth indicating, no significant difference in feeding practices between the gender. Similar results were found concerning top milk, colostrum, and Prelacteal feeding.

Table 4.27: Distribution of initiation of BF according to Gender of child

Category	Male		Female		Total		Chi Square (P Value)
	n=143	%	n=113	%	N=256	%	
Initiation of BF							
Within 1 hour	56	39.2	45	39.8	101	39.5	0.835 (0.841)
Same day after 1 hour	24	16.8	15	13.3	39	15.2	
Within 3 days	52	36.4	42	37.2	94	36.7	
More than 4 days	11	7.7	11	9.7	22	8.6	
What was given to the child till breastfeeding was initiated							
Animal milk	13	14.9	12	17.6	25	16.1	3.098 (0.727)
Formula milk	58	66.7	45	66.2	103	66.5	
Donor's milk	3	3.4	2	2.9	5	3.2	
Packaged milk	0	0.0	2	2.9	2	1.3	
Nothing	13	14.9	7	10.3	20	12.9	
Colostrum feeding							
Yes	127	88.8	98	86.7	225	87.9	0.258 (0.612)
No	16	11.2	15	13.3	31	12.1	
Prelacteal feeding							
Yes	33	23.1	23	20.4	56	21.9	0.274 (0.601)
No	110	76.9	90	79.6	200	78.1	

Currently BF child and type of breastfeeding practices followed

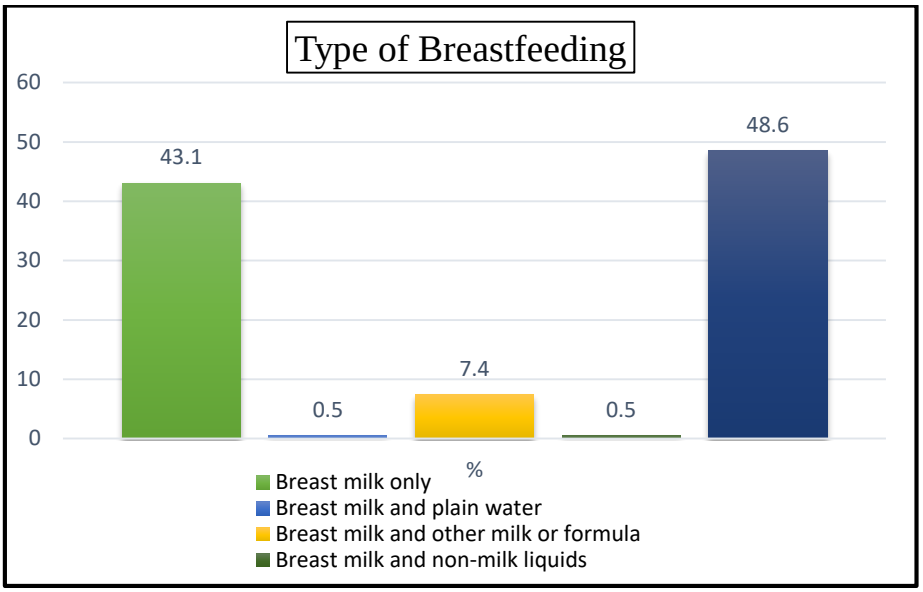
At the time of the survey, almost all the children were breastfed (84.4%), the proportion being slightly more in the unorganized (89%) compared to the organized (82%) sector. However, no significant difference was found for the same. More number of children from unorganized (44.4%) were only on breast milk as compared to the organized sector (42.2%) & on the contrary, more proportion of children from organized (10.4%) were fed with breast milk and other milk or formula than the unorganized sector (2.5%). It was interesting to find, 99% of the mothers had given

breastfeeding during the night irrespective of the setup, and among them, maximum gave less than four times. About frequency of breastfeeding during the day, more mothers from organized (17%) than unorganized (9%) fed more than eight times.

Table 4.28: Sector wise distribution of Breastfeeding practices

Category	Organized		Unorganized		Total		Chi Square (P Value)
	n=165	%	n=91	%	N=256	%	
Child currently breastfed							
Yes	135	81.8	81	89.0	216	84.4	2.302 (0.129)
No	30	18.2	10	11.0	40	15.6	
Type of breastfeeding							
Breast milk only	57	42.2	36	44.4	93	43.1	6.059 (0.195)
Breast milk and plain water	1	0.7	0	0.0	1	0.5	
Breast milk and other milk or formula	14	10.4	2	2.5	16	7.4	
Breast milk and non-milk liquids	1	0.7	0	0.0	1	0.5	
Breast milk and complementary foods	62	45.9	43	53.1	105	48.6	
Breastfeeding during night							
Yes	134	99.3	79	97.5	213	98.6	1.104 (0.293)
No	1	0.7	2	2.5	3	1.4	
Frequency of BF – Day							
< 8 times	84	62.2	62	76.5	146	67.6	7.209 (0.066)
8 times	28	20.7	11	13.6	39	18.1	
> 8 times	23	17.0	7	8.6	30	13.9	
On demand	0	0.0	1	1.2	1	0.5	
Frequency of BF – Night							
< 4 times	67	50.0	42	53.2	109	51.2	3.590 (0.309)
4 times	34	25.4	23	29.1	57	26.8	
> 4 times	33	24.6	13	16.5	46	21.6	
On demand	0	0.0	1	1.3	1	0.5	
Continue breastfeeding when child getting ill							
Yes	65	39.4	25	27.5	90	35.2	3.657 (0.056)
No	100	60.6	66	72.5	166	64.8	

Figure 4.5: Type of Breastfeeding infant received



Gender wise distribution of Breastfeeding practices

Table 4.29 represents slightly more male (85.3%) than female (83.2%) children were on breastfeeding at the time of the study, which is statistically not significant. Compared to male children, more female children were on breastfeeding alone. Male children (8.2%) in contrast with female (6.4%) were fed with mixed feeding i.e. breast milk along with other or formula milk. The same proportion of males as well as females had received breastfeeding during the night, and the difference was not significant. However, more male children than female received breastfeeding more than four times at night and more than eight times during the day.

Table 4.29: Gender wise distribution of Breastfeeding practices

Category	Gender of child						Chi Square (P Value)
	Male		Female		Total		
	n=143	%	n=113	%	N=256	%	
Child currently Breastfed							
Yes	122	85.3	94	83.2	216	84.4	0.217 (0.641)
No	21	14.7	19	16.8	40	15.6	
Type of breastfeeding							
Breast milk only	50	41.0	43	45.7	93	43.1	1.954 (0.928)
Breast milk and plain water	1	0.8	0	0.0	1	0.5	
Breast milk and other milk or formula	10	8.2	6	6.4	16	7.4	
Breast milk and non-milk liquids	1	0.8	0	0.0	1	0.5	
Breast milk and complementary foods	60	49.2	45	47.9	105	48.6	
Breastfeeding during night							
Yes	120	98.4	93	98.9	213	98.6	0.132 (1.000)
No	2	1.6	1	1.1	3	1.4	
Frequency of BF – Day							
< 8 times	78	63.9	68	72.3	146	67.6	3.544 (0.272)
8 times	26	21.3	13	13.8	39	18.1	
> 8 times	18	14.8	12	12.8	30	13.9	
On demand	0	0.0	1	1.1	1	0.5	
Frequency of BF – Night							
< 4 times	61	50.8	48	51.6	109	51.2	2.382 (0.493)
4 times	30	25.0	27	29.0	57	26.8	
> 4 times	29	24.2	17	18.3	46	21.6	
On demand	0	0.0	1	1.1	1	0.5	
Continue breastfeeding when child getting ill							
Yes	58	40.6	32	28.3	90	35.2	4.149 (0.042*)
No	85	59.4	81	71.7	166	64.8	

*: p<0.05, **: p<0.01, ***: p<0.001

Age wise distribution of currently BF child and type of BF

Table 4.30 reveals age-wise analysis. At the time of the study, significantly more children belonged to 0 – 6 months (95%) as compared to children 6 – 12 months of age group (75.4%) who were breastfed (P<0.05). Interestingly the recommended practices were followed by 80.4% of children (0 – 6 months of age) who were exclusively breastfeeding, and 95.2% of children (6 – 12 months of age) were receiving complementary feeding along with breastfeeding. Almost all the mothers breastfed their child during the night, of which a higher number of children from age group 0 – 6 months had breastfed more than four times at night compared to 6 – 12 months of age group. Similar findings were for breastfeeding during the day, which was more than eight times.

Table 4.30: Age wise distribution of currently BF child and type of BF

Category	Age of child						Chi Square (P Value)
	0-6 months		6-12 months		Total		
	n=118	%	n=138	%	N=256	%	
Child currently Breastfed							
Yes	112	94.9	104	75.4	216	84.4	18.446 (0.000***)
No	6	5.1	34	24.6	40	15.6	
Type of breastfeeding							
Breast milk only	90	80.4	3	2.9	93	43.1	174.702 (0.000***)
Breast milk and plain water	1	0.9	0	0.0	1	0.5	
Breast milk and other milk or formula	14	12.5	2	1.9	16	7.4	
Breast milk and non-milk liquids	1	0.9	0	0.0	1	0.5	
Breast milk and complementary foods	6	5.4	99	95.2	105	48.6	
Breastfeeding during night							
Yes	110	98.2	103	99.0	213	98.6	0.267 (0.605)
No	2	1.8	1	1.0	3	1.4	
Frequency of BF – Day							
< 8 times	48	42.9	98	94.2	146	67.6	65.614 (0.000***)
8 times	34	30.4	5	4.8	39	18.1	

> 8 times	29	25.9	1	1.0	30	13.9	
On demand	1	0.9	0	0.0	1	0.5	
Frequency of BF – Night							
< 4 times	42	38.2	67	65.0	109	51.2	19.907 (0.000***)
4 times	32	29.1	25	24.3	57	26.8	
> 4 times	35	31.8	11	10.7	46	21.6	
On demand	1	0.9	0	0.0	1	0.5	
Continue breastfeeding when child getting ill							
Yes	31	26.3	59	42.8	90	35.2	7.580 (0.006**)
No	87	73.7	79	57.2	166	64.8	

*: p<0.05, **: p<0.01, ***: p<0.001

❖ **Children who Discontinued Breastfeeding**

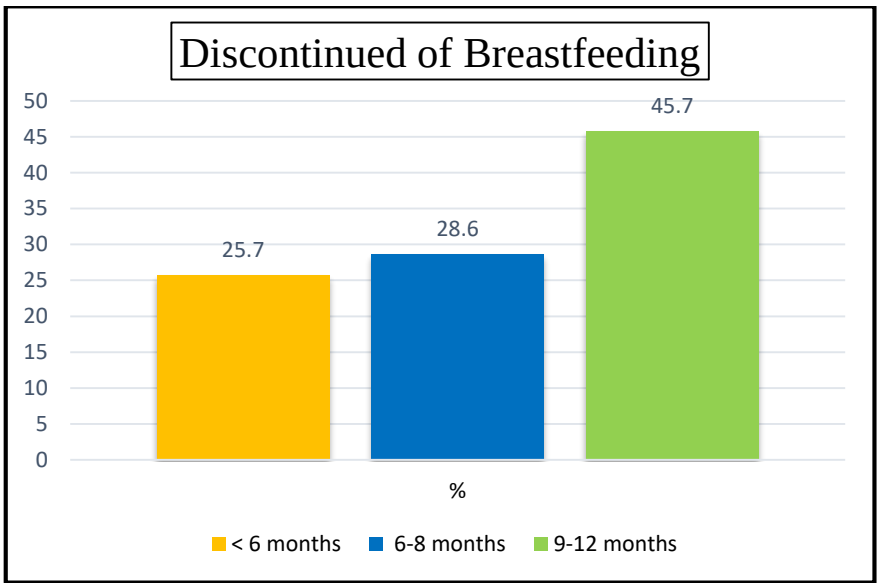
Sector wise distribution of children who Discontinued Breastfeeding

The sector-wise analysis highlights that one-third of children from the unorganized sector had discontinued breastfeeding before the recommended age of month. Compared to the unorganized sector (11.1%), majority of the children from the organized sector (35%) had discontinued breastfeeding at 6 – 8 months of age whereas, in the unorganized sector, 56% had discontinued at 9 – 12 months. (Table 4.31).

Table 4.31: Sector wise distribution of children who Discontinued BF

Category	Organized		Unorganized		Total		Chi Square (P Value)
	n=26	%	n=9	%	N=35	%	
< 6 months	6	23.1	3	33.3	9	25.7	1.823 (0.402)
6-8 months	9	34.6	1	11.1	10	28.6	
9-12 months	11	42.3	5	55.6	16	45.7	

Figure 4.6: Prevalence of Children who discontinued Breastfeeding at particular age



Gender wise distribution of children who Discontinued breastfeeding

More male children (30%) than female (20%) had discontinued breastfeeding at less than six months of age, while the percentage of female children who discontinued breastfeeding at 6 – 8 months were higher than male (Table 4.32).

Table 4.32: Gender wise distribution of children who Discontinued breastfeeding

Category	Male		Female		Total		Chi Square (P Value)
	n=20	%	n=15	%	N=35	%	
< 6 months	6	30.0	3	20.0	9	25.7	0.547 (0.761)
6-8 months	5	25.0	5	33.3	10	28.6	
9-12 months	9	45.0	7	46.7	16	45.7	

Age wise distribution of children who Discontinued Brestfeeding

According to Table 4.33, an age-wise analysis showed a statistically significant difference among the mothers who discontinued breastfeeding ($P<0.05$). Two children less than six months had discontinued breastfeeding before the recommended age of 6 months. 48.5% and 30.3% of children who belonged to 9 – 12 months and 6 – 8 months respectively discontinued breastfeeding. Thus, indicating that as the age of the children increases, more mothers discontinued breastfeeding.

Table 4.33: Age wise distribution of children who Discontinued BF

Category	Age of child						Chi Square (P Value)
	0-6 months		6-12 months		Total		
	n=2	%	n=33	%	N=35	%	
< 6 months	2	100.0	7	21.2	9	25.7	6.128 (0.047*)
6-8 months	0	0.0	10	30.3	10	28.6	
9-12 months	0	0.0	16	48.5	16	45.7	

*: p<0.05, **: p<0.01, ***: p<0.001

Sector wise distribution of children who receiving formula milk

As Table 4.34 shows, unfortunately, 20% of mothers from the organized sector had fed formula milk to their children, of which it was shocking to observe that they were recommended by the doctor (85%) and 15.2% had given by themselves only.

Table 4.34: Sector wise distribution of children who receiving formula milk

Category	Organized		Unorganized		Total		Chi Square (P Value)
	n=165	%	n=91	%	N=256	%	
Feed formula milk							
Yes	33	20.0	5	5.5	38	14.8	9.763 (0.002**)
No	132	80.0	86	94.5	218	85.2	
If yes advised by							
Doctor	28	84.8	3	60.0	31	81.6	1.784 (0.182)
Own self	5	15.2	2	40.0	7	18.4	

*: p<0.05, **: p<0.01, ***: p<0.001

Gender and age wise distribution of children who receiving formula milk

Table 4.35 and 4.36 indicate gender-wise and age-wise on children who received formula milk. There was no statistically significant difference for formula milk as the same proportion of male-female from both age group category had received formula milk which was advised by the doctor only.

Table 4.35: Gender wise distribution of children who received formula milk

Category	Male		Female		Total		Chi Square (P Value)
	n=143	%	n=113	%	N=256	%	
Feed formula milk							
Yes	21	14.7	17	15.0	38	14.8	0.006 (0.936)
No	122	85.3	96	85.0	218	85.2	
If yes advised by							
Doctor	16	76.2	15	88.2	31	81.6	0.916 (0.633)
Own self	5	23.8	2	11.8	7	18.4	

Table 4.36: Age wise distribution of children who receiving formula milk

Category	Age of child						Chi Square (P Value)
	0-6 months		6-12 months		Total		
	n=118	%	n=138	%	N=256	%	
Feed formula milk							
Yes	18	15.3	20	14.5	38	14.8	0.029 (0.864)
No	100	84.7	118	85.5	218	85.2	
If yes advised by							
Doctor	16	88.9	15	75.0	31	81.6	1.216 (0.270)
Own self	2	11.1	5	25.0	7	18.4	

❖ **Children who Exclusively Breastfed**

Sector wise distribution of children who Exclusively Breastfed at particular age

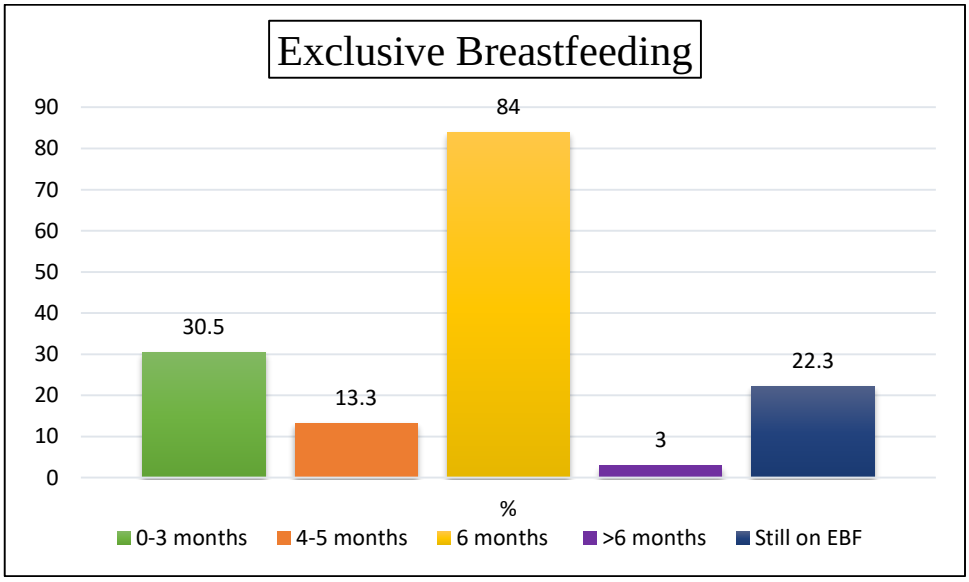
Table 4.37 reveals more than third percentage of children from organized sector received exclusive breastfeeding till 6 months or more than 6 months of age. It was terrible to observe that also more than one third of children from organized sector were EBF till only less than recommended age of month which is an incorrect practice. Surprisingly four children from organized sector and one from unorganized sector were only on formula milk or animal milk. Significant difference was observed for both indicators ($P<0.005$).

Table 4.37: Sector wise distribution of children who Exclusively Breastfed

Category	Organized		Unorganized		Total		Chi Square (P Value)
	n=165	%	n=91	%	N=256	%	
Till what age was the child exclusively breastfed							
0-3 months	60	36.4	18	19.8	78	30.5	8.306 (0.040*)
4-5 months	22	13.3	12	13.2	34	13.3	
≥ 6 months	51	30.9	36	39.6	87	34.0	
Still on EBF	32	19.4	25	27.5	57	22.3	
Mixed feeding							
Both Formula/animal milk and Breastmilk	78	47.3	29	31.9	107	41.8	6.776 (0.034*)
Only on Breastmilk	83	50.3	61	67.0	144	56.3	
Only on Formula or animal milk	4	2.4	1	1.1	5	2.0	

*: p<0.05, **: p<0.01, ***: p<0.001

Figure 4.7: Prevalence of Children who Exclusively Breastfed at Particular age



Gender wise distribution of children who Exclusively Breastfed

As many as one-third of female children, more than male were exclusively breastfed till three months of age. Oppositely, a higher number of male children (36.4%) than female (31%) were exclusively breastfed till 6 months or more than 6 months of age. 43.4% of male children had received mixed feeding, which was more than female children, which was not good for the health of children, and compared to male, more female children were only on formula or animal milk which can also lead to infection.

Table 4.38: Gender wise distribution of children who Exclusively Breastfed

Category	Male		Female		Total		Chi Square (P Value)
	n=143	%	n=113	%	N=256	%	
Till what age was the child exclusively breastfed							
0-3 months	41	28.7	37	32.7	78	30.5	3.011 (0.390)
4-5 months	22	15.4	12	10.6	34	13.3	
≥ 6 months	52	36.4	35	31.0	87	34.0	
Still on EBF	28	19.6	29	25.7	57	22.3	
Mixed feeding							
Both Formula/animal milk and Breastmilk	62	43.4	45	39.8	104	41.8	2.802 (0.246)
Only on Breastmilk	80	55.9	64	56.6	144	56.3	
Only on Formula or animal milk	1	0.7	4	3.5	5	2.0	

Age wise distribution of children who Exclusively Breastfed

An age-wise statistically significant difference was found for exclusive breastfeeding and mixed feeding (Table 4.39). As regards age difference in exclusive breastfeeding, it was shocking to observe that significantly more children from age group 0 – 6 months (46%) on EBF till only 0 – 3 months of age whereas, more than one-half of children from 6 – 12 months of age group were on exclusive breastfeeding till recommended age of month and the difference was statistically significant. Four children who were yet 0 – 6 months of age were only on formula milk or animal milk meaning they never breastfed, and 48.3% were on mixed feeding. The difference was

also statistically significant.

Table 4.39: Age wise distribution of children who Exclusively Breastfed

Category	Age of child						Chi Square (P Value)
	0-6 months		6-12 months		Total		
	n=118	%	n=138	%	N=256	%	
0-3 months	54	45.8	24	17.4	78	30.5	151.128 (0.000***)
4-5 months	7	5.9	27	19.6	34	13.3	
≥ 6 months	2	1.7	85	61.6	87	34.0	
Still on EBF	55	46.6	2	1.4	57	22.3	
Mixed feeding							
Both Formula/animal milk and Breastmilk	57	48.3	50	36.2	107	41.8	6.988 (0.030*)
Only on Breastmilk	57	48.3	87	63.0	144	56.3	
Only on Formula or animal milk	4	3.4	1	0.7	5	2.0	

*: p<0.05, **: p<0.01, ***: p<0.001

❖ **Knowledge and Practices of mothers as regards various aspect of complimentary feeding**

Sector wise distribution of reason to initiate complementary feeding at 6 month or at completion of 6 month of age

As Table 4.40 shows, significantly more mothers from the organized (62.4%) than the unorganized sector (48.4%) had knowledge of introducing complementary feeding at 6 months of age (P<0.005). From interviewed mother, breast milk alone not satisfied and child will be healthy were the major reported reasons for initiation of the CF at 6 months or the completion of 6 months of age. Significantly more mothers from the unorganized sector than the organized sector had stated that they were counseled by AWW or other health functionaries as the reason to initiate complementary foods at the recommended age of month (P<0.005). 44.2% of mother had given other reasons for the same as they said:

Mother from the organized sector articulated the following:

- "GNM karyu che etle mane khabar j che ke 6 mahine pachij biju badhu upper nu

jamvanu apay”

(I had done GNM so I knew after 6 month of age complementary foods should be introduced)

- “I am enough qualified so I know”

Mother from unorganized sector said:

- “Aatarda ane badha sharir na bhago khorak pachava mate taiyar thai jay 6 mahine etle have apay”.

(Intestine and other body part are ready to digest food at 6 months of age so now we can give complementary foods)

- “6 mahina sudhi mata nu dudh purtu hoy etle e pehla na aapvu pade upper nu jamvanu”

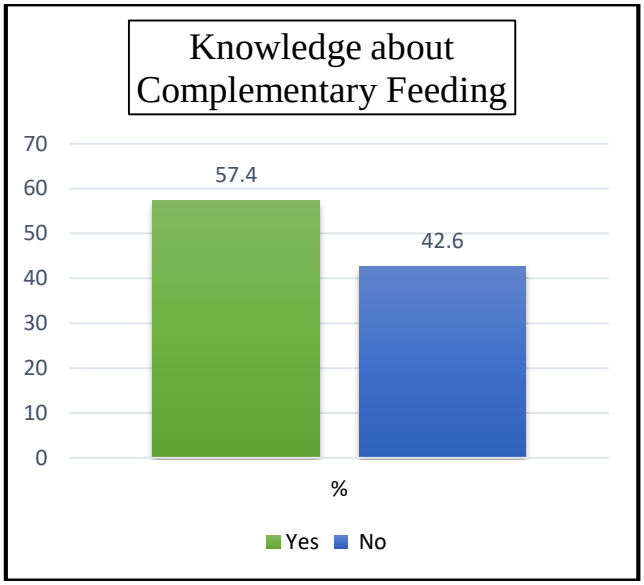
(Breastmilk is enough till 6 months of age so before that no need to give other food)

Table 4.40: Sector wise distribution of reason to initiate complementary feeding at 6 month or at completion of 6 month of age

Category	Organized		Unorganized		Total		Chi Square (P Value)
	n=165	%	n=91	%	N=256	%	
Knowledge about CF at 6 months							
Yes	103	62.4	44	48.4	147	57.4	4.751 (0.029*)
No	62	37.6	47	51.6	109	42.6	
Reason to initiate complementary feeding at 6month or at completion of 6 month of age							
Child will be healthy	85	82.5	26	59.1	111	75.5	9.155 (0.002**)
Hunger will be satisfied	72	69.9	27	61.4	99	67.3	1.022 (0.312)
Breast milk alone not satisfied	86	83.5	40	90.9	126	85.7	1.384 (0.239)
Counselled by AWW/Health functionary	21	20.4	30	68.2	51	34.7	31.082 (0.000***)
Other	51	49.5	14	31.8	65	44.2	3.914 (0.048*)

*: p<0.05, **: p<0.01, ***: p<0.001

Figure 4.8: Knowledge about complementary Feeding at 6 month of age among Mothers



Gender wise distribution of reason to initiate complementary feeding at 6 month or at completion of 6 month of age

Table 4.41 shows that more than half of mothers of male children were aware of the introduction of complementary feeding at 6 months of age. The major reason to initiate complementary foods at 6 months was breast milk alone not satisfied, which was more observed among mothers of female children (87%) than male (85%). Further a larger proportion of mothers of female children than male children had mentioned that they were counseled by AWW/health functionary as the reason for the same. 44.2% mentioned other reason as they said:

- "Badha taste no anubhav thay ne aapiye to"
  (The child would receive an experience of all tastes)
- "Mara pehla baby ne pan 6 mahine j chalu karyu hatu upper nu aapvanu badhu etle"
  (I had started to give complementary foods at 6 months of age to my older child so that)
- "Ghar na loko e salah aapi hati etle"
  (Advised by a family member so)

Table 4.41: Gender wise distribution of reason to initiate complementary feeding at 6 month or at completion of 6 month of age

Category	Male		Female		Total		Chi Square (P Value)
	n=143	%	n=113	%	N=256	%	
Knowledge about CF at 6 months							
Yes	86	60.1	61	54.0	147	57.4	0.979 (0.322)
No	57	39.9	52	46.0	109	42.6	
Reason to initiate complementary feeding at 6month or at completion of 6 month of age							
Child will be healthy	66	76.7	45	73.8	111	75.5	0.171 (0.680)
Hunger will be satisfied	59	68.6	40	65.6	99	67.3	0.149 (0.699)
Breast milk alone not satisfied	73	84.9	53	86.9	126	85.7	0.117 (0.733)
Counselled by AWW/Health functionary	25	29.1	26	42.6	51	34.7	2.893 (0.089)
Other	43	50.0	22	36.1	65	44.2	2.809 (0.094)

Age wise distribution of reason to initiate complementary feeding at 6 month or at completion of 6 month of age

Table 4.42 represents that age-wise significantly more mothers of children between 6 – 12 months of age had knowledge about what is complementary feeding ($P<0.05$). Reasons to initiate complementary foods at 6 months were higher from 86% (breast milk alone not satisfied) to the least 35% (counseled by AWW/health functionary). Among them, 44.2% had given other reasons like:

- "Swadindriya badhi aavi gai hoy etle apay". (Taste senses have been now developed so it is ok to give)

Table 4.42: Age wise distribution of reason to initiate complementary feeding at 6 month or at completion of 6 month of age

Category	Age of child						Chi Square (P Value)
	0-6 month		6-12 month		Total		
	n=118	%	n=138	%	N=256	%	
Knowledge about CF at 6 months							
Yes	33	28.0	114	82.6	147	57.4	77.682 (0.000***)
No	85	72.0	24	17.4	109	42.6	
Reason to initiate complementary feeding at 6month or at completion of 6 month of age							
Child will be healthy	31	93.9	80	70.2	111	75.5	7.815 (0.005**)
Hunger will be satisfied	28	84.8	71	62.3	99	67.3	5.927 (0.015*)
Breast milk alone not satisfied	31	93.9	95	83.3	126	85.7	2.351 (0.125)
Counselled by AWW/Health functionary	6	18.2	45	39.5	51	34.7	5.121 (0.024*)
Other	8	24.2	57	50.0	65	44.2	6.884 (0.009**)

*: p<0.05, **: p<0.01, ***: p<0.001

Sector wise distribution of children who were receiving CF

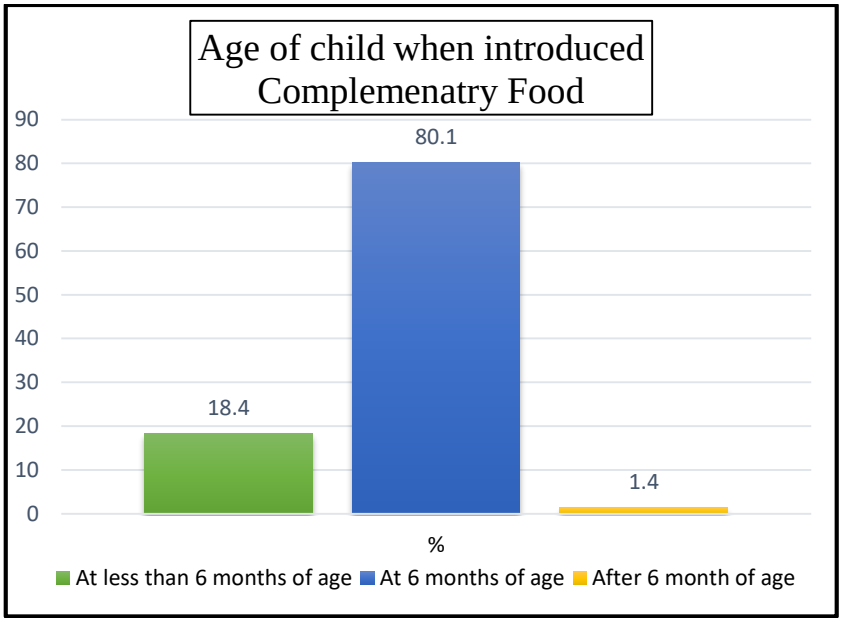
About reasons stated to initiate complementary foods, sector-wise no statistically significant difference was observed as shown in Table 4.43. As many as 55.1% had started to receive complementary foods. It was great to observe that majority of children received complementary foods at the correct or recommended age of months (At 6 months of age). Compared to the unorganized sector (10%) more children from the organized sector (23.3%) started to receive complementary food at less than 6 months of age which was an incorrect practice.

Table 4.43: Sector wise distribution of children who receiving CF

Category	Organized		Unorganized		Total		Chi Square (P Value)
	n=165	%	n=91	%	N=256	%	
Introduce complementary feeding							
Yes	90	54.5	51	56.0	141	55.1	0.053 (0.818)
No	75	45.5	40	44.0	115	44.9	
Age of child when introduced CF							
At less than 6 months of age	21	23.3	5	9.8	26	18.4	4.050

At 6 months of age	68	75.6	45	88.2	113	80.1	(0.132)
After 6 month of age	1	1.1	1	2.0	2	1.4	

Figure 4.9: Age of child when introduced Complementary Food



Gender wise distribution of children receiving CF

Considering gender differences in the introduction of complementary feeding (Table 4.44), more male children (57.3%) than female children (52.2%) were receiving complementary foods. However, more female children initiated complementary foods at an early age (less than 6 months of age) than males. An equal proportion of male and female children were introduced to complementary foods at 6 months of age.

Table 4.44: Gender wise distribution of children who receiving CF

Category	Gender of child						Chi Square (P Value)
	Male		Female		Total		
	n=143	%	n=113	%	N=256	%	
Introduce complementary feeding							
Yes	82	57.3	59	52.2	141	55.1	0.671 (0.413)
No	61	42.7	54	47.8	115	44.9	
Age of child when introduced CF							
At less than 6 months of age	14	17.1	12	20.3	26	18.4	1.640 (0.440)
At 6 months of age	66	80.5	47	79.7	113	80.1	
After 6 month of age	2	2.4	0	0.0	2	1.4	

Age wise distribution of children receiving CF

Table 4.45 indicates significantly more children of 6 – 12 months of age group were receiving complementary foods than 0 – 6 months of age group (P<0.05). Compared to children between 6 – 12 months (17.2%) of age more children from 0 – 6 months (43%) of age were introduce to complementary foods before the recommended age of month. Two children from age group 6 – 12 months received complementary foods after 6 months of age which may lead to undernutrition.

Table 4.45: Age wise distribution of children who receiving CF

Category	Age of child						Chi Square (P Value)
	0-6 month		6-12 month		Total		
	n=118	%	n=138	%	N=256	%	
Introduce complementary feeding							
Yes	7	5.9	134	97.1	141	55.1	213.688 (0.000***)
No	111	94.1	4	2.9	115	44.9	
Age of child when introduced CF							
At less than 6 months of age	3	42.9	23	17.2	26	18.4	2.972 (0.226)
At 6 months of age	4	57.1	109	81.3	113	80.1	
After 6 month of age	0	0.0	2	1.5	2	1.4	

*: p<0.05, **: p<0.01, ***: p<0.001

Reasons for late and early introduction of CF: Sector wise

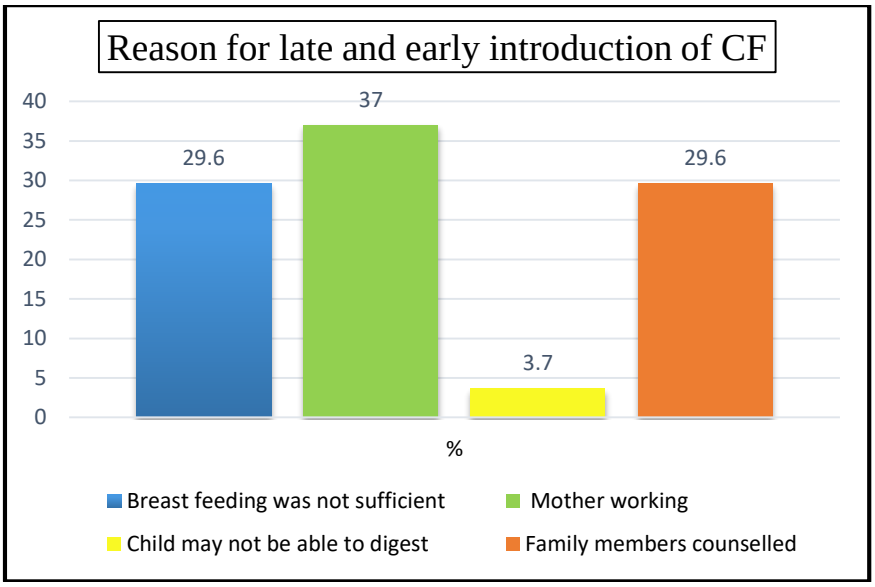
Table 4.46 reveals that 27 children (Organized sector: 22, Unorganized sector: 5) were observed for late or early introduction of complementary feeding. Mother's working was the most stated reason for early introduction of complementary foods which was more from organized (41%) sector than unorganized (20%). Breastfeeding was not sufficient and counseled by family members was an equally stated reason for the early or late introduction of complementary foods.

Sector-wise no significant difference was found for reasons to initiate complementary foods at 6 months.

Table 4.46: Sector wise distribution of reason for late and early introduction of Complementary Feeding

Category	Organized		Unorganized		Total		Chi Square (P Value)
	n=22	%	n=5	%	N=27	%	
Breast feeding was not sufficient	6	27.3	2	40.0	8	29.6	4.240 (0.354)
Mother working	9	40.9	1	20.0	10	37.0	
Child may not be able to digest	1	4.5	0	0.0	1	3.7	
Family members counselled	6	27.3	2	40.0	8	29.6	

Figure 4.10: Reason for late and early introduction of Complementary Feeding



Reason for late and early introduction of CF: Gender wise

One-third of the mothers of female children had reported breastfeeding was not sufficient, mother working and counseling by a family member as reasons for the early or late introduction of complementary foods (Table 4.47). More percentage of mothers of male children than female had reported their working status as a barrier for not initiating complementary foods at the recommended age of the child.

Table 4.47: Gender wise distribution of reason for late and early introduction of Complementary Feeding

Category	Male		Female		Total		Chi Square (P Value)
	n=15	%	n=12	%	N=27	%	
Breast feeding was not sufficient	4	26.7	4	33.3	8	29.6	1.196 (0.980)
Mother working	6	40.0	4	33.3	10	37.0	
Child may not be able to digest	1	6.7	0	0.0	1	3.7	
Family members counselled	4	26.7	4	33.3	8	29.6	

Age wise distribution of reason for late and early introduction of CF

According to Table 4.48, more children from 6 – 12 months than 0 – 6 months were introduced to complementary foods before or after the recommended period of age. The age-wise analysis also showed that the working status of mothers was the common reason for the late or early introduction of complementary feeding (37%). The difference was statistically significant.

Table 4.48: Age wise distribution of reason for late and early introduction of Complementary Feeding

Category	Age of child						Chi Square (P Value)
	0-6 month		6-12 month		Total		
	n=3	%	n=24	%	N=27	%	
Reason for late and early introduction of CF							
Breast feeding was not sufficient	2	66.7	6	25.0	8	29.6	16.810 (0.000***)
Mother working	0	0.0	10	41.7	10	37.0	
Child may not be able to digest	0	0.0	1	4.2	1	3.7	
Family members counselled	1	33.3	7	29.2	8	29.6	

*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Distribution of Frequency, Quantity and Consistency of CF : Sector wise

Table 4.49 represents 141 complimentary feeding episodes during the interview for formative research. More children from unorganized were receive breastfeeding along

with complementary feeding. More than half the proportion of children were fed 2 – 3 times. Among them, utmost children consumed ½ cup of complementary foods at each feed with semi-solid or mashed consistency of food.

Sector-wise there was no statistically significant difference in frequency, quantity, and consistency of complementary foods.

Table 4.49: Sector wise Distribution of Frequency, Quantity and Consistency of Complementary Feeding

Category	Organized		Unorganized		Total		Chi Square (P Value)
	n=90	%	n=51	%	N=141	%	
Continuation breastfeeding along with complementary feeding							
Yes	64	71.1	43	84.3	107	75.9	3.101 (0.078)
No	26	28.9	8	15.7	34	24.1	
Frequency of complementary feeding							
2-3 times	52	57.8	32	62.7	84	59.6	0.334 (0.564)
3-4 times	38	42.2	19	37.3	57	40.4	
Quantity of CF							
Full cup	8	8.9	3	5.9	11	7.8	5.095 (0.078)
$3/4^{th}$ cup	36	40.0	12	23.5	48	34.0	
½ cup	46	51.1	36	70.6	82	58.2	
Consistency of the CF							
Solid food	11	12.2	7	13.7	18	12.8	0.169 (0.919)
Semi solid mashed food	63	70.0	34	66.7	97	68.8	
Liquid food	16	17.8	10	19.6	26	18.4	

Gender wise distribution of Frequency, Quantity, and Consistency of CF

Regarding gender-wise (Table 4.50) almost a similar percentage of male, as well as female children, continued breastfeeding along with complementary feeding. Interestingly female children (44.1%) were fed more frequently (3 – 4 times) with a half cup of quantity and semi-solid consistency of complementary foods than males. Gender wise no significant difference was found.

Table 4.50: Gender wise distribution of Frequency, Quantity, and Consistency of CF

Category	Male		Female		Total		Chi Square (P Value)
	n=82	%	n=59	%	N=141	%	
Continuation breastfeeding along with complementary feeding							
Yes	62	75.6	45	76.3	107	75.9	0.008 (0.928)
No	20	24.4	14	23.7	34	24.1	
Frequency of complementary feeding							
2-3 times	51	62.2	33	55.9	84	59.6	1.223 (0.543)
3-4 times	31	37.8	26	44.1	57	40.4	
Quantity of CF							
Full cup	8	9.8	3	5.1	11	7.8	2.659 (0.447)
$3/4^{th}$ cup	30	36.6	18	30.5	48	34.0	
½ cup	44	53.7	38	64.4	82	58.2	
Consistency of the CF							
Solid food	12	14.6	6	10.2	18	12.8	1.403 (0.705)
Semi solid mashed food	56	68.3	41	69.5	97	68.8	
Liquid food	14	17.1	12	20.3	26	18.4	

Age group wise Frequency, Quantity, and Consistency of CF

Age-wise analysis showed that (Table 4.51), seven children from age group 0 – 6 months had started to receive complementary foods which was not recommended. It was heartening to observe that three fourth of children (6 – 12 months) were receiving breastfeeding along with CF. A significant majority of children (0 – 6 months:100%, 6 – 12 months: 57.5%) received CF 2 – 3 times with a half cup of quantity and in mashed form ($P<0.05$). Age-wise significant difference found for consistency of food. However, only 8% of children fed with full cup quantity belonged to the 6 – 12 months of age group.

Table 4.51: Age group wise Distribution of Frequency, Quantity, and Consistency of Complementary Feeding

Category	Age of child						Chi Square (P Value)
	0-6 month		6-12 month		Total		
	n=7	%	n=134	%	N=141	%	
Continuation breastfeeding along with complementary feeding							
Yes	6	85.7	101	75.4	107	75.9	0.389 (0.533)
No	1	14.3	33	24.6	34	24.1	
Frequency of complementary feeding							

2-3 times	7	100.0	77	57.5	84	59.6	4.998 (0.025*)
3-4 times	0	0.0	57	42.5	57	40.4	
Quantity of CF							
Full cup	0	0.0	11	8.2	11	7.8	2.381 (0.304)
3/4th cup	1	14.3	47	35.1	48	34.0	
½ cup	6	85.7	76	56.7	82	58.2	
Consistency of the CF							
Solid food	0	0.0	18	13.4	18	12.8	22.200 (0.000***)
Semi solid mashed food	1	14.3	96	71.6	97	68.8	
Liquid food	6	85.7	20	14.9	26	18.4	

*: p<0.05, **: p<0.01, ***: p<0.001

Feeding pattern among two set up

As regard to child feeding pattern, consumption of processed foods were more observed in the unorganized sector (53%) than the organized (36.7%). Processed foods like Gathiya, Wafers, Bhungda, Biscuit, Sev, Papdi, Gopal, Toast, Aloo sev, and fryums were reported.

A significant number of children from the organized sector got quality food first contrary more children from the unorganized sector sat together with other family members (P<0.05). Maximum children from irrespective of the sector were fed by their mothers. However positive findings were that majority of the children were reported to be fed from a separate plate or bowl. When a child suffering from some illness more than one-third of mothers gave food less than usual and the remaining never get any illness.

Table 4.52: Feeding pattern among two sectors

Category	Organized		Unorganized		Total		Chi Square (P Value)
	n=90	%	n=51	%	N=141	%	
Consumption of processed food							
Yes	33	36.7	27	52.9	60	42.6	3.527 (0.060)
No	57	63.3	24	47.1	81	57.4	
Who get quality food 1st							
Child get first	61	67.8	19	37.3	80	56.7	18.857 (0.000***)
Sit together	15	16.7	26	51.0	41	29.1	
Not fixed	14	15.6	6	11.8	20	14.2	
Who fed to this child							

By himself/herself	0	0.0	2	3.9	2	1.4	7.265 (0.026*)
By mother	90	100.0	47	92.2	137	97.2	
By grandmother	0	0.0	2	3.9	2	1.4	
In which manner a food is served to the child							
In the same plate in which mother eats	8	8.9	6	11.8	14	9.9	0.488 (0.784)
In the same plate in which other children eat	1	1.1	1	2.0	2	1.4	
In a separate bowl	81	90.0	44	86.3	125	88.7	
Changes done in quantity of food when child getting ill							
Give less than usual	37	41.1	19	37.3	56	39.7	0.202 (0.653)
Give same as usual	53	58.9	32	62.7	85	60.3	

*: p<0.05, **: p<0.01, ***: p<0.001

Feeding pattern among male and female children

From Table 4.53 gender analysis summarize that more male children were consuming a higher proportion of processed foods than female. Regarding quality food received fewer male children (54%) than female (61%) were the first ones to get. Most of the children were fed by their mother in separate plates or bowls. With regard to feeding during illness more male children (44%) than female (33.9%) was fed with less than the usual amount of food.

Table 4.53: Feeding pattern among male and female children

Category	Male		Female		Total		Chi Square (P Value)
	n=82	%	n=59	%	N= 141	%	
Consumption of processed food							
Yes	39	47.6	21	35.6	60	42.6	2.010 (0.156)
No	43	52.4	38	64.4	81	57.4	
Who get quality food 1st							
Child get first	44	53.7	36	61.0	80	56.7	2.731 (0.255)
Sit together	23	28.0	18	30.5	41	29.1	
Not fixed	15	18.3	5	8.5	20	14.2	
Who fed to this child							
By himself/herself	1	1.2	1	1.7	2	1.4	0.113 (0.945)
By mother	80	97.6	57	96.6	137	97.2	
By grandmother	1	1.2	1	1.7	2	1.4	

In which manner a food is served to the child							
In the same plate in which mother eats	9	11.0	5	8.5	14	9.9	0.287 (0.866)
In the same plate in which other children eat	1	1.2	1	1.7	2	1.4	
In a separate bowl	72	87.8	53	89.8	125	88.7	
Changes done in quantity of food when child getting ill							
Give less than usual	36	43.9	53	33.9	56	39.7	1.434 (0.231)
Give same as usual	46	56.1	20	66.1	85	60.3	

Feeding pattern among two age group

Present below (Table 4.54) are the results of feeding patterns among two age group categories.

More than one-half of the mothers denied giving processed food to their children. Irrespective of the age group, the majority of the children got quality food first and were fed by their mother in a separate bowl. Significantly more children from age group 0 – 6 months than 6 – 12 months had received food less than usual quantity when they fall ill (P<0.05).

Table 4.54: Feeding pattern among two age group

Category	Age Category						Chi Square (P Value)
	0-6 month		6-12 month		Total		
	n=7	%	n=134	%	N=141	%	
Consumption of processed food							
Yes	1	14.3	59	44.0	60	42.6	2.408 (0.121)
No	6	85.7	75	56.0	81	57.4	
Who get quality food 1st							
Child get first	2	28.6	78	58.2	80	56.7	2.586 (0.274)
Sit together	3	42.9	38	28.4	41	29.1	
Not fixed	2	28.6	18	13.4	20	14.2	
Who fed to this child							
By himself/herself	0	0.0	2	1.5	2	1.4	0.215 (0.898)
By mother	7	100.0	130	97.0	137	97.2	
By grandmother	0	0.0	2	1.5	2	14	
In which manner a food is served to the child							

In the same plate in which mother eats	0	0.0	14	10.4	14	9.9	0.943 (0.624)
In the same plate in which other children eat	0	0.0	2	1.5	2	1.4	
In a separate bowl	7	100.0	118	88.1	125	88.7	
Changes done in quantity of food when child getting ill							
Give less than usual	6	85.7	50	37.3	56	39.7	6.509 (0.011*)
Give same as usual	1	14.3	84	62.7	85	60.3	

*: p<0.05, **: p<0.01, ***: p<0.001

Bottle feeding

Table 4.55 depicts that sector-wise statistically significant difference was seen for bottle feeding. Gender analysis indicated that nearly three fourth proportion of mothers were avoiding bottle feeding and 29% had followed the wrong practice which may lead to infection. Age group-wise significantly more children from 6 – 12 months of age group than 0 – 6 months were bottled fed (P<0.001).

Table 4.55: Bottle feeding practices followed by the mother

Category	**Set up**						**Chi Square (P Value)**
	Organized		**Unorganized**		**Total**		
	n=165	**%**	**n=91**	**%**	**N=256**	**%**	
Bottle feeding							
Yes	58	35.2	16	17.6	74	28.9	8.810 (0.003**)
No	107	64.8	75	82.4	182	71.1	
	Gender of child						
	Male		**Female**		**Total**		
	n=143	**%**	**n=113**	**%**	**N=256**	**%**	
Bottle feeding							
Yes	41	28.7	33	29.2	74	28.9	0.009 (0.926)
No	102	71.3	80	70.8	182	71.1	
	Age category						
	0-6 month		**6-12 month**		**Total**		
	n=118	**%**	**n=138**	**%**	**N=256**	**%**	
Bottle feeding							
Yes	18	15.3	56	40.6	74	28.9	19.852 (0.000***)
No	100	84.7	82	59.4	182	71.1	

*: p<0.05, **: p<0.01, ***: p<0.001

Reason to avoid particular food during CF among two sectors

Table 4.56 shows, nearly the same proportion of mothers from both sectors were avoiding particular food during complementary foods. Majority of the mothers had stated that they avoided giving certain fruits to their children fearing it would cause health issue "shardi" and "cough", cause some allergy as mother said:

- "Mane ane mara husband ne keda ni allergy che to kadach mara baby ne pan thay etle nathi aapta"

  (My husband and I both have allergy from banana so I think it would cause the same allergy to my baby also so doesn't give)

  and in vegetable one mother had reported that they were not giving spinach in excess amount because it may cause "Diarrhoea" followed by 14% avoided high salt and sugar food as mother said:

- "Gadi vastu nathi aapta cough thay etle"

  (Doesn't give the sweet item as causes cough)

- "High salt and sugar vadi vastu nathi aapta health mate saru na hoy nathi etle"

  (Doesn't give high salt and sugar food item as it is not good for health)

Table 4.56: Reason to avoid particular food during CF among two sector

Category	Organized		Unorganized		Total		Chi Square (P Value)
	n=90	%	n=51	%	N=141	%	
Avoid any food during CF							
Yes	28	31.1	15	29.4	43	30.5	0.044 (0.833)
No	62	68.9	36	70.6	98	69.5	
If yes then which food do you avoid							
Grain & Cereals	3	10.7	1	6.7	4	9.3	11.138 (0.133)
Legume and pulses	0	0.0	3	20.0	3	7.0	
Dairy Product	2	7.1	2	13.3	4	9.3	
Fruits & GLVs (Spinach)	9	32.1	7	46.7	16	37.2	
Non – veg	1	3.6	0	0.0	1	2.3	
High salt and sugar & Processed food	6	21.4	0	0.0	6	14.0	
Spicy Food	4	14.3	1	6.7	5	11.6	
Hard/Solid food	3	10.7	1	6.7	4	9.3	
Reason for avoid that particular food							
Allergy	1	3.6	0	0.0	1	2.3	2.627

Health issues	17	60.7	12	80.0	29	67.4	(0.757)
Not good for Health	4	14.3	1	6.7	5	11.6	
Seasonal changes	1	3.6	1	6.7	2	4.7	
Too young	5	17.9	1	6.7	6	14.0	

Reason to avoid particular food during CF

According to Table 4.57, it was observed that 30.5% of respondents had avoided some particular food during CF. Highest to least avoided food group was ranged from 37.2% (fruits and vegetables) to 2.3% (non-veg). 12% and 9.3% of mothers who reported spicy food and hard/solid food respectively under avoided food and specify health issue as:

- For spicy food
- "Peshab karvani jagya e lay bade etle tikkhu nathi aapta"
  (Spicy food would cause a burn at the genital area so doesn't give spicy food)
- Hard/solid food
- "Daant na aavya hoy haji etle badak kathan vastu chavi na shake etle nathi aapta"
  (Doesn't give hard food because teeth do not develop still so the child may not able to chew)

Table 4.57: Reason to avoid particular food during CF among both gender

Category	Male		Female		Total		Chi Square (P Value)
	n=82	%	n=59	%	N=141	%	
Avoid any food during CF							
Yes	24	29.3	19	32.2	43	30.5	0.139 (0.709)
No	58	70.7	40	67.8	98	69.5	
If yes then which food do you avoid							
Grain & Cereals	2	8.3	2	10.5	4	9.3	5.779 (0.605)
Legume and pulses	2	8.3	1	5.3	3	7.0	
Dairy Product	2	8.3	2	10.5	4	9.3	
Fruits & GLVs (Spinach)	10	41.7	6	31.6	16	37.2	
Non – veg	1	4.2	0	0.0	1	2.3	
High salt and sugar & Processed food	1	4.2	5	26.3	6	14.0	
Spicy Food	3	12.5	2	10.5	5	11.6	

Hard/Solid food	3	12.5	1	5.3	4	9.3	
Reason for avoid that particular food							
Allergy	1	4.2	0	0.0	1	2.3	3.366 (0.644)
Health issues	15	62.5	14	73.7	29	67.4	
Not good for Health	2	8.3	3	15.8	5	11.6	
Seasonal changes	2	8.3	0	0.0	2	4.7	
Too young	4	16.7	2	10.5	6	14.0	

Reason to avoid particular food during CF among two age group

From Table 4.58 it was seen that Seven mothers of children (0 – 6 months) had not avoided any food as they stated "haji hamna j aapvanu chalu karyu che upper nu etle avoid karta hoy evu kasu nathi badhu try karaviye j che" (we just now started to give complementary foods so there is nothing that would be avoided we try to introduce all types of food). One-third of mothers of children (6 – 12 months) had avoided some food which has been enlisted in Table. 9.3% and 7% were observed to avoid the dairy product, some food item of grains and cereal and legumes and pulses respectively as the mother articulated that:

- For dairy product and cereal and grains
- "Mara feeding sivay nu baar nu koi dudh aapiye to vomit thay che etle amul nu dudh nathi aapta"

  (Apart from breast feeding some packaged milk has been given, it lead to vomiting so we don't give Amul milk)
- Legumes and pulses
- "Tuver ni dad nathi aapta vaydi pade etle"

  (Doesn't give red gram dal which leads to stomach problem)

Table 4.58: Reason to avoid particular food during CF among two age group

Category	Age Category						Chi Square (P Value)
	0-6 month		6-12 month		Total		
	n=7	%	n=134	%	N=141	%	
Avoid any food during CF							
Yes	0	0.0	43	32.1	43	30.5	3.232 (0.072)
No	7	100.0	91	67.9	98	69.5	
If yes then which food do you avoid							
Grain & Cereals	0	0.0	4	9.3	4	9.3	

Legume and pulses	0	0.0	3	7.0	3	7.0	
Dairy Product	0	0.0	4	9.3	4	9.3	
Fruits & GLVs (Spinach)	0	0.0	16	37.2	16	37.2	
Non – veg	0	0.0	1	2.3	1	2.3	
High salt and sugar & Processed food	0	0.0	6	14.0	6	14.0	
Spicy Food	0	0.0	5	11.6	5	11.6	
Hard/Solid food	0	0.0	4	9.3	4	9.3	
Reason for avoid that particular food							
Allergy	0	0.0	1	2.3	1	2.3	
Health issues	0	0.0	29	67.4	29	67.4	
Not good for Health	0	0.0	5	11.6	5	11.6	
Seasonal changes	0	0.0	2	4.7	2	4.7	
Too young	0	0.0	6	14.0	6	14.0	

Sector wise distribution of Frequency of food group consume by children previous day

Table 4.59 represents the finding of 141 children who consumed complementary foods with different food groups on the previous day from the organized and the unorganized sectors. The majority of the children from both sectors had received complementary foods from food groups like grains, cereals, roots, and tubers (51.2%), legumes and pulses & nuts and oilseeds (50%), and dairy products (41.4%). Compared to the organized sector (37%), more proportion of the children from the unorganized (45.1%) had received breast milk on the previous day. However, a moderate proportion of children had consumed other fruits and vegetables (26%), and Vitamin A-rich fruits and vegetables (15.2%), and the least proportion of children had consumed flesh food and egg on the previous day.

Table 4.59: Sector wise distribution of Frequency of food group consumed by children previous day

Category	Organized		Unorganized		Total		Chi Square (P Value)
	n=90	%	n=51	%	N=141	%	
Grains cereals roots and tubers	85	51.5	46	50.5	131	51.2	0.22 (0.882)
Legumes and pulses & nuts and oilseeds	79	47.9	48	52.7	127	49.6	0.556 (0.456)

Dairy products	73	44.2	33	36.3	106	41.4	1.539 (0.215)
Flesh foods	0	0.0	1	1.1	1	0.4	1.820 (0.177)
Eggs	1	0.6	1	1.1	2	0.8	0.184 (0.668)
Vitamin A rich fruits and vegetables	28	17.0	11	12.1	39	15.2	1.082 (0.298)
Other fruits and vegetables	44	26.7	22	24.2	66	25.8	0.190 (0.663)
Breast milk	61	37.0	41	45.1	102	39.8	1.600 (0.206)

Gender wise distribution of Frequency of Food group consumed by children

Statistical data from Table 4.60 showed that Gender wise, no significant difference was found among the eight food groups. The proportion of male children who received complementary feeding with added grains, cereals, roots & tubers, legumes, pulses & nuts and oilseed, and Vitamin A-rich fruits and vegetables as food group were more than for female. Also, more males than females were breastfed on the previous day.

Table 4.60: Gender wise frequency of food group consumed by children

Category	Male		Female		Total		Chi Square (P Value)
	n=82	%	n=59	%	N=141	%	
Grains, cereals, roots and tubers	76	53.1	55	48.7	131	51.2	0.506 (0.477)
Legumes and pulses & nuts and oilseeds	73	51.0	54	47.8	127	49.6	0.269 (0.604)
Dairy products	59	41.3	47	41.6	106	41.4	0.003 (0.957)
Flesh foods	0	0.0	1	0.9	1	0.4	1.270 (0.260)
Eggs	1	0.7	1	0.9	2	0.8	0.028 (0.867)
Vitamin A rich fruits and vegetables	24	16.8	15	13.3	39	15.2	0.602 (0.438)
Other fruits and vegetables	35	24.5	31	27.4	66	25.8	0.289 (0591)

Breast milk	58	40.6	44	38.9	102	39.8	0.069 (0.792)

Age wise frequency of food group consumed by children

The food group to be given as complementary feeding on the previous day were more significantly different among the two age groups except for flesh foods and egg as consumption of these food groups was less in both the groups (P<0.001). In regards to age-wise analysis, younger children (0 – 6 months consumed less food group as compared to older children (6 – 12 months) on the previous day although complementary foods should be introduced before 6 months.

Table 4.61: Age wise frequency of food group consumed by children

Category	Age group						Chi Square (P Value)
	0 – 6 months		6 – 12 months		Total		
	n=7	%	n=134	%	N=141	%	
Grains, cereals, roots and tubers	5	4.2	126	91.3	131	51.2	192.987 (0.000***)
Legumes and pulses & nuts and oilseeds	3	2.5	124	89.9	127	49.6	193.982 (0.000***)
Dairy products	3	2.5	103	74.6	106	41.4	136.276 (0.000***)
Flesh foods	0	0.0	1	0.7	1	0.4	0.858 (0.354)
Eggs	0	0.0	2	1.4	2	0.8	1.724 (0.189)
Vitamin A rich fruits and vegetables	2	1.7	37	26.8	39	15.2	31.074 (0.000***)
Other fruits and vegetables	2	1.7	64	46.4	66	25.8	66.369 (0.000***)
Breast milk	6	5.1	96	69.6	102	39.8	110.341 (0.000***)

*: p<0.05, **: p<0.01, ***: p<0.001

Prevalence of MDD, MMF and MAD among two setups

Table 4.62 represents the sector-wise prevalence of Minimum Dietary Diversity (MDD), Minimum Meal Frequency (MMF), and Minimum Acceptable Diet (MAD) of 138 children who had started complementary foods. Nearly half of the children had met MDD with 7 food groups, and slightly more than one-third had met MDD with 8

food groups (As Breastmilk was one of the food groups). About MMF more children from the organized sector (73%) than unorganized (58%) had met MMF. However, more than one-third of children had met MAD with regards 7 food group (excluded breast milk) and 27% met with 8 food group.

Table 4.62: Prevalence of MDD, MMF and MAD among two sectors

Indicator		Organized		Unorganized		Total	
		n= 88	%	n= 50	%	N= 138	%
MDD	7 Food groups	46	52.8	19	38	65	47.1
	8 Food groups	30	34.1	18	36	48	34.8
MMF		64	72.7	29	58	93	67.4
MAD	7 Food groups	36	40.9	14	28	50	36.2
	8 Food groups	23	26.1	14	28	37	26.8

Age wise MDD, MMF and MAD

Table 4.63 shows, majority of children from 6 – 8 months of age group (organized sector) had met MDD (7 food group: 50%, 8 food group: 39.4%) and met MMF 95%, met MAD (7 food group: 47%, 8 food group:37%), compared to children in the unorganized sector. However, majority of the children from 9 – 12 months of age group in the unorganized sector had met MDD and MAD with 8 food group compared to the children in the organized sector, although lesser number of children were able to meet MAD as compared to 0-6 months old children. MMF decreased with the increase in age in both the sectors, However, it was more in the unorganized sector.

Table 4.63: Age wise MDD, MMF and MAD among two sector

6- 8 Months		Organized		Unorganized		Total	
		n = 38	%	n = 24	%	N = 62	%
MDD	7 Food groups	19	50	7	29.2	26	41.9
	8 Food groups	15	39.5	7	29.2	22	35.5
MMF		36	94.7	19	79.2	55	88.7

MAD	7 Food groups	18	47.4	7	29.2	25	40.3
	8 Food groups	14	36.8	7	29.2	21	33.9
9- 12 Months		**n = 50**	**%**	**n = 26**	**%**	**N = 76**	**%**
MDD	7 Food groups	27	54	12	46.2	39	51.3
	8 Food groups	15	30	11	42.3	26	34.2
MMF		28	56	10	38.5	38	50.0
MAD	7 Food groups	18	36	7	26.9	25	32.9
	8 Food groups	9	18	7	26.9	16	21.1

Gender wise no difference was seen between the two sectors (Table 4.64). However, between the two genders, more females were able to meet MDD with 8 food groups (39.7% Vs 31.2%) and MAD with 8 food groups (31.0% Vs 23.8%) compared to boys. MMF was slightly more in female (68.9%) compared to males (66.3%). However, between the two sectors, in the organized sector, MMF of males (76.5%) was more than females (67.6%).

Table 4.64: Gender wise distribution of MDD, MMF and MAD

Indicators		**Organized**		**Unorganized**		**Total**	
		MALE					
		n =51	**%**	**n =29**	**%**	**N =80**	**%**
MDD	7 Food group	25	49.0	9	31.0	34	42.5
	8 Food group	16	31.4	9	31.0	25	31.3
MMF		39	76.5	14	48.3	53	66.3
MAD	7 Food group	21	41.2	6	20.7	27	33.8
	8 Food group	13	25.5	6	20.7	19	23.8
FEMALE							
		n =37	**%**	**n =21**	**%**	**N =58**	**%**
MDD	7 Food group	21	56.8	10	47.6	31	53.4
	8 Food group	14	37.8	9	42.9	23	39.7

MMF		25	67.6	15	71.4	40	68.9
MAD	7 Food group	15	40.5	8	38.1	23	39.7
	8 Food group	10	27.0	8	38.1	18	31.0
TOTAL							
		n= 88	**%**	**n= 50**	**%**	**N= 138**	**%**
MDD	7 Food group	46	52.3	19	38.	65	47.1
	8 Food group	30	34.1	18	36.0	48	34.8
MMF		64	72.7	29	58.0	93	67.4
MAD	7 Food group	36	40.9	14	28.0	50	36.2
	8 Food group	23	26.1	14	28.0	37	26.8

Table 4.65 shows the comparison of MDD, MMF and MAD amongst breastfed and non-breastfed children. More number of non-breastfed children were able to meet MDD and MDD with 7 food groups, However, with regards to MDD and MAD with 8 food groups, a greater number of breastfed children were able to meet the criteria. Thus, highlighting the need to continue breastfeeding along with complementary foods. MMF was similar in both breastfed and non-breastfed children. Amongst the non-breastfed, 9% of children were able to meet MAD with 8 food groups indicating a good quality dietary diversity in their diets.

Table 4.65: MDD, MMF and MAD among Breastfed and Non-Breastfed

Indicator		**Breastfed**		**Non-Breastfed**		**Total**	
		n=104	**%**	**n=34**	**%**	**N=138**	**%**
MDD	7 Food group	46	44.23	19	55.88	65	47.10
	8 Food group	44	42.30	4	11.76	48	34.78
MMF		70	67.30	23	67.64	93	67.39
MAD	7 Food group	35	33.65	15	44.11	50	36.23
	8 Food group	34	32.69	3	8.82	37	26.81

Hygiene and sanitation practices

Regarding hygiene and sanitation practices followed by mothers during feeding among both sectors, all the mothers were washing their hands with soap. One-third of the mothers had washed hands before preparing food, after preparing food, before feeding the child, and after feeding the child irrespective of sectors. With regards to caring taken during feeding the children more than one-third of mothers positively replied for the care taken like both mother and child wash hands, cleanliness of spoon/bowl, the temperature of the foods, food should not be stale and safe drinking water.

Table 4.66: Hygiene and sanitation practices among both sector

Category	Organized		Unorganized		Total		Chi Square (P Value)
	n=90	%	n=51	%	N=141	%	
Mother wash hand with soap							
Before preparing food	89	98.9	49	96.1	138	97.9	1.235 (0.266)
Before feeding the child	90	100.0	49	96.1	139	98.6	3.580 (0.058)
After feeding the child	66	73.3	27	52.9	93	66.0	6.029 (0.014*)
What care taken during feed the child							
Washing hands of both mother and the child	68	75.6	41	80.4	109	77.3	0.434 (0.510)
Cleanliness of utensils	90	100.0	51	100.0	141	100.0	
Temperature of Foods	89	98.9	48	94.1	137	97.2	2.689 (0.101)
Fresh foods	86	95.6	48	94.1	134	95.0	0.143 (0.706)
Safe drinking water	88	97.8	46	90.2	134	95.0	3.966 (0.046*)

*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Hygiene and sanitation practices

Table 4.67 reveals 141 children were observed who were introduced to complementary foods all of the mothers (55.1%) had washed their hands with soup. Most of the mothers washed hand before preparing food, after preparing food, before feeding the child, after feeding the child as mother had mentioned that:

- “Hamna corona na lidhe to ame ghadiye ne ghadiye hath dhoya j kariye” (As because

of corona we are washing hands very often)

Majority of the mothers had followed good care while feeding the child as indicated by both mother and child wash hands, cleanliness of spoon/bowl, the temperature of the foods, Food should not be stale and safe drinking water.

Table 4.67: Hygiene and sanitation practices according to gender

Category	Male		Female		Total		Chi Square (P Value)
	n=82	%	n=59	%	N=141	%	
Mother wash hand with soap							
Before preparing food	81	98.8	57	96.6	138	97.9	0.776 (0.378)
Before feeding the child	81	98.8	58	98.3	139	98.6	0.055 (0.814)
After feeding the child	52	63.4	41	69.5	93	66.0	0.564 (0.453)
What care taken during feed the child							
Washing hands of both mother and the child	64	78.0	45	76.3	109	77.3	0.062 (0.804)
Cleanliness of utensils	82	100.0	59	100.0	141	100.0	
Temperature of Foods	80	97.6	57	96.6	137	97.2	0.113 (0.737)
Fresh foods	78	95.1	56	94.9	134	95.0	0.003 (0.956)
Safe drinking water	78	95.1	56	94.9	134	95.0	0.003 (0.956)

Hygiene and sanitation practices

According to Table 4.68, an age-wise statistically significant difference observed for the mentioned parameter. As many as mothers had to follow recommended hygiene and sanitation practices as well care taken during feeding the child was mostly applicable for children who belonged to 6 – 12 months of age group.

Table 4.68: Hygiene and sanitation practices among two age group of children

Category	0-6 month		6-12 month		Total		Chi Square (P Value)
	n=7	%	n=134	%	N=141	%	
Mother wash hand with soap							
Before preparing food	6	85.7	132	98.5	138	97.9	5.229 (0.022*)
Before feeding the child	7	100.0	132	98.5	139	98.6	0.106 (0.745)
After feeding the child	5	71.4	88	65.7	93	66.0	0.98 (0.754)
What care taken during feed the child							
Washing hands of both mother and the child	5	71.4	104	77.6	109	77.3	0.145 (0.703)
Cleanliness of utensils	7	100.0	134	100.0	141	100.0	
Temperature of Foods	7	100.0	130	97.0	137	97.2	0.215 (0.643)
Fresh foods	7	100.0	127	94.8	134	95.0	0.385 (0.535)
Safe drinking water	7	100.0	127	94.8	134	95.0	0.385 (0.535)

*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Awareness about MBA among working mother from both Sectors

Findings of awareness-related MBA (Table 4.69) reveals that only one-third of mothers from the organized sector were aware of MBA. Around 81% were not aware, of which 71% from the organized and 99% from the unorganized sectors were not aware of it. Out of 48 mothers from the organized sector who aware of MBA, 23% were aware of paid maternity leave (26 weeks) facility which covered under MBA, 4.2% didn't know about any facility, and only 1.2% were aware of Paid Maternity leave (26 weeks) and no increased benefit for a third child. Further 57% had received maternity leave from their workplace during pregnancy which is separately more than half of respondent from both the sectors & the remaining 43% left the job. Out of 146, 77% of mothers from the organized sector had received paid maternity leave which is significantly higher than the unorganized sector (9%), although 91% from the unorganized sector had received unpaid leave, which is higher than the organized sector (18%). The difference was statistically significant. There were 4 mothers from

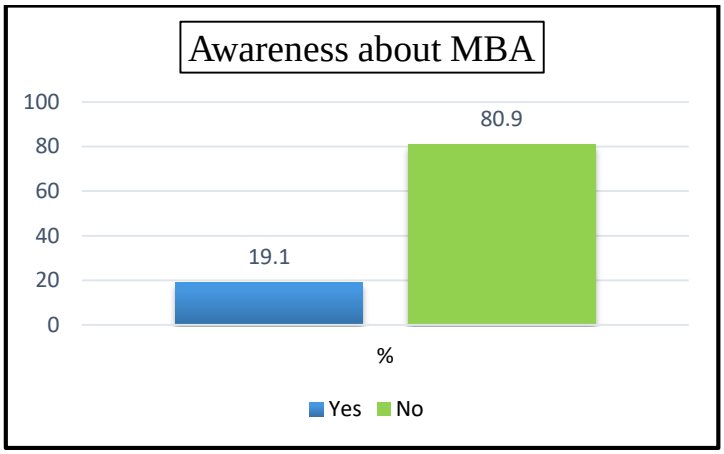
the organized sector who stated that they had received three months paid and 3-month unpaid leave. With respect to, duration of maternity leave 88% of mothers from the organized sector received 6 months of leave accompanied by 8% received less than 6 months of leave, 3.2% got more than 6 months of leave and 1% received unfix duration of maternity leave whereas in unorganized sector 55.5% mothers got more than 6 months of leave and 22.2% mothers received less than 6 months and 6-month duration of maternity leave.

Table 4.69: Awareness about MBA among both Sector

Category	Organized sector		Unorganized sector		Total		Chi Square (P Value)
	n = 165	%	n = 91	%	N = 256	%	
Awareness about MBA							
Yes	48	29.1	1	1.1	49	19.1	29.694 (0.000***)
No	117	70.9	90	98.9	207	80.9	
If yes, then which facility covered under MBA							
Don't know	7	14.6	1	100.0	8	16.3	37.805 (0.000***)
Paid Maternity leave (26 week)	38	79.2	0	0.0	38	77.6	
Paid Maternity leave (26 week), No increased benefit for third child	2	4.2	0	0.0	2	4.1	
Paid Maternity leave (26 week), Crèche facility	1	2.1	0	0.0	1	2.0	
Maternity leave had been provided by workplace							
Yes	92	55.8	54	59.3	146	57.0	0.307 (0.579)
Left the job	73	44.2	37	40.7	110	43.0	
Type of maternity leave							
Paid	71	77.2	5	9.3	76	52.1	76.952 (0.000***)
Unpaid	17	18.5	49	90.7	66	45.2	
Both (3 month paid & 3 month unpaid)	4	4.3	0	0.00	4	2.7	
Duration of maternity leave							
< 6 month	7	7.6	12	22.2	19	13.0	73.701 (0.000***)
6 month	81	88.0	12	22.2	93	63.7	
> 6 month	3	3.3	30	55.6	33	22.6	
Not fixed	1	1.1	0	0.0	1	0.7	

*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Figure 4.11: Awareness about MBA among Working Mother



Awareness about MBA among working mother based on age of child

It is seen from Table 4.70 that 23% of mothers whose children aged between 0 – 6 months and only 16% of mothers whose children aged between 6 – 12 months were aware of Maternity Benefit Act (MBA) remaining mothers were not aware. No difference was seen among the knowledge of the mothers between the two age groups. Amongst the mothers who knew Maternity Benefit Act, 78% of mothers were aware of paid maternity leave for 26 weeks, of which 82% and 73% were mothers of children who belonged to 0 – 6 months and 6 – 12 months of age group, respectively. 16% of the mothers were not aware of any facility covered under MBA. Maternity leave was provided to 57% of the mothers from their workplace, 60.2% of mothers of children aged 0 – 6 months, and 54.3% of mothers whose children belonged to the 6 – 12 months of age. There were 40% and 46% of mothers of children from 0 – 6 months and 6 – 12 months who had left the job. Nearly 50% of mothers of children 0 – 6 months of age either received paid or unpaid maternity leave, and 4% stated that they had received both (3 months of paid and 3 months unpaid leave) types of maternity leave. However, 55% of mothers of children 6 – 12 months of age received paid leave followed by 43% unpaid leave, and only one mother had received both types of maternity leave. The majority of mothers of children from both 0 – 6 months (62%) and 6 – 12 months (65%) of age earned 6 months duration of maternity leave whereas, 24% (0 – 6 month) and 20% (6 – 12 month) of mothers had more than 6 months of maternity leave, 14% and 12% of mothers whose children fall 0 – 6 months and 6 – 12 months of age respectively received less than 6 months of leave.

Table 4.70: Awareness about MBA among mothers according to two age group

Category	0-6 month		6-12 month		Total		Chi Square (P Value)
	n=118	%	n=138	%	N=256	%	
Awareness about MBA							
Yes	27	22.9	22	15.9	49	19.1	1.979 (0.159)
No	91	77.1	116	84.1	207	80.9	
If yes, then which facility covered under MBA							
Don't know	4	14.8	4	18.2	8	16.3	3.657 (0.456)
Paid Maternity leave (26 week)	22	81.5	16	72.7	38	77.6	
Paid Maternity leave (26 week), No increased benefit for third child	1	3.7	1	4.5	2	4.1	
Paid Maternity leave (26 week), Crèche facility	0	0.0	1	4.5	1	2.0	
Maternity leave had been provided by workplace							
Yes	71	60.2	75	54.3	146	57.0	0.880 (0.348)
Left the job	47	39.8	63	45.7	110	43.0	
Type of maternity leave							
Paid	35	49.3	41	54.7	76	52.1	1.306 (0.519)
Unpaid	33	46.5	32	42.7	65	44.5	
Bothe (3 month paid & 3 month unpaid)	3	4.2	1	1.3	4	2.7	
Duration of maternity leave							
< 6 months	10	14.1	9	12.0	19	13.0	1.217 (0.891)
6 months	44	62.0	49	65.3	93	63.7	
> 6 months	17	23.9	15	20.0	32	21.9	
Not fixed	0	0.0	1	1.3	1	0.7	

Breastfeeding practice adopted by working mother after returning to workplace

Table 4.71 contains the results of breastfeeding practices adopted by working mothers after returning to the workplace. It was observed that a similar proportion of working mothers from both organized (67%) and unorganized (68%) didn't return to their workplace after their delivery and only one-third of mothers return to the workplace

(organized (33%) and unorganized (32%)) at the time of study period. Among the mothers who had returned to the workplace, 55 (66%) mothers had never taken their child at the workplace of which 40 (74%) from the organized and 15 (52%) from the unorganized sector remaining 15% from organized and 45% from unorganized had taken their child at the workplace. There were 11.1% and 3.4% mothers from organized and unorganized sectors, respectively who were working from home. Mothers who had not taken their child at the workplace, 52 (95%) mothers, of which 93% from the organized and all from the unorganized sectors said that their child was taken care of at their own home with other family member remaining one mother had stated that they had put their child at neighbour's home and two mothers stated that they left their children at grandparents' house (Nani's home) in the organized sector. As breastfeeding is a big challenge for working mother after returning to the workplace thus study observed 53% of mothers breastfed their child after work, of which 61% were from organized, and 38% were from the unorganized sectors, followed by 30% breastfed at their workplace of which 17% of mothers from organized, 53% from the unorganized sector, and only 14% of mothers reported that they had breastfeeding break whereas only two mothers from organized sector adopted expressed breast milk as breastfeeding habit after returning to the workplace who used the breast pump for expressing breast milk. Breastfeeding practices adopted by working mothers who significantly different in both sectors.

Table 4.71: Breastfeeding practice adopted by working mother after returning to workplace among both set up

Category	Organized sector		Unorganized sector		Total		Chi Square (P Value)
	n = 165	%	n = 91	%	N = 256	%	
Return to workplace							
Yes	54	32.73	29	31.87	83	32.4	0.020 (0.888)
No	111	67.27	62	68.13	173	67.6	
Taken their child at workplace or not							
Yes	8	14.8	13	44.8	21	25.3	8.786 (0.010*)
No	40	74.1	15	51.7	55	66.3	
Work from Home	6	11.1	1	3.4	7	8.4	
If no, then generally where they put their child							
At our own	37	92.5	15	100.0	52	94.5	0.876

home with other family member							(1.000)
At Neighbour's home	1	2.5	0	0.0	1	1.8	
Other	2	5.0	0	0.0	2	3.6	
Breastfeeding habit was adopted on returning to work after maternity leave							
Breastfeeding break	6	5.6	2	9.5	8	14.0	7.812 (0.029*)
Breastfeeding at the workplace	6	16.7	11	52.4	17	29.8	
Express breast milk	2	16.7	0	0.0	2	3.5	
Breastfeeding after work	22	61.1	8	38.1	30	52.6	
How did they express breast milk							
Expressing by pump	2	100.0	0	0.0	2	100.0	

*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Breastfeeding practice adopted by working mother after returning to workplace

Overall, two-thirds of the working mothers had not returned to their work among them, 88.1% were the mother of 0 – 6 months old children and 50% were 6 – 12 months old children. Whereas one-third of mothers who returned to the workplace, 12% were the mothers of children aged between 0 – 6 months, and 50% were the mothers whose children belonged to 6 – 12 months of age group, and the difference was statistically significant. 66% of mothers had negatively responded about taking their child at their workplace, out of them 50% were the mothers of 0 – 6 months of age group, and 70% were the mothers whose children belonged to 6 – 12 months of age. All mothers of children less than 6 months who had not taken their child at the workplace reported that their child stayed at their own home with other family members. 94% of mothers of children (6 – 12 months) also gave a similar response. 53% of mothers breastfed their baby after returning from work followed by 30% breastfed at the workplace, 14% got breastfeeding break to go and feed their baby, and 4% of mothers whose children 6 – 12 months old adopted the practice of expressing breast milk by using a breast pump as an option of breastfeeding after returning to

work.

Table 4.72: Breastfeeding practice adopted by working mother after returning to workplace based on age category of children

Category	Age Category						Chi Square (P Value)
	0-6 month		6-12 month		Total		
	n=118	%	n=138	%	N=256	%	
Return to workplace							
Yes	14	11.9	69	50.0	83	32.4	42.222 (0.000***)
No	104	88.1	69	50.0	173	67.6	
Taken their child at workplace or not							
Yes	7	50.0	14	20.3	21	25.3	5.113 (0.068)
No	7	50.0	48	69.6	55	66.3	
Work from Home	0	0.0	7	10.1	7	8.4	
If no, then generally where they put their child							
At our own home with other family member	7	100.0	45	93.8	52	94.5	0.916 (1.000)
At Neighbour's home	0	0.0	1	2.0	1	1.8	
Other	0	0.0	2	4.2	2	3.6	
Breastfeeding habit was adopted on returning to work after maternity leave							
Breastfeeding break	1	7.7	7	15.9	8	14.0	4.142 (0.220)
Breastfeeding at the workplace	7	53.8	10	22.7	17	29.8	
Express breast milk	0	0.0	2	4.5	2	3.5	
Breastfeeding after work	5	38.5	25	56.8	30	52.6	
How did they express breast milk							
Expressing by pump	0	0.0	2	100.0	2	100.0	

*: $p<0.05$, **: $p<0.01$, ***: $p<0.001$

Duration of Maternity Leave and IYCF practices

No significant difference was observed for duration of maternity leave with regards to IYCF practices.

Table 4.73: Duration of Maternity Leave and IYCF practices

Category	Duration of Maternity Leave						Chi square (P value)
	< 6 months		≥ 6 months		Total		
	n= 19	%	n= 127	%	N=146	%	
Early Initiation of Breastfeeding							
Yes	10	52.63	56	44.09	66	45.21	0.486 (0.486)
No	9	47.37	71	55.91	80	54.79	
Exclusive Breastfeeding for first 2 days after birth							
Yes	11	57.89	59	46.46	70	47.95	0.866 (0.352)
No	8	42.11	68	53.54	76	52.05	
Exclusive Breastfeeding under 6 months of age							
Yes	6	60.00	31	50.82	37	52.11	0.292 (0.737)
No	4	40.00	30	49.18	34	47.89	
Introduction of Complementary Feeding							
Yes	4	100.00	35	94.59	39	95.12	0.422 (1.000)
No	0	00.00	2	5.41	2	4.88	

SECTION II: TO IDENTIFY THE BARRIERS AND FACILITATORS IN OPTIMAL IYCF PRACTICES FOLLOWED BY WORKING MOTHER

Barriers and Facilitators Identified for Early initiation of Breast feeding, Exclusive Breastfeeding and Complementary feeding

Table 4.74: Barriers and Facilitators

Barriers	Facilitators
EARLY INITIATION OF BREASTFEEDING WITHIN 1 HOUR	
• Caste is a barrier in early initiation of breastfeeding as mothers from backward castes had not initiated breastfeeding with 1 hour.	• Monthly income of the family influenced the early initiation of breastfeeding rates
• Higher the education of mothers was negatively corelated with the early initiation of breastfeeding.	• Education of both father and mother had a positive corelation with the early initiation of breastfeeding
• Occupation of the mother affected the early initiation rate as mothers who were	• Place of delivery facilitates initiation of delivery as Nurses in hospitals promotes breastfeeding

Professionals or Managers had delayed breastfeeding beyond 1 hour of birth.	within 1 hour.
• Type of delivery was significantly associated with early initiation as mothers who had undergone C section had delayed initiation of breastfeeding.	• Counseling received by the mother during ANC visits encouraged the mother to initiate breastfeeding with 1 hour.
• Primi mothers needs support for early initiation as a greater number of firstborn children had delay in initiation of breastfeeding.	• Mother have prior experience facilitates early initiation.
• Mothers facing difficulty especially related to breast such as inverted nipples had delay in initiation of breastfeeding.	• Birth order of child significantly improve timely initiation of breastfeeding i.e. for second born child, more chances to initiate breastfeeding early
EXCLUSIVE BREASTFEEDING FOR 6 MONTHS	
• Caste also affected exclusive breastfeeding for 6 months.	• Normal delivery of mothers continued breastfeeding for 6 months.
• Mothers working in the organized sector discontinued breastfeeding before 6 months.	• Counseling during ANC visits motivates the mother to exclusively breastfed their children for 6 months.
• Place of delivery significantly affects exclusive breastfeeding for 6 months as deliveries done in private hospitals prescribe formula milk for first 2 days thereby affecting exclusive	• Significantly a higher proportion of mothers who delivered in Government hospitals continue to exclusively breastfeed their children for 6 months.

breastfeeding rates.	
• Mother facing difficulty significantly affected breastfeeding practices for 6 months as the mothers who faced difficulty, discontinued breastfeeding before 6 months.	• Mothers having prior experience facilitated in exclusively breastfeeding their children for 6 months.
	• Early initiation of breastfeeding with 1 hour or breastfeeding initiated with 1 day helped the mother to exclusively breastfed their children.
COMPLEMENTARY FOODS	
	• Age of the mother was positively corelated with the knowledge among them regarding timely initiation of complementary foods.
	• Mothers education and occupation significantly improved the knowledge among them for initiation of complementary foods at 6 months.
	• Timely initiation of complementary foods at 6 months helped the children in achieving MMF.

Barriers and Facilitators in two sectors

In organized sector type and place of delivery was significantly associated with breastfeeding practices as mothers who had undergone C section had delayed initiation of breastfeeding and exclusive breastfeeding contrary mothers who had normal delivery facilitated initiation of breastfeeding as early as possible and exclusively breastfed their infants for 6 months. Deliveries done in Government hospital promote early initiation of breastfeeding and also exclusive breastfeeding till

6 months whereas deliveries done at private hospitals acted as a barrier for timely initiation of breastfeeding. As no such trend observed in unorganized sector. Receiving counselling related to IYCF practices during ANC visit promote EIBF and EBF in organized sector whereas in unorganized sector receiving counselling regarding IYCF practices during PNC visit promote EIBF. Mothers from organized sector who facing difficulty with breastfeeding were the barriers for EIBF as well as EBF for 6 months and mothers who had prior experience help to initiate breastfeeding i.e. second born child had received timely initiation of breastfeeding. Also in organized sector, mothers who received counselling and support from their family member and nurse facilitate the mother to initiate breastfeeding within one hour and in exclusively breastfed their infants for 6 months. Fathers from organized sector who had higher education and occupation level significantly improve exclusive breastfeeding practices and household which had 3 or more than 3 earning members also facilitate EBF for 6 months. Timely or early initiation of breastfeeding facilitates the working mother in organized sector to continue breastfeeding till 12 months. In organized sector, occupation of father facilitate introduction of complementary feeding and education of father also promote timely introduction of complementary feeding, i.e. at 6 months of age. In both the sector, knowledge about complementary feeding among mothers facilitate timely introduction of complementary feeding. Including variety of fruits and vegetables (Vitamin A rich fruits and vegetables) not only facilitate meeting diet diversity but also facilitate in achieving MAD in both sector. With respect to unorganized sector frequency of feeding complementary feeding i.e. if child fed with 3 – 4 times complementary feed facilitate in meeting MAD. Children should be fed more frequently with variety of food group. In unorganized sector, mothers who followed WHO – IYCF practices such as feeding 3 – 4 times with 1 full cup of complementary food helped in achieving MAD.

SECTION III: TO CREATE AWARENESS ABOUT THE BENEFITS OF BREASTFEEDING AMONG WORKING MOTHERS AND THE PROVISION OF MATERNITY LEAVE FOR IMPROVING BREASTFEEDING PRACTICES

Based on the result, working mother were partially followed correct IYCF practices and majority of them didn't aware about MBA therefor we have developed trifold brochure which will be disseminate after the study.(Annexure 3.5)

The content included the following

1. What are the IYCF practices,

2. What is the meaning of exclusive breast feeding and complementary feeding,

3. Frequency of breastfeeding and complementary feeding,

4. Advantage of exclusive breastfeeding,

5. Things to remember when starting/initiating complementary feeding,

6. Major highlights of MBA.

DISCUSSION

The threat to the lives of millions of infants and young children in India is a major national and global concern. Ironically, most such deaths result from preventable causes. Various studies validate the widespread practice of suboptimal feeding behavior among Indian women. Working women constitute a significant and expanding pool of mothers in India feeding behavior among them has not been researched adequately. (Kumar, 2014)

Exclusive breastfeeding for the first six months of life provides the complete nutritional requirements for healthy infants. Continued breastfeeding along with complementary foods provides optimum growth and development which is essential for a child in the second year and beyond. (Nkrumah, 2017)

This study aims to feature barriers and facilitators promoting IYCF practices among working mothers.

In the present study, almost all mothers were Hindu, the majority ranged from 19 to 35 years, and educated only 3% were illiterate. Caste is a barrier in the early initiation of breastfeeding as mothers from backward castes had not initiated breastfeeding with 1 hour. Mothers from backward castes had given their cultural beliefs as one of the reasons for the late initiation of breastfeeding. A study from Nairobi, Kenya stated, cultural practices, myths, misconceptions, and beliefs influence the ability of most mothers to initiate breastfeeding within one hour after birth, practice EBF, and prolong the duration of breastfeeding, particularly in low-income countries. (Wanjohi M et al., 2016)

According to the present study, Caste also affected exclusive breastfeeding for 6 months. Another Ghanian study mentioned that the practice of exclusive breastfeeding (EBF) is influenced by maternal knowledge and attitudes as well as socio-demographic and cultural factors. (Mogre et al., 2016)

One-fourth of mothers lived in a nuclear family. Majority of the working mother from the organized sector had a Professional and honor's degree (37.6%), followed by graduation (31%) and intermediate diploma (20%).

Higher education of mothers was negatively correlated with the early initiation of breastfeeding. The education of both father and mother had a positive correlation with the early initiation of breastfeeding. One study revealed a mother's education to be the most important predictor of chronic malnutrition. The possible explanation could be that the knowledge and understanding of mothers on child nutrition and feeding practices are likely to have a positive impact on their children nutritional status (Muhammad Edial Sanif Dina Alfiana, 2019).

Mothers' education and occupation significantly improved the knowledge among them for initiation of complementary foods at 6 months. Dina Alfiana et al., (2019) conducted a study among mothers of infants aged 6 to 24 months in the Tegalgubug Health Center, in Cirebon City with an objective to examine the correlation between education, work, and maternal knowledge about complementary feeding. She concluded that there is a significant correlation of mother's education, occupation, and knowledge of complementary feeding with nutritional status of 6-24-month-old babies with a weak correlation.

About socio-economic classification based on Kuppuswami SES scale 2020, in organized sector majority of mothers belonged to Upper Middle (II) (38.2%) on contrary least mothers from unorganized belonged to same class, Similar findings were observed in a departmental study carried out in Vadodara 2020, in private setup majority (67.3%) belonged to Upper Middle class and in ICDS set up least mother was from class (II). However, at unorganized more proportion (61.5%) of mothers compared to organized (33%) were from Upper lower (IV) class which is also similar with the earlier mention study wherein ICDS set up a majority (55%) were from class (IV) and only 2% from private set up belonged to the same socio-economic class. (Kantawala S, 2020).

Monthly income of the family influenced the early initiation of breastfeeding rates. Sharma and Byrne stated breastfeeding initiation based on wealth also contrasts between countries. In an urban area of India, Kolkata, early initiation practices were higher among women from lower-income groups (Dihidar S et al., 2002).

With regard to the mode of delivery, all the deliveries were institutional, with 40% of them were normal and 60% cesarean. More than half of working mothers had a normal vaginal delivery in the unorganized sector. Whereas a nearly third fourth had a cesarean delivery in the organized sector. Contrary results were found in a study conducted in Bengaluru and central India, where compared to the vaginal route of the delivery lesser proportion of deliveries were cesarean. (Gaidhane et al., 2019).

In present study almost working mother (97.3%) had received 4 or more than 4 ANC it is similar with Study on breastfeeding practices among rural women in the field practice areas of a tertiary care teaching hospital where 60% mother had visited 4 or more than 4 ANC which is also comparable with NFHS-4 data findings which showed nearly 70% had 4 or more than 4 ANC. (Nagar et al., 2019). A comparative study was explored in Kancheepuram District, Tamil Nadu. Majority of mothers (62.8%) had 3 to 7 antenatal visits. With regard to PNC visits, 10.1% had visited more than 4 PNC which is similar to the Tamil Nadu-based study where 6.1% had visited more than 3 PNC visits. (Liaquath Ali et al., 2019).

Counseling received by the mother during ANC visits encouraged the mother to initiate breastfeeding with 1 hour and to exclusively breastfed their children for 6 months. In India, the ANMs are being trained in IMNCI strategy, which involves training on positioning and attachment. So at the Village Health and Nutrition Day (Mamta Divas in Gujarat), their skills can be utilized for the health education of future mothers and support for breastfeeding mothers (Davara et al., 2016).

During the bivariate logistic regression analysis, educational status of the mother, employment status of the mother, educational status of the husband, breastfeeding counseling during ANC, infant feeding counseling during PNC, colostrum feeding, prelacteal feeding, and knowledge about breastfeeding were significantly associated with EBF. Mothers who received counseling about breastfeeding during ANC were 2.44 times more likely to exclusively breastfed their infants compared to those who didn’t receive counseling. (Mekuria & Edris, 2015). Fasna Liaquath Ali et al., (2019) in Tamil Nadu found effective antenatal and postnatal advice on breastfeeding practice has a positive impact on exclusive breastfeeding for six months.

Early initiation of breastfeeding

Putting the baby to breast within an hour of birth (early initiation) is the first and foremost step to optimal breastfeeding.

As reported by Prandnya P Sathe (2016), association between cesarean delivery and breastfeeding outcomes among women, Caesarean section was a risk factor for not initiating breastfeeding. Dismally our study has also shown the prevalence of early initiation of breastfeeding within one hour were less among mother who had a cesarean delivery. Women with normal vaginal delivery (62.5%) had started breastfeeding compared to women, who delivered by cesarean section (24%). The result was highly significant statistically. Probable reason is that women who delivered by the normal vaginal route are more comfortable to initiate breastfeeding compared to those who underwent cesarean section (Unadkat et al, 2017).

As per NFHS 5 Gujarat data, 38% of children under age 3 years breastfed within one hour of birth. However, the present study found 39.5% of working mothers had initiated breastfeeding within one hour of birth which can be related to the study of breastfeeding practices among working and non-working women of Maharashtra where, 53.3% of non-working women and 33.6% of working women initiated breastfeeding within one hour after birth (Mohite Rv et al.,2020). A study carried out by Mukta Singh Bhandar et al., 2019 found 57% of women working in tertiary level hospitals initiated breastfeeding within one hour of birth.

Type of delivery was significantly associated with early initiation as mothers who had undergone C section had delayed initiation of breastfeeding. Mothers facing difficulty especially related to breast such as inverted nipples had delay in initiation of breastfeeding was also a barrier in the present study.

The reasons for late initiation (after one hour) were mother undergone cesarean section, baby not well (not able to breathe, needs to put in incubator or NICU, baby not able to suck, low birth weight) and family ritual which was revealed from the unorganized sector as “amara ma be divas pachi j aape” & “chep vadu hatu dudh etle”. Other reasons were breast issues or feeding problems (inverted nipple, milk didn’t secrete), maternal problem (not able to sit, unconsciousness, hypertension). Similar reasons were cited as mother’s health condition specifically unconscious after

delivery, unable to sit, suffering from comorbidities like hypertension, fatigue, or generalized 'illness' after delivery, time for recovery from cesarean delivery and delay in uniting the newborn and mother after cesarean section as reasons for delayed initiation (Sharma & Byrne, 2016).

A study from Jamnagar also mentioned similar reasons for late initiation (after 1 hour) i.e cesarean section and cultural beliefs and other reasons were breast-related issues (inverted nipple, breast engorgement), maternal problems (eclampsia, PPH), lack of prenatal guidance on the advantage of exclusive breastfeeding. Sunjay V Wagh et al (2013) also found that cesarean section, delivery complication, the baby in NICU, and milk not produced immediately were the reasons for late initiation of breastfeeding. (Unadkat et al., 2017). A study conducted in Mumbai stated a 23% delay in initiation of breastfeeding because of physical discomfort and there was no milk secretion to the mother. (Srivastava & Gawande, 2018).

52% of women who were in the age group of 19 – 25 had started early breastfeeding which was the highest proportion among all age groups of mothers. The result of the study was found to be similar to the study where factor affecting core indicators of infant and young child feeding practices in an urban area of Gujarat state, India was assessed and found 1.9% of women who were in the age group of 26-30 years age group started early breastfeeding which was the highest proportion among all the age groups (Rana et al., 2016).

Occupation of the mother affected the early initiation rate as mothers who were Professionals or Managers had delayed breastfeeding beyond 1 hour of birth. Contrary findings from Minnesota, U.S. show that having a professional occupation had positive effects on breastfeeding initiation and continuation (Dagher et al., 2016).

A systematic literature review of factors and barriers in South Asia found that birth order, previous birth interval, teenage motherhood, and having a male child are linked with early initiation of breastfeeding (Sharma & Byrne, 2016), which could be related to our study as a result, shows mother has prior experience facilitates early initiation.

Place of delivery facilitates initiation of delivery as Nurses in hospitals promote breastfeeding within 1 hour. Significantly a higher proportion of mothers who

delivered in Government hospitals continue to exclusively breastfeed their children for 6 months. A study on feeding practices among mothers with children aged less than two years in the rural area of Kancheepuram District, Tamil Nadu stated place of delivery was associated with appropriate feeding practices (Liaquath Ali et al., 2019).

Mothers need support for early initiation as a greater number of firstborn children had a delay in initiation of breastfeeding, consistent with a South Asian study in which they had observed lack of available support and milk insufficiency are demand-side barriers for early initiation of breastfeeding (Sharma & Byrne, 2016).

The feeding of colostrum is considered as the first immunization for the child due to its anti-infective properties. Giving babies other fluid and milk before breastfeeding is initiated (known as giving prelacteal feeds) is a poor practice that contributes to the loss of essential nutrition which breastmilk can provide and places babies at risk of illness and even death.

Irrespective of sectors, colostrum was fed to almost 88% of children, and a higher percentage (78%) of children were not given any prelacteal after birth indicating that the mothers were aware of the benefits and harms related to these two practices. Similar findings were seen with a departmental study conducted by Seksaria and Sheth (2015) at Chikhli taluka, Gujarat, and a study done by Pradnya P. Sathe et al.(2016) in Maharashtra , Prelacteal were given to 2% and colostrum to 98% of babies whose mother worked as to paramedical staff. Majority of children who had normal birth weight (>2500 gram), were given colostrum feed and initiated breastfeeding within 1 hour of birth as seen in a similar study carried out by (Guirindola et al., 2018).

In the present study majority of working mothers, irrespective of place of delivery had given colostrum and not Prelacteal food to their children. The findings of our study found similar to the result from a Nepal-based study, colostrum was fed by 195 (94%) of working mother and Prelacteal feeding was given by only 14 (7%) women. (Singh et al., 2019). In the current study, highest proportion of mothers who gave Prelacteal to their neonates were from the age group 26-30 years. The finding is similar to a study conducted by Rana et al. (2016). According to one study, Prelacteal feeding was more common among mothers in the age more than 35 years, this may be due to the fact

that mothers of older age tend to follow age-old rituals & customs more than the younger ones whereas no as such trend observed in our study (Rai & Bhutia, 2018).

Mothers revealed that 66.5% had given formula milk and 16.1% had given animal milk (cow's milk, Goat's milk) till breastfeeding was initiated. This is corroborated by a study in Nigeria as 55% had fed formula milk till breastfeeding was initiated (Ogunba, 2015). A comparative study based on rural Maharashtra found among non-working mothers, majority of the mothers gave cow's milk, and though it was the same with working mothers the number of working mothers who fed their babies with formula milk was 27.3% and the association was found to be statistically significant. (Mohite Rv et al., 2020).

An infant needs to be breastfed 8-12 times in 24 hours. As per our results, overall infants had received breastfeeding during day time as well as night but in terms of frequency of breastfeeding only 14% of infants were breastfed more than 8 times during day whilst night only 22% received breastfeeding more than 4 times. However, an earlier study which was based on Vadodara and urban slum area, observed only 81 (38.6%) of mothers had given breastfeeding more than eight times in the daytime, and 115 (55%) of the mothers had given breastfeeding for more than four times in the night which is far better proportion than the present study. Nighttime breastfeed is important to prevent hypoglycemia in the child and for weight gain (Davara et al., 2019). Another study from Ghana revealed infants were breastfed many more times in the night than during the day (Nkrumah, 2017).

A study carried out by E. Kishore and Syam Sundar Junapudi (2016) in Andhra Pradesh reported out of 112 mothers, 68 (60.71%) mother's breastfed their infants about 6-8 times in a day, 21 (18.75%) mothers less than 6 times, 20 (17.85%) mothers feed 8 to 12 times for the day.

Appropriate feeding during illness is important to prevent nutritional deficiencies and in the present study one-third of children who were getting ill and among them all (100%) were continue receiving breast milk. This practice is consistent with a study conducted in South Indian city, Nellore which found that 88.23% continued to breastfeed their infants during episodes of diarrhea (Kishore & Junapudi, 2018).

When mother inquiring about the cessation of breastfeeding 35 (14%) mother had discontinued to breastfed their baby, among them, majority of mothers (46%) discontinued breastfeeding at age 9-12 months of infant whilst one fourth (25.7%) before 6 months of age which was not recommended practice and 28.6% at 6-8 months. Contrast findings were seen among employed mother at Malaysia where at the time of the study out of total 290 participants, 149 (51%) had discontinued breastfeeding. Among those who discontinued breastfeeding, 54% breastfed less than three months, 35% discontinued between three to six months, and only 12% discontinued after six months (Amin et al., 2011)

According to NFHS – 5 in Gujarat, 65% of children under age 6 months are exclusively breastfed. The rates are positively increasing from 56% as per NFHS – 4 data. A Maharashtra-based study found the percentage of non-working women (46.7%) who followed exclusive breastfeeding was higher than that of working women (15.9%) (Mohite Rv et al., 2020). Nepal-based study report 11% were exclusively breastfed for six months(Singh et al., 2019). However, in the present study, one-third (34%) of working mothers (organized: 31%, Unorganized: 39.6%) fed their infants exclusively till 6 months or more than 6 months of age. Similar findings also reported by Kadale 2018, who analyzed information among 138 working mothers who were from the different states of India noted only 1/3rd (31.88%) of working mothers could exclusively breastfeed their child for 6 months (Kadale et al., 2018). Similarly, a study done in North Gondar Zone, Northwest Ethiopia revealed 35.9% of female nurses midwives practiced exclusive breastfeeding for six months, and 88 (49.4%) of the respondents exclusively breastfeed for only 3 months or less (Dachew & Bifftu, 2014). Compared to our study proportion of EBF till 3 months were more prone in a study done by Dachew & Biffu (2014), findings from our study represent 30.5% working mother were exclusively breastfed till 0-3 months of age of infants, of which more mother from organized (36.4%) than unorganized (20%). Whereas study done by Ashok A.,(2018) found only 11% of working mothers breastfed their baby till 24 weeks whereas Mysore, Karnataka-based study found 15.9% of the working women had exclusively breastfed their children for six months (Boralingiah et al., 2016).

A study about Exclusive Breastfeeding and Maternal Employment in Ethiopia

observed the prevalence of exclusive breastfeeding was 44% and 65% among employed and unemployed mothers respectively (Abebe et al., 2014). Which corroborated with the present study where infants who were from age group 0-6 months (47%) were exclusively breastfed at the time of the survey.

exclusive breastfeeding among bankers in Mainland Local Government in Lagos State, in Nigeria Exclusive breastfeeding was practiced by 56% of the respondents, however, only 28.5% practiced exclusive breastfeeding for up to 6 months post-delivery. (Osibogun et al., 2018).

Mothers working in the organized sector discontinued breastfeeding before 6 months. A study on Maternal work and exclusive breastfeeding practice observed more mothers in the informal sector of employment exclusively breastfed their infants and breastfed more than eight times in the previous 24 h compared to mothers in the formal sector of employment (Nkrumah, 2017).

Workplace issues were identified as one of the factors that contributes to mothers' decision to exclusively breastfeed their babies or not (Abekah-Nkrumah et al., 2020). Vindhya Polinen et al., (2016) in Mysuru observed working status of women has reduced the duration of exclusive breastfeeding.

Another study also concluded the short duration of maternity leave, being a full-time worker, **private organization employees**, failure to pump breast milk, lack of a lactation break, inflexible work time, and working far away from their child were associated with cessation of EBF among employed women (Kebede et al., 2020).

Mothers having prior experience facilitated exclusively breastfeeding their children for 6 months. A study of 1,488 survey respondents in which researchers found that working women breastfed longer if they had breastfed a previous child (Fein & Roe, 1998). Better breastfeeding practice was seen among mothers from Abu Dhabi, UAE who delivered their last child by vaginal delivery ($p = 0.003$) and those who had an experience of exclusive breastfeeding ($p = 0.009$) (Al Ketbi et al., 2018).

Normal delivery of mothers continued breastfeeding for 6 months. A study among professionals working in Ghana found the mothers who had a normal delivery were almost 10 times more likely to practice exclusive breastfeeding. (Dun-Dery & Laar, 2016)

Mother facing difficulty significantly affected breastfeeding practices for 6 months as

the mothers who faced difficulty discontinued breastfeeding before 6 months. A study on Barriers and facilitators of exclusive breastfeeding observed **Breast pain and milk insufficiency** made EBF difficult (Moyo et al., 2020).

Place of delivery significantly affects exclusive breastfeeding for 6 months as deliveries are done in private hospitals that prescribe formula milk for the first 2 days thereby, affecting exclusive breastfeeding rates. UAE study mentioned 176 (58.3%) mothers had not given ready-made liquid formula in the hospital, but 48% of mothers reported that they were advised by a doctor to start formula milk for their child (Al Ketbi et al., 2018).

A comparative study of the impact of breastfeeding practices on the nutritional status of the infants among the working and non-working women found no working mothers have given bottle feeding to their babies but in the control group (non-working mother) 8% of mothers had initiated bottle feeding (Ashok A. et al., 2018). In contrast to these studies, findings showed 30% of working mothers had been given bottle feeding to their babies. Whereas study from Uttarakhand observed there were 53.33% of infants were partially or fully bottle-fed (Rathaur et al., 2017), and a study done by Fasna Liaquath Ali et al., 2019 reported 63.2% of women denied bottle-feeding practices which are similar without findings as 71.1% had denied.

Majority of 57% of the working mother had knowledge about complementary feeding whereas Gujarat-based study found knowledge about the correct time of starting complementary feeding was more commonly found in housewife mothers than the working mothers. (Parikh et al., 2019)
Age of the mother was positively corelated with the knowledge among them regarding timely initiation of complementary foods. A study from Northeast Ethiopia mention maternal age as one of determinant for knowledge about the right time for initiation of complementary feeding (Sisay et al., 2016).

Out of 208 working mothers of children in Nepal, complementary food was introduced before six months of age by 90 (43%) women. Whereas positive Findings were observed from this study as 55.1% of working mothers started to feed complementary food to their child out of them, 80% had started at the recommended age of 6 months

of age (Singh et al., 2019). In our study 18.4% of working mother had started CF before 6 months of age which is not recommended, Mother working was the most stated reason by working mothers for initiate complementary feeding before 6 months of age. In Nepal based study 51% of women had also stated inadequate milk secretion as the reason for starting complementary food early and 47% of women stated lack of time to breastfeed due to work as the barrier.

A study by Danielle et al says that returning to work was one of the main reasons for early initiation of complementary feeding and reduce breastfeeding which is also corroborated with the present study (Weber et al., 2011). A study among tea garden workers from Assam found only 2% of working mothers introduced complementary foods before 6 months which may be attributed to the insufficient production of milk. (Dutta & Gogoi, 2019). In Tamil Nadu, 58.6% of non-working mothers of children were introduced to soft/solid/semi-solid food at the end of 6 to 8 months (Liaquath Ali et al., 2019). A study was conducted in New Delhi among 150 working mothers of children aged between 6-24 months observed 39% of mothers started complementary feeding at 6 months of age contrary result found from our study as 80% of working mothers initiated complementary feeding at 6 months of age (Kumar, 2014).

A Community Based Study in Urban Slum Areas of Vadodara City from Vadodara found about 23% of the mothers had started giving foods other than breast milk before the age of 6 months. (Davara et al., 2019)

Infant and young child feeding practices of working and non-working mothers in urban slums of Davangere city found Majority of nonworking mothers (73%) practiced adequate minimum meal frequency, whereas adequate minimum dietary diversity was practiced by 70% of working mothers. Adequate minimum acceptable diet was low among the study population (20%) but comparatively high among nonworking mothers (31%) (DB et al., 2016). Contrast findings from our study revealed 67.4% of children had met minimum meal frequency, 47% met minimum dietary diversity with 7 food group whereas 35% with 8 food group (Breastmilk was one of the food group). Minimum Acceptable Diet was received by 36.2% of children with 7 food groups and 27% with 8 food groups.

Complementary feeding practices among children aged 6–23 months in Aligarh, Uttar

Pradesh found MDD was adequate in 42.6% of children, MMF in 50.9% of children, and MAD in 35.6% of children (Istiyaq Ahmad, Najam Khalique, Salman Khalil & Maroof, 2017).

A study setting from sub-Saharan Africa observed less than 35 % (ranged 6.4–35.3%), 60 % (ranged 33.5–59.5%), and 18 % (ranged 3.7–18.3 %) of children 6–23 months of age met the criterion of minimum dietary diversity (at least four food group), minimum meal frequency and minimum acceptable diet, respectively (Na et al., 2015). Consumption of unhealthy or processed foods was more observed in the unorganized sector which consistent with slum families of Dhaka were more likely to consume processed food due to their mothers' work (Kabir & Maitrot, 2017).

A study on maternity benefits and their effectiveness in the construction industry found around 86% of the workers do not know about the maternity benefit which is consistent with our findings as 81% of the working mothers were not aware of MBA (Gopalakrishnan, 2017). Results found from the study conducted at a semi-urban area of Odisha, only 28.09 % of respondents were fully aware of the Maternity Benefit Act 1961 and 68.09% were partially aware of it (Satpathy & Agarwal, 2014). A study on effectiveness and impact of maternity benefit (amendment) act, 2017 on employment in the unorganized sector at West Nagpur, Maharashtra found the women employee on the construction company is unaware about what benefit they are getting under Maternity Act and only 4% women workers are aware of the Act, remaining 96 % women workers unaware (Admane, 2020) whereas in present study 48 mothers from the organized sector who aware about MBA among them 79.2% were aware of the facility of paid maternity leave (26 weeks) which covered under MBA.

Study subjects from Karnataka and Nepal, majority of working mother opined that short duration of leave 90% and 95% women received paid maternity leave respectively. However, in the present study half of working mothers had received paid maternity and among them, 64% had received 6 months of duration, 22% had more than 6 months of leave and 13% had received less than 6 months of maternity leave. Whereas one descriptive longitudinal study found about, 32% of working mothers had 6 months and 36% <3 months of maternity leave, respectively (Hegde et al., 2017). Another Indian study conducted by Satpathy et al. (2014) observed 39.56% had

availed a leave of 12 to 16 weeks, which is the highest paid leave in private organizations for mothers whereas 57.12 % availed paid leave of 12 weeks or less than that. A Pakistan-based study reported Paid maternity leave was provided in most of the workplaces (86%) (Soomro et al., 2016).

Deliveries which had taken place at a private hospital was one of the barriers for early initiation of breastfeeding whereas Government hospital was the facilitators for initiation of breastfeeding within one hour of birth. Place of delivery also affected the mode of delivery as compared to Government hospital higher proportion of C-section had taken place at a private hospital in both sectors. Ultimately mode of delivery directly affects the timely initiation of breastfeeding. C-section was the barrier for delayed early initiation of breastfeeding which was the most stated reason for late initiation of breastfeeding. The physiological and physical difficulty was also the barrier for late initiation as after C-section many mothers had stated feeding issue and mother herself not well was the reasons for late initiation of breastfeeding.

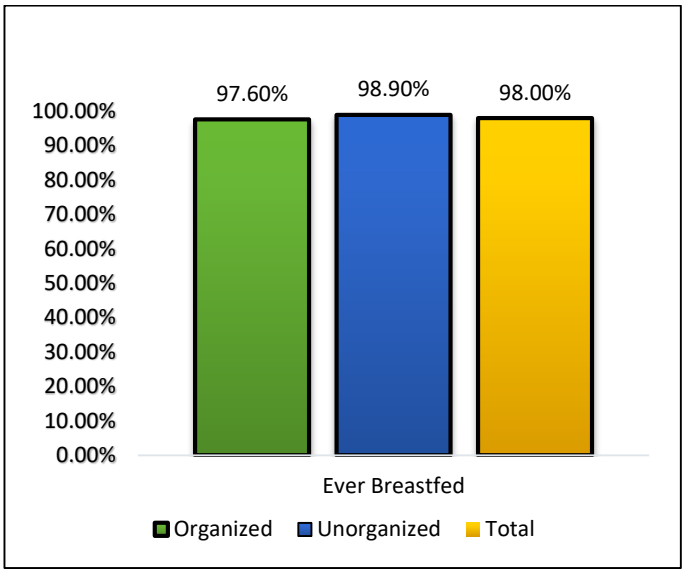
SUMMARY AND CONCLUSION

SUMMARY

- A total of 256 working mothers were enrolled in the study, of which, 64.5% of mothers were from the organized sector and 35.5% from the unorganized sector.
- The majority of working mothers of the organized sector (38.2%) belonging to the Upper Middle class and mothers from the unorganized sector (61.5%) were from the Upper Lower class according to Kuppuswami's classification, and the difference was statistically significant.
- Most working mothers from the organized sector (38%) had professional or honor degrees, while mothers from the unorganized sector (32%) had middle school certificates.
- As many as 40% of mothers from the organized sector were professionally working, and 48.3% from the unorganized sector were Skilled Workers and Shop & Market Sales Workers.
- A significant difference was noticed for the type of delivery between the two sectors as more mothers from unorganized (64%) had a normal vaginal delivery contrary to the organized sector (72.1%) majority of the mothers had a cesarean delivery.
- Deliveries which had taken place at private hospital were more common in organized (88%) than unorganized sector (39.5%).
- Almost all mothers from both sectors had visited more than 4 ANC checkups, only 8% of mothers from the unorganized sector had visited less than 4 ANC, and the pandemic situation was one of the reasons.
- Comparatively, more mothers from the unorganized (64%) than the organized (43%) sector had received counseling related to feeding practices during ANC visits.
- 93% of mothers in the organized sector and 70.3% in the unorganized sector had visited clinics for PNC checkups.

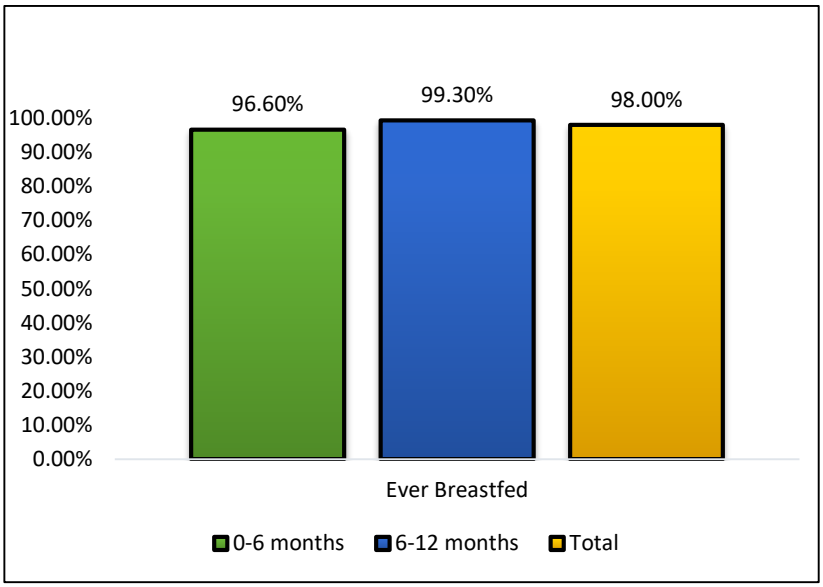
- Almost 98% of children irrespective of the sector were Ever Breastfed.

Figure 5.1: Prevalence of Ever Breastfed children: Sector wise



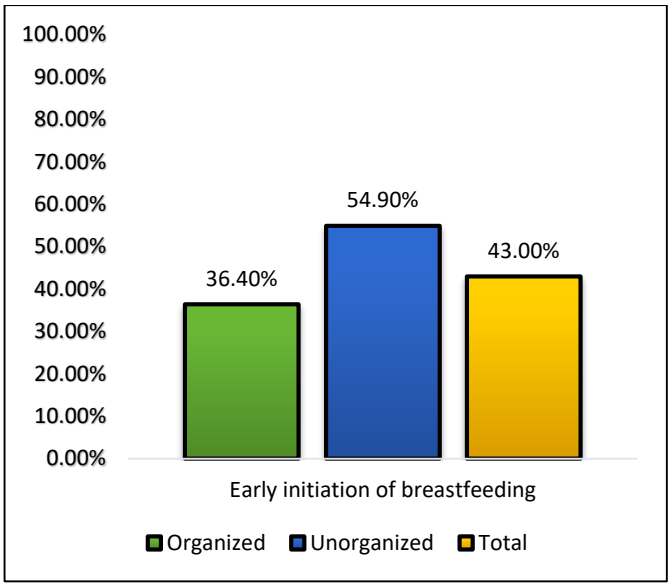
- Age group-wise 97% from 0-6 months and 99.3% from 6-12 months were children who were ever breastfed.

Figure 5.2: Prevalence of Ever Breastfed children: Age group wise



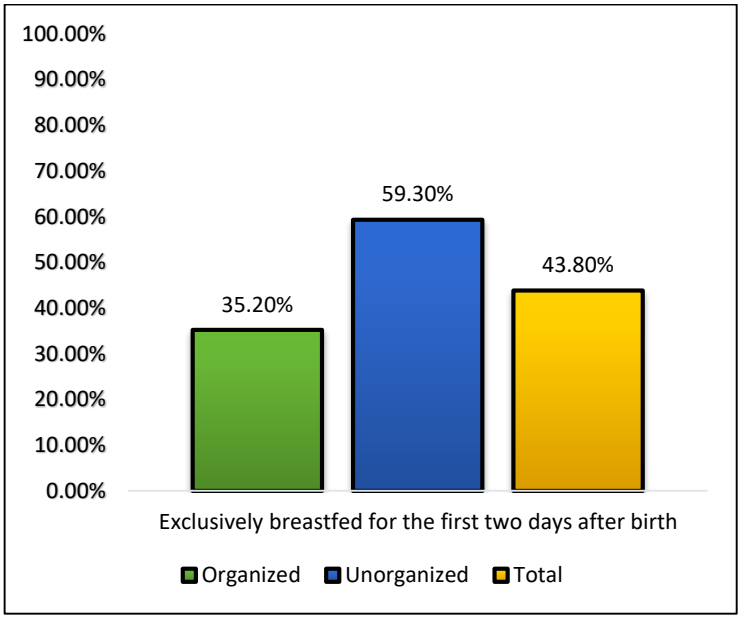
- Unfortunately, only 43% of children had initiated breastfeeding within 1 hour, of which 36.4% were from the organized and 55% were from the unorganized sector.

Figure 5.3: Prevalence of Early Initiation of Breastfeeding: Sector wise



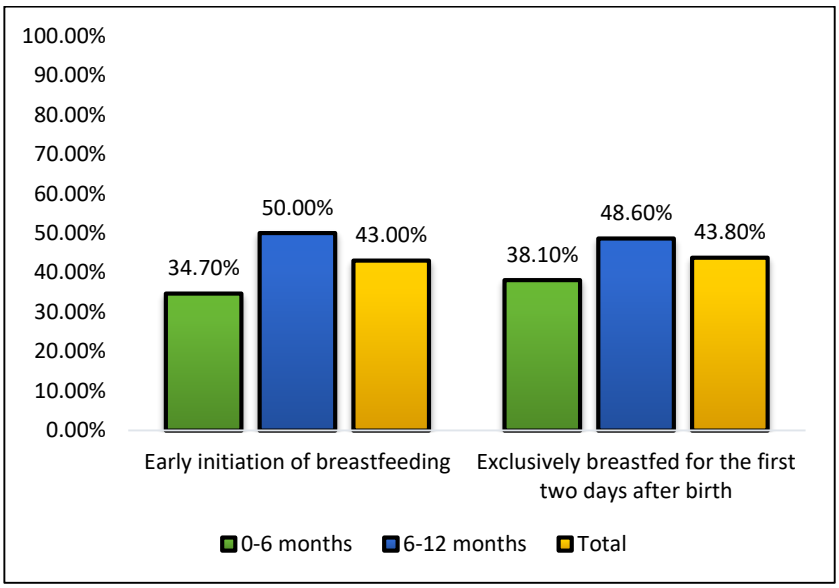
- A significantly more proportion of children from age group 6-12 (50%) months had received early initiation of breastfeeding compared to children 0-6 months of age group (35%).
- Among 256 children, 44% of children were exclusively breastfed for the first two days after birth which was significantly more prevalent in the unorganized (59.3%) than the organized sector (35.2%).

Figure 5.4: Prevalence of EBF for first 2 days after birth: Sector wise



- Nearly half of children from age 6-12 (49%) months were exclusively breastfed for the first two days after birth which were more than children from age group 0-6 months (38.1%).

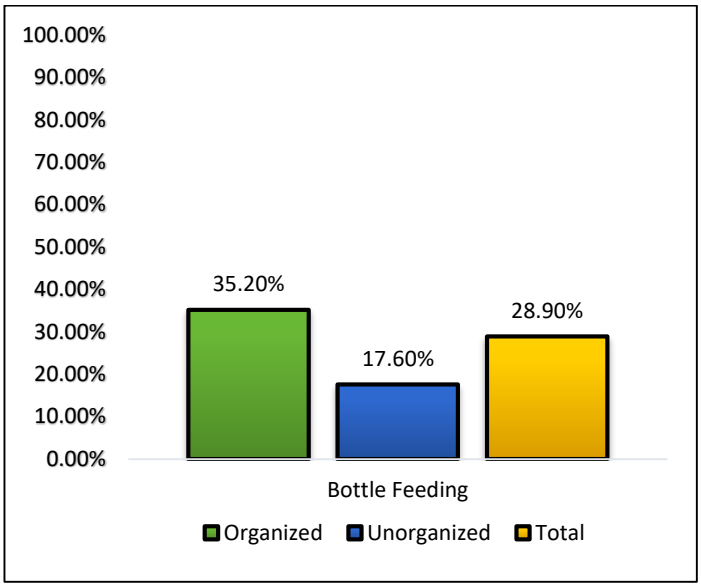
Figure 5.5: Prevalence of EIBF & EBF for first 2 days after birth: Age wise



- The prevalence of early initiation of breastfeeding within one hour was more observed in women who had normal delivery (62.5%) than in caesarean delivery (24%).
- The reasons for late initiation of breastfeeding among both sectors were significantly different as 56.5% of mothers from the organized sector stated C-section and 34% from unorganized mentioned feeding issues for late initiation of breastfeeding.
- 155 children who didn't receive early initiation of breastfeeding within one hour of birth, majority of mother had fed formula milk to their children from organized (75%) and unorganized (47%) sectors. 11% of mothers from the unorganized sector had given Donor's breastmilk, no such trend was observed in the organized sector.
- A significant difference was seen for early initiation of breastfeeding and Prelacteal feeding practices between the two-sector based on the place of delivery.
- Age of working mother significantly associated with colostrum feeding.
- A significant difference seen for early initiation of breastfeeding and top milk given to infants till breastfeeding was initiated among mothers of children who received counseling during ANC visits. 48.1% of mothers who received counseling related to feeding practices during ANC visits had initiated breastfeeding within one hour of birth, which is significantly more than mothers who didn't receive counseling (31%).

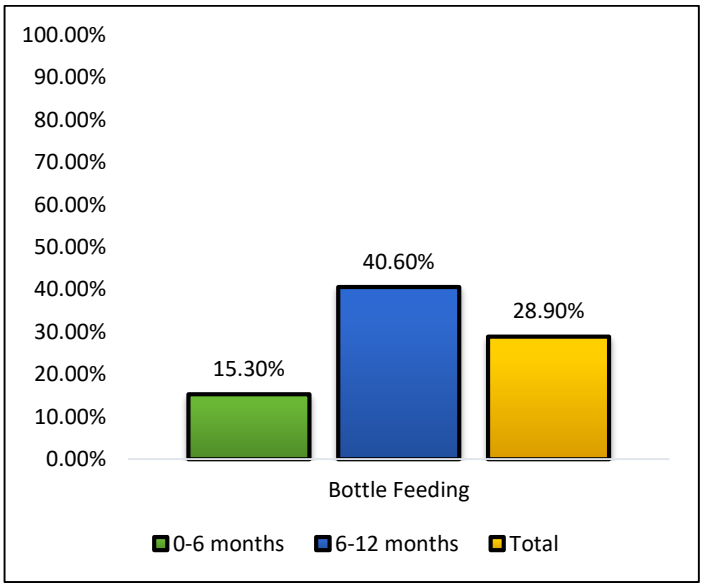
- A significantly greater number of children from the organized sector (35.2%) than the unorganized sector (18%) were bottle-fed.

Figure 5.6: Prevalence of Bottle Feeding: Sector wise



- Significantly more children from age group 6-12 (41%) than children from age group 0-6 months (15.3%) were bottle-fed.

Figure 5.7: Prevalence of Bottle Feeding: Age wise



- Sector-wise and age group wise significant difference was found for bottle feeding practice as more children from the organized sector (35.2%) compared to unorganized (18%) and from age group, 6-12 months (41%) compared to age group 0-6 months (15.3%) were bottle-fed.

- Gender wise no difference was observed for the indicators ever breastfed (99.30% Vs 96.50%%), EIBF (43.4% Vs 42.5%), exclusively breastfed for first two days after birth (44.1% Vs 43.4%), and bottle feeding (28.7% Vs 29.2%).

Figure 5.8: Prevalence of Ever Breastfed children: Gender wise

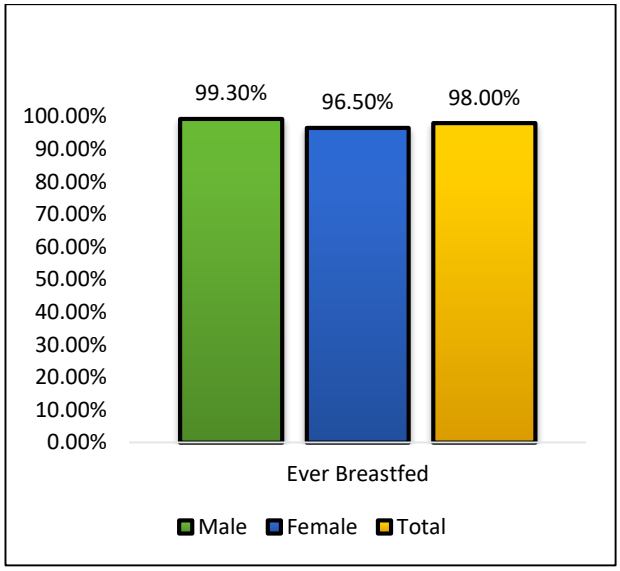


Figure 5.9: Prevalence of EIBF: Gender wise

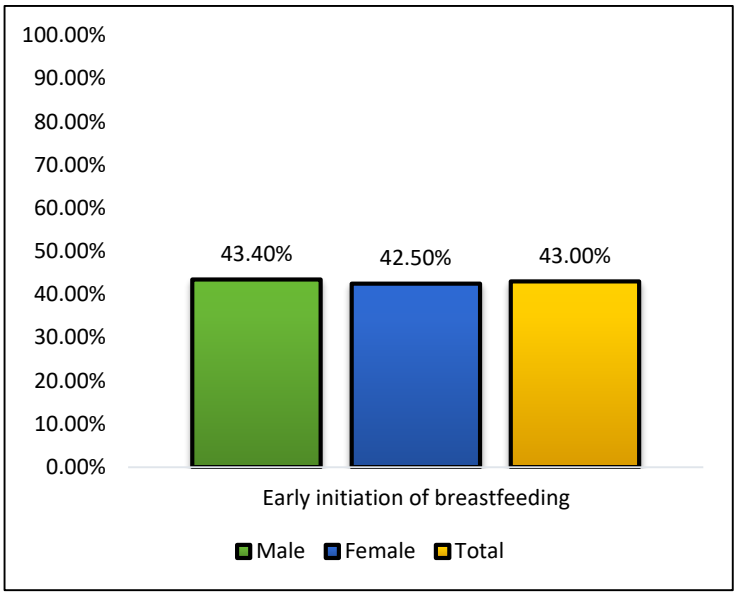


Figure 5.10: Prevalence of EBF for first 2 days after birth: Gender wise

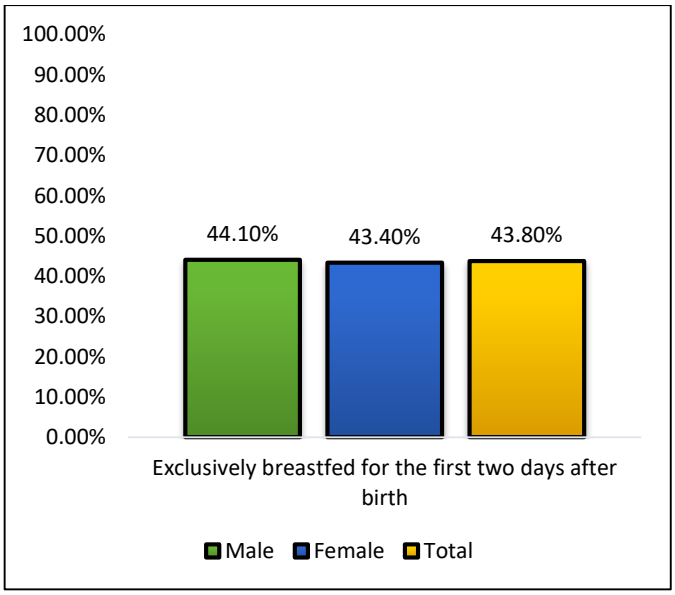
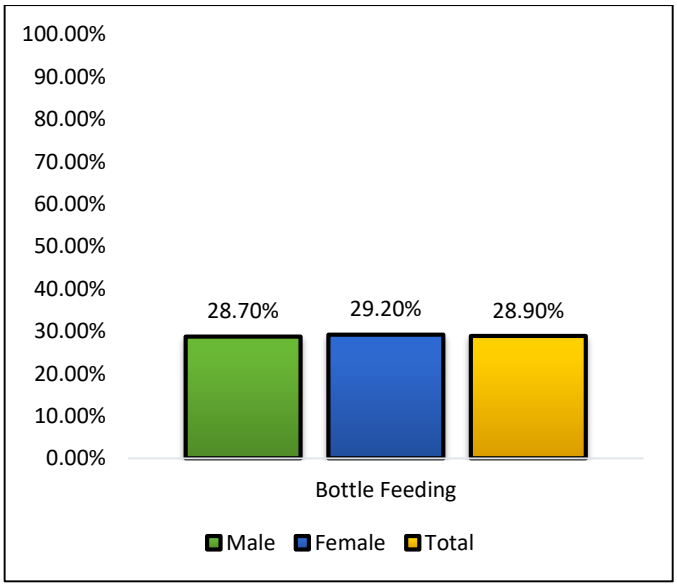
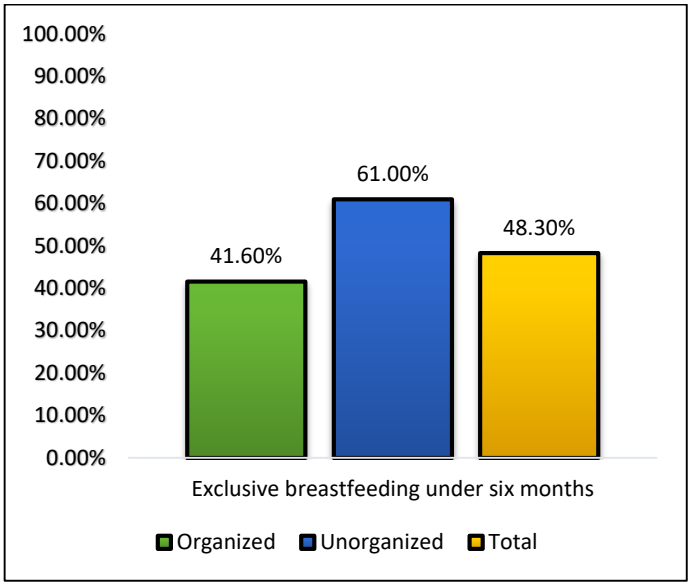


Figure 5.11: Prevalence of Bottle Feeding: Gender wise



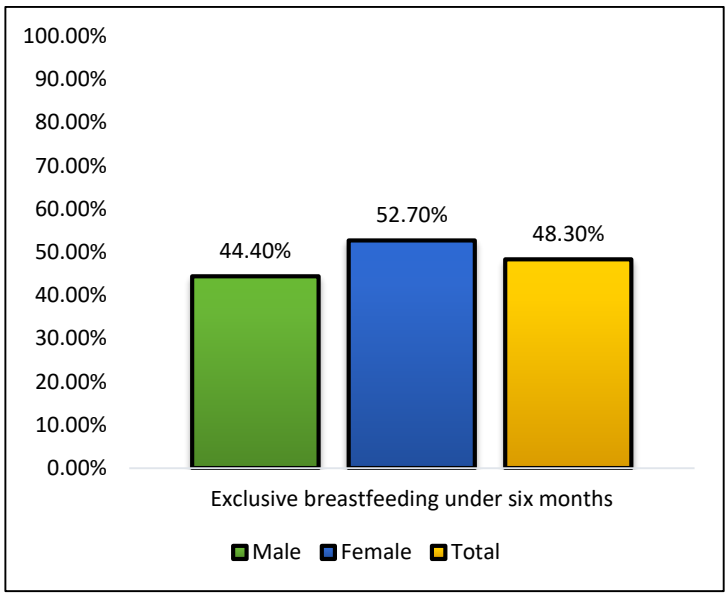
- Sector-wise significantly more children from the unorganized sector (40%) had exclusively breastfed till 6 months or more than 6 months of age which was less observed in the organized sector 31%.
- Nearly half of the children under 6 months of age were exclusively breastfed, of which more than half were from the unorganized and 42% were from the organized sectors.

Figure 5.12: Prevalence of EBF under six month of age: Sector wise



- 44.4% male and 53% female children were exclusively breastfed under 6 months.

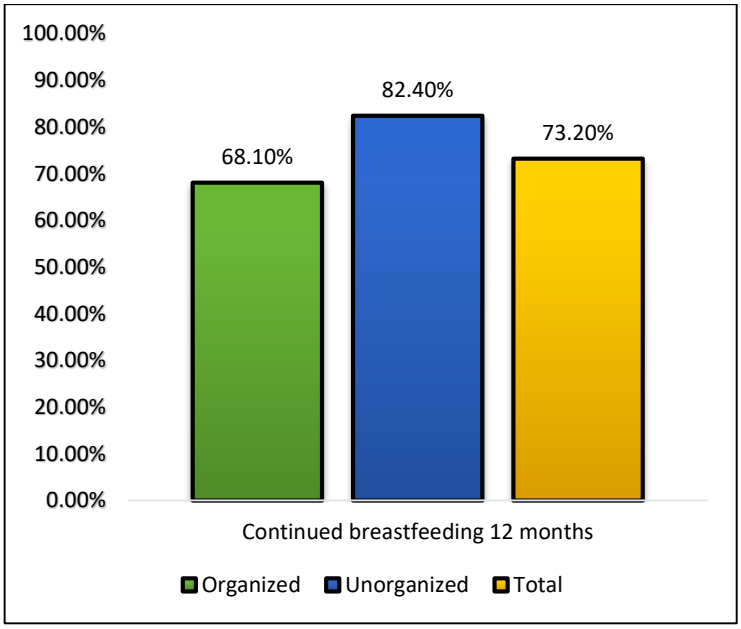
Figure 5.13: Prevalence of EBF under six month of age: Gender wise



- 118 children who belonged to under 6 months of age, among them 48.3% were fed exclusively and 48.3% were on mixed feeding
- Among the two age groups, only one-fourth of children from 0-6 months of age group received breast milk more than 8 times in the day and nearly one-third of them were breastfed more than 4 times at night which was more significant than children from 6-12 months of age group.

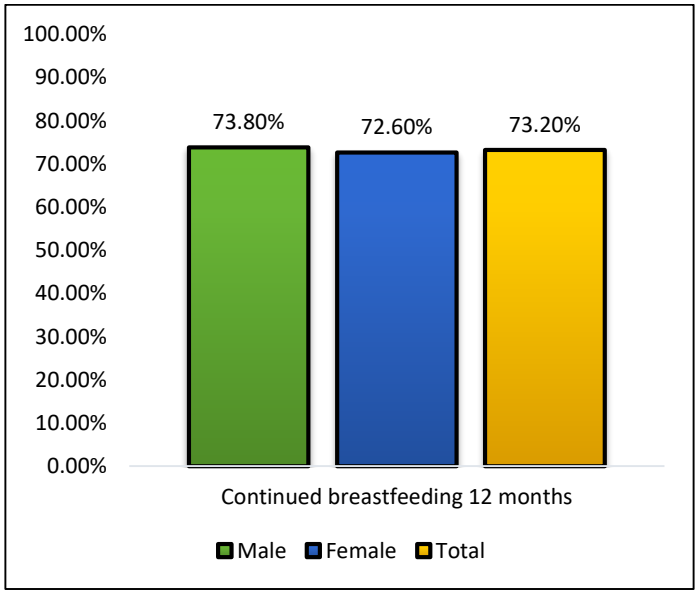
- Compared to the organized sector (68.1%) more children from the unorganized sector (82.4%) had continued breastfeeding for 12 months.

Figure 5.14: Prevalence of continued breastfeeding for 12 months of age: Sector wise



- Irrespective of the gender, overall approximately three-fourth of children continued breastfeeding till 12 months of age.

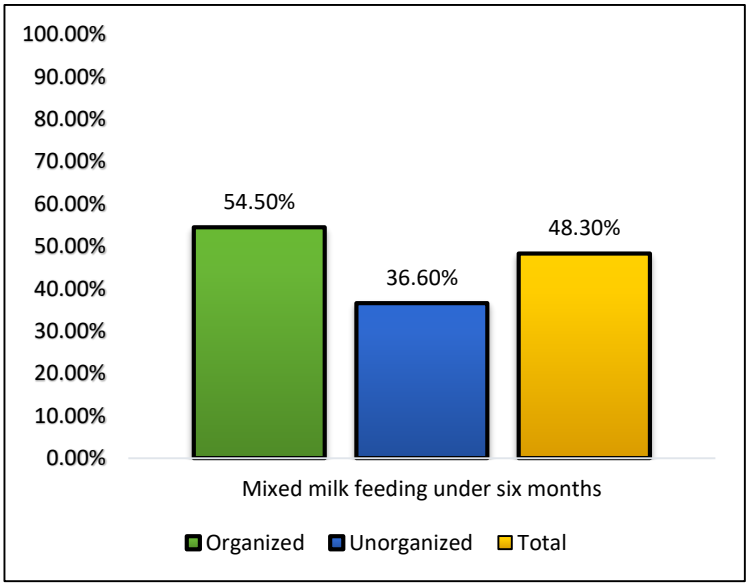
Figure 5.15: Prevalence of continued breastfeeding for 12 months of age: Gender wise



- The prevalence of mixed feeding was 42% of which more children were from the organized (47.3%) than the unorganized sector (32%). Mixed milk feeding under six

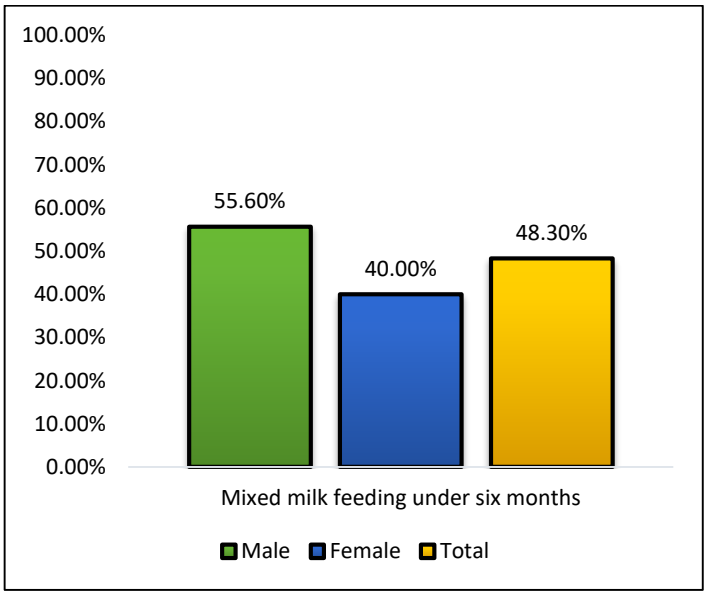
months was more observed in the organized sector (54.5%) compared to the unorganized sector (37%).

Figure 5.16: Prevalence of Mixed Feeding among children under 6 months of age: Sector wise



- Percentage of infants 0–6 months of age who were fed formula and/or animal milk in addition to breast milk were 56% in male and 40% in female.

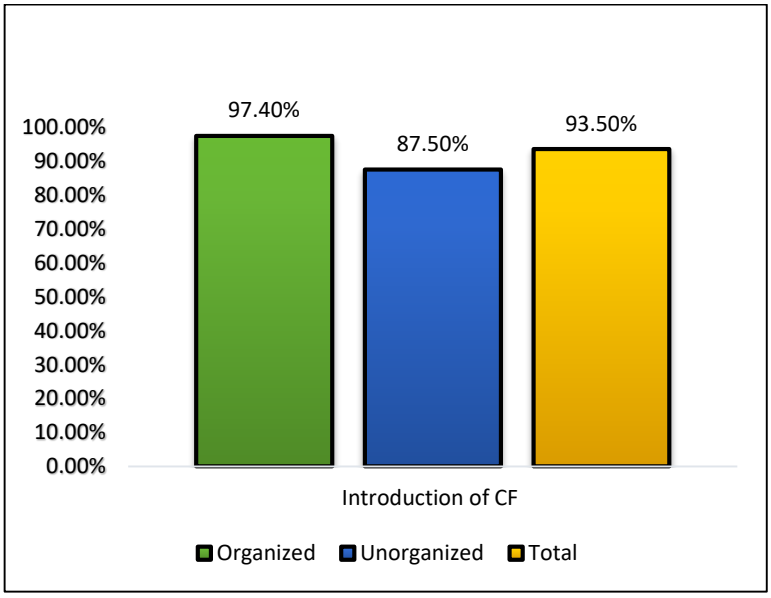
Figure 5.17: Prevalence of Mixed Feeding among children under 6 months of age: Gender wise



- 35 children who had discontinued breastfeeding, 2 children were 0-6 months of age, and 33 children 6-12 months old, among them, a majority had discontinued breastfeeding between 9-12 months of age.

- Unfortunately, At the time of study 15% of children were received formula milk of which 20% were those who belonged to the organized and only 5.5% belonged to the unorganized sector.
- Three fourth children 6-12 months of age were fed breast milk during the day before the interview.
- More than half of mothers knew timely introduction of complementary feeding at 6 months, among them 62.4% were mothers from organized and 48.4% from unorganized sector.
- Percentage of infants 6-8 months of age who consumed solid, semi-solid, or soft foods during the previous day were 93.5%, 97.4% were belonged to organized and 87.5% belonged to the unorganized sector.

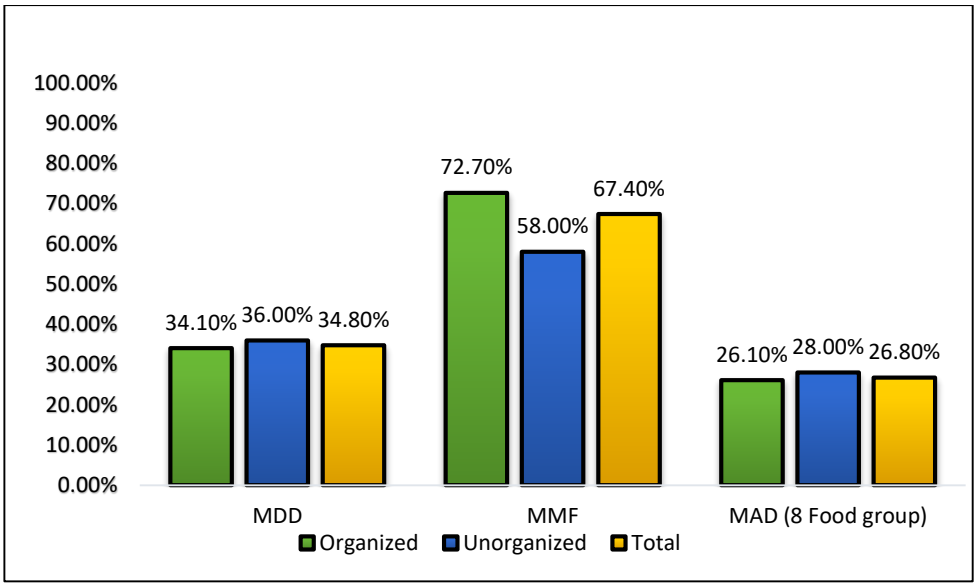
Figure 5.18: Prevalence of Introduction of Complementary Feeding (6-8 months): Sector wise



- Most of the children from age group 6-12 months (97.1%) were introduced to complementary feeding. However, 6% of children from age group 0-6 months were also introduced to complementary foods.
- Significantly more working mother from the unorganized (62.8%) than organized sector (20.4%) had stated Counselled by AWW/Health functionary was one of the reasons to initiate complementary feeding at 6 months whereas the majority of working mother from the organized sector (82.5%) had stated child will be healthy as a reason for the same.

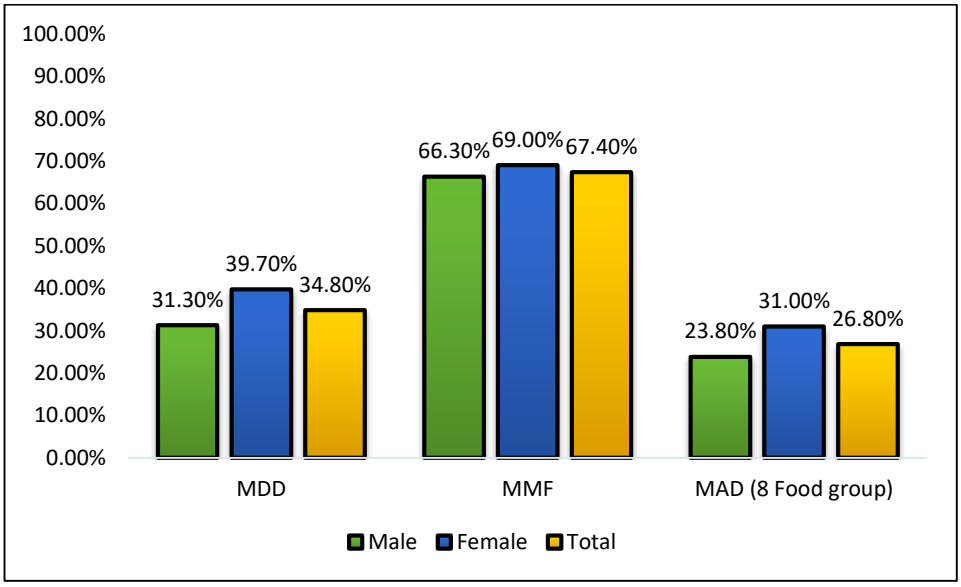
- In the study, 27 children were found who received complementary feeding before or after recommended age, among them, nearly 37% (slightly more than one third) of the mothers had mentioned their working status as one of the reasons for the early introduction of complementary feeding followed by 30% had stated breast milk was insufficient.
- Children from the organized sector who get quality food first were 68% whereas children from the unorganized sector tend to sit together which is 51%.
- The majority of children had received complementary food 2-3 times in a day accompanied by 40.4% got 3-4 times.
- It was found that 72% of children who belonged to age group 6-12 months were fed with semi-solid or mashed food consistency whereas 86% of children aged between 0-6 months were fed with liquid food.
- The frequency of consumption of food group was Grains, Cereals, roots and tubers (51.25), Legumes and pulses & nuts oilseeds (50%), Dairy product (41.4%), Breast milk (40%), other fruits and vegetables (25.8%) and Vitamin A rich fruits and vegetables (15.2%), which was no significant sector-wise and gender-wise.
- Among 138 children aged between 6-12 months, nearly one-third proportion of them met MDD irrespective of the sector as no significant difference was observed between the two sectors.
- From the organized sector around three fourth proportion of children had met MMF whereas in the unorganized sector more than half were met.
- Overall only one-fourth proportion of the children received MAD.

Figure 5.19: Prevalence of MDD, MFF and MAD (6-12 months): Sector wise



- One-third of children met MDD of which 40% were female and 31% .3% were male.
- Gender wise more than half of male and as well as female children received MMF.
- On average 27% had met MAD (with 8 food groups) of which 24% were male and 31% were female.

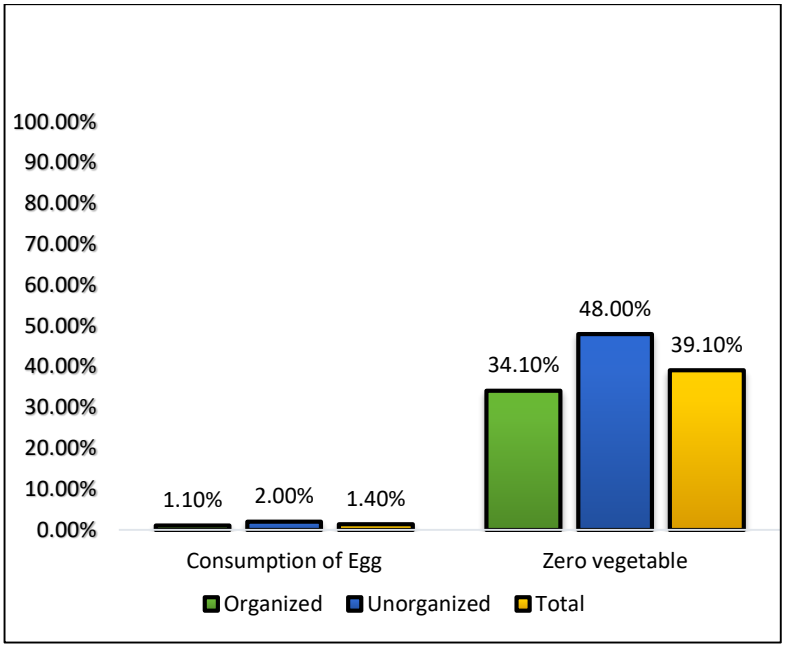
Figure 5.20: Prevalence of MDD, MMF and MAD (6-12 months): Gender wise



- 35% and 67.4% of children who belonged to age group 6-12 months had met MDD and MMF respectively whilst slightly more than one fourth (27%) had met MAD.
- 48% of children from unorganized and 34% from the organized sector did not consume any vegetables or fruits the previous day.

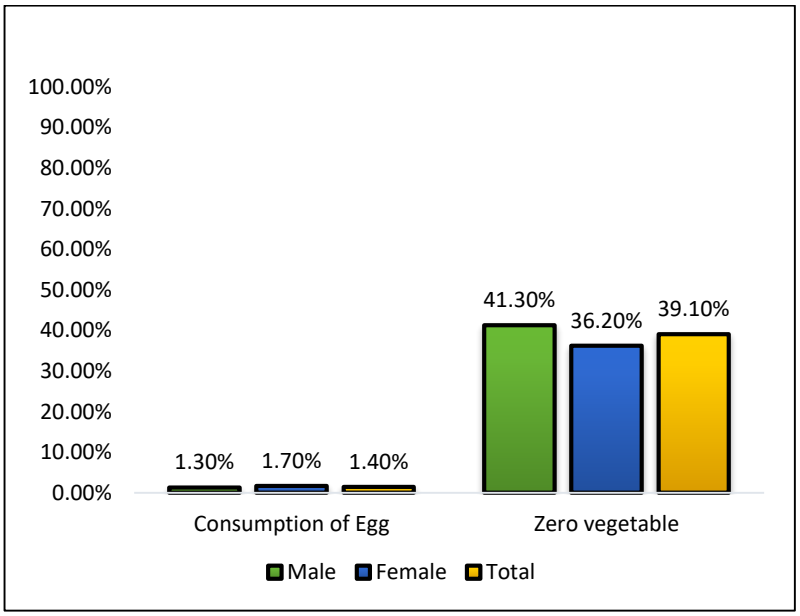
- With regard to consumption of egg and flesh food least proportion of children (1.2%) had consumed which was not significantly different from sectors, gender wise and age group wise.

Figure 5.21: Prevalence of Consumption of Egg & Zero Vegetables: Sector wise



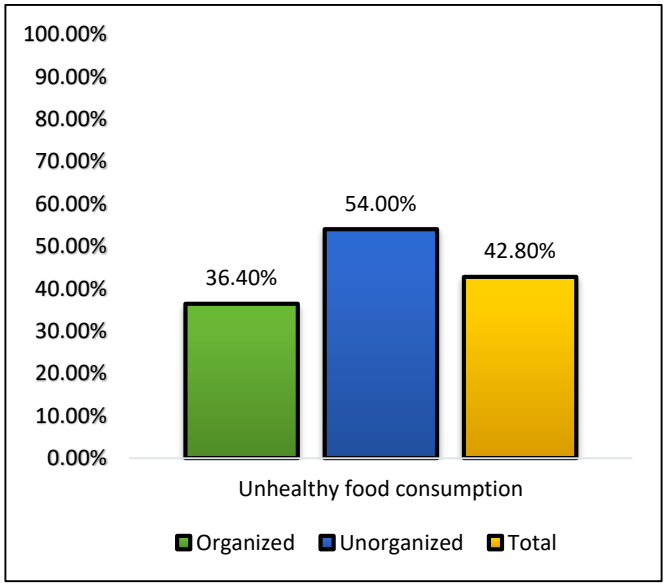
- 41.3% male and 36.2% female children 6–23 months of age did not consume any vegetables or fruits during the previous day.
- Least Percentage of children 6–12 months consumed egg during the previous day. 2% female followed by 1.3% male had consumed egg previous day.

Figure 5.22: Prevalence of Consumption of Egg & Zero Vegetables: Gender wise



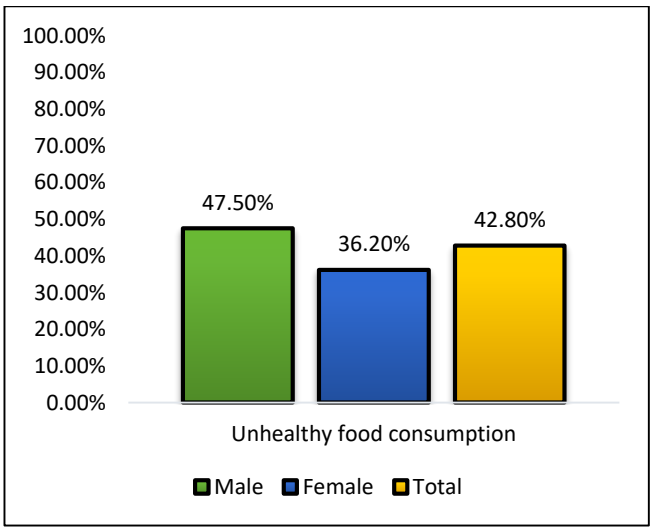
- Minimum dietary diversity with added egg as a one food group in complementary food was less practiced among 138 children 6-12 months of age. Only two children ate eggs the previous day.
- It was found that 39.1% of children 6–23 months of age did not consume any vegetables or fruits.
- The prevalence of consumption of unhealthy or processed food was more found in the unorganized sector (54%) as compared to the organized sector (36.4%). 43% of children (6-12 months) were consumed unhealthy or processed food.

Figure 5.23: Prevalence of Unhealthy Food consumption: Sector wise



- Compared to the female children (36.2%) more proportion of the male (47.5%) were consuming unhealthy food although the difference was not significant.

Figure 5.24: **Prevalence of Unhealthy Food consumption: Gender wise**



- Significant difference was seen for awareness about MBA among two-sector as maximum working mother were not aware of MBA, only 29% working mother which was from the organized sector were aware.
- 48 mothers from the organized sector who aware of MBA among them 79.2% were aware of paid maternity leave (26 weeks) facility which has been covered under Maternity Benefit Act whereas 15% don't know about any facility.
- As many as 77.2% of working mothers from the organized sector had received paid maternity leave which was higher than the unorganized sector (9.3%) contrary result observed for unpaid leave as 91% of working mothers from the unorganized sector had received unpaid leave.
- More than half of working mothers had received 6 months of duration of maternity leave of which 88% were from the organized and 22% from the unorganized sector.
- 74.1% of mothers from the organized sector had never taken their child at the workplace and 15% had taken whilst 52% and 44% had not taken and taken their child at workplace respectively from unorganized sector.
- 83 mothers who returned to the workplace, a higher proportion of them had breastfed after work (53%) followed by 30% breastfed at the workplace, In terms of expressed breast milk only 17% of working mother (organized sector) had adopted this after returning to the workplace. Sector-wise significant difference was seen for breastfeeding practices adopted after returning to work.
- Based on the age group of children higher proportion of working mothers had not returned to the workplace of which 88.1% were the mothers of children aged between 0-6 months and 50% 6-12 months. Pandemic situation was one of the reasons for not returning to work.
- Caste, Occupation of mother like working mothers, type of delivery such as C-section, support for early initiation, Mother facing difficulty were the Barriers found for early initiation of breastfeeding and exclusive breastfeeding for 6 months.
- Monthly income, education of both father & mother, place of delivery, counselling and mother have prior experience facilitates early initiation of breastfeeding and Normal delivery, counselling during ANC visit supports the mothers to exclusively breastfeed their babies for 6 months.

CONCLUSION

By all counts, and with proven results, sector-wise, gender-wise, and age group wise no significant difference was found for children who were ever breastfed. Compared to the organized sector more proportion of working mothers of children from unorganized had started early initiation of breastfeeding and exclusive breastfed for the first two days after birth. From both sectors higher proportion of mother had given formula milk to their infant till breastfeeding was initiated. Good to observe that five mother from unorganized sector had given donor's milk to their infant till breastfeeding was initiated. No significant difference was found for colostrum and Prelacteal as mother were aware about good and harmful effect. Between the two sectors, more children from unorganized than organized were exclusively breastfed under six months. Majority of mother were aware about timely introduction of complementary feeding at 6 months. Most of children from age group 6-12 months were introduced to complementary feeding. Overall, slightly more than one third, more than one half and one fourth had met MDD, MMF and MAD respectively. Sector-wise no significant difference was observed for mixed feeding, continued breastfeeding 12 months, introduction of CF, MDD, MMF, MAD, Consumption of egg, and zero vegetable. With regard to consumption of unhealthy food maximum number of children from the unorganized were consuming unhealthy foods like papdi, gathiya. In the present study gender-wise, no significant difference was seen for all IYCF practices. Majority of children from the organized sector were bottle-fed which was least practiced in unorganized. The difference was seen between the two age groups for bottle feeding which was more practiced among children aged between 6-12 months. Overall awareness regarding MBA among study population were found lower and more than half of working mothers had received 6 months of duration of maternity leave. Majority of working mothers from the organized sector had received paid maternity leave which was higher than the unorganized sector.

RECOMMENDATION

- More Milk banks should be established in hospitals irrespective of the type of hospital. Awareness about the availability of milk bank at SSG hospital should be promoted.
- Counselling regarding IYCF practices during ANC visits should be strengthened.
- Lactation Management Counselling should be taught to private nursing staff to facilitate early initiation of breastfeeding.
- Development of multimedia (Video – Audio clip) to impart knowledge about IYCF practices among working mother.
- An in-depth study should be conducted to know Barriers and Facilitators at unorganized sector.
- An in-depth study among working mothers in the organized sector could be conducted.
- For IYCF practices KAP study should be conducted for health functionary in the private sector.
- The study should be conducted in a facility centre to know the facilities provided to the company's women employees.

LIMITATION

- Snowball technique was used for data collection due to pandemic situation.
- Due to telephonic interview, primary data such as anthropometry, 24 hour diet recall, and 7-day food frequency was not done.
- This study can only be generalized to working mothers of Vadodara city.

BIBLIOGRAPHY

5th Report of Assessment of India's Policy and Programmes on Infant and Young Child Feeding, Breastfeeding Promotion Network of India (BPNI)/IBFAN Asia 2018

Abekah-Nkrumah, G., Antwi, M. Y., Nkrumah, J., & Gbagbo, F. Y. (2020). Examining working mothers' experience of exclusive breastfeeding in Ghana. *International breastfeeding journal*, *15*(1), 1-10.

Abisha, M. (2019). A Comparative Study to Assess the level of Knowledge and Practice on Infant Feeding Practices among Working and Non-Working Mothers at selected areas in Puducherry. *Asian Journal of Nursing Education and Research*, *9*(2), 185-187.

Ahmad, I., Khalique, N., & Khalil, S. (2017). Complementary feeding practices among children aged 6–23 months in Aligarh, Uttar Pradesh. *Journal of family medicine and primary care*, *6*(2), 386.

Alfiana, D., Pratiwi, W., & Sanif, M. E. (2019, August). THE CORRELATION BETWEEN EDUCATION, WORK, AND MATERNAL KNOWLEDGE ON COMPLEMENTARY FEEDING WITH 6-24 MONTHS'NUTRITIONAL STATUS. In *Proceedings of the International Conference on Applied Science and Health* (No. 4, pp. 157-162).

Ali, F. L. (2019). A study on feeding practices among mothers with children aged less than two years in rural area of Kancheepuram District, Tamil Nadu. *Int J Community Med Public Health*, *6*, 3471.

Amin, R. M., Said, Z. M., Sutan, R., Shah, S. A., Darus, A., & Shamsuddin, K. (2011). Work related determinants of breastfeeding discontinuation among employed mothers in Malaysia. *International Breastfeeding Journal*, *6*(1), 1-6.

Ashok A, Shwetha JH, Mahesh TK. A comparative study of impact of breastfeeding practices on the nutritional status of the infants among the working and non-working women. Int J Contemp Pediatr 2018;5:1759-62.

Ashoka, A., Shwetha, J. H., & Mahesh, T. K. (2016). A study of breastfeeding practices among working women in urban area of Davangere, Karnataka. *International Journal of Contemporary Pediatrics*, *3*, 645-8.

Athavale, P., Hoeft, K., Dalal, R. M., Bondre, A. P., Mukherjee, P., & Sokal-Gutierrez, K. (2020). A qualitative assessment of barriers and facilitators to implementing recommended infant nutrition practices in Mumbai, India. *Journal of Health, Population and Nutrition*, *39*(1), 1-12.

Bala, S. Impact of the Maternity Benefit (Amendment) Act, 2017 in the IT/ITES Industry.

Bhandari, M. S., Manandhar, P., & Tamrakar, D. (2019). Practice of breastfeeding and its barriers among women working in tertiary level hospitals. *J Nepal Med Assoc*, *57*(215), 8-13.

Bhanderi, D. J., Pandya, Y. P., & Sharma, D. B. (2019). Barriers to exclusive breastfeeding in rural community of central Gujarat, India. *Journal of family medicine and primary care*, *8*(1), 54.

Birhanu, M., Abegaz, T., & Fikre, R. (2019). Magnitude and Factors Associated with Optimal Complementary Feeding Practices among Children Aged 6-23 Months in Bensa District, Sidama Zone, South Ethiopia. *Ethiopian journal of health sciences*, *29*(2).

Boralingiah, P., Polineni, V., Kulkarni, P., & Manjunath, R. (2016). Study of breastfeeding practices among working women attending a tertiary care hospital, Mysore, Karnataka, India. *Int J Community Med Public Health*, *3*(5), 1178-82.

Chandodkar S. and Shah P, (2017). Mapping food and nutrition security among children age of 7 - 59 months in rural Vadodara. Department of foods and nutrition, Faculty of family and community sciences, The maharaja Sayajirao University of Baroda, Vadodara.

Chandwani, H., Prajapati, A., Rana, B., & Sonaliya, K. (2015). Assessment of infant and young child feeding practices with special emphasis on IYCF indicators in a field practice area of Rural Health Training Centre at Dabhoda, Gujarat, India. *Int J Med Sci Public Health*, *4*(10), 1414-9.

Chekol, D. A., Biks, G. A., Gelaw, Y. A., & Melsew, Y. A. (2017). Exclusive breastfeeding and mothers' employment status in Gondar town, Northwest Ethiopia: a comparative cross-sectional study. *International breastfeeding journal*, *12*(1), 1-9.

Chen, J., Xin, T., Gaoshan, J., Li, Q., Zou, K., Tan, S., ... & Tang, K. (2019). The association between work related factors and breastfeeding practices among Chinese working mothers: a mixed-method approach. *International breastfeeding journal*, *14*(1), 1-13.

Chhetri, S., Rao, A. P., & Guddattu, V. (2018). Factors affecting exclusive breastfeeding (EBF) among working mothers in Udupi taluk, Karnataka. *Clinical Epidemiology and Global Health*, *6*(4), 216-219.

Comprehensive National Nutrition Survey 2016 – 2018

Dachew, B. A., & Bifftu, B. B. (2014). Breastfeeding practice and associated factors among female nurses and midwives at North Gondar Zone, Northwest Ethiopia: a cross-sectional institution based study. *International breastfeeding journal*, *9*(1), 1-7.

Dadzie, L. K. (2019). *Women empowerment and infant and young child feeding practices in Ghana* (Doctoral dissertation, University of Cape Coast).

Dagher, R. K., McGovern, P. M., Schold, J. D., & Randall, X. J. (2016). Determinants of breastfeeding initiation and cessation among employed mothers: a prospective cohort study. *BMC pregnancy and childbirth*, *16*(1), 1-11.

Danso, J. (2014). Examining the practice of exclusive breastfeeding among professional working mothers in Kumasi metropolis of Ghana. *International journal of nursing*, *1*(1), 11-24.

Davara, K., Chavda, P., & Pandya Solanki, D. (2016). Breastfeeding practices in children under 6 months of age: a community based study in urban field practice area of a medical college in central Gujarat, India. *International Journal of Community Medicine and Public Health*, *3*(5), 1010.

Davara, K., Pandya, C., Chavda, P., Solanki, D., Mehta, K., & Shringarpure, K. (2019). Feeding Practices by Mothers Having Children Under 6 Months of Age–A Community Based Study in Urban Slum Areas of Vadodara City. *Community Med*, *10*(2), 86-90.

Dihidar S, Bhattacharya BN, Mukherjee KL. Description of breastfeeding practices among poorer sections in Calcutta Metropolitan area and its impact on postpartum infecundity. J Child Health Care. 2002;6(3):203–19.

Dun-Dery, E. J., & Laar, A. K. (2016). Exclusive breastfeeding among city-dwelling professional working mothers in Ghana. *International breastfeeding journal*, *11*(1), 1-9.

Dutta, M., & Gogoi, M. (2019). Complementary feeding practises among tea garden workers of Nahortoli and Dikom tea estate of Dibrugarh district, Assam.

Gandhi H and Mehta H, (2020). ASSESSMENT OF DIETARY PRACTICES OF CHILDREN (6-23 MONTHS) AND PROMOTION OF HOME BASED MIXED FARMING (HBMF) APPROACH FOCUSING NUTRI-KITCHEN GARDEN CONCEPT TOWARDS DEVELOPING AGRI-NUTRI (AG2N) SMART COMMUNITY IN SELECTED TRIBAL DISTRICT OF GUJARAT. Department of foods and nutrition, Faculty of family and community sciences, The maharaja Sayajirao University of Baroda, Vadodara.

Gandhi H and Patni M, (2017). To compare nutritional status and to assess child feeding and caring practices under swasthya vatsalya yojana in rural Vadodara. Department of foods and nutrition, Faculty of family and community sciences, The maharaja Sayajirao University of Baroda, Vadodara.

Gandhi, H., & Shah, M. (2020). IYCN practices and nutritional status of young children (0-5 years) in Gujarat: insights from national data sets. *IP Journal of Nutrition, Metabolism and Health Science*, *3*(1), 1-5.

Gandhi, S. J., Godara, N., Modi, A., & Kantharia, S. (2014). Impact of feeding practices on nutritional status of children in rural area of Navsari district. *Int J Med Sci Public Health*, *3*(11), 1338-42.

Gebrekidan, K., Plummer, V., Fooladi, E., & Hall, H. (2020). Work-Related Factors Affecting Exclusive Breastfeeding Among Employed Women in Ethiopia: Managers' Perspective Using a Qualitative Approach. *International Journal of Women's Health*, *12*, 473.

Gladzah, N. D. (2013). *Challenges of exclusive breastfeeding among female health workers in two hospitals in Accra* (Doctoral dissertation, University of Ghana).

Global Nutrition Report (2018)

Global Nutrition Report (2020)

Global strategy for infant and young child feeding, 2003.

Gopalakrishnan, G., & Brindha, D. G. (2017). A Study on Maternity Benefit and its Effectiveness in Construction Industry. *International Journal of Civil Engineering and Technology*, *8*(10).

Guirindola, M. O., Maniego, M. L. V., Silvestre, C. J., & Acuin, C. C. S. (2018). Determinants of Meeting the Minimum Acceptable Diet Among Filipino Children Aged 6-23 Months. *Philippine Journal of Science*, *147*(1), 75-89.

GUPTA, A., & THAKUR, N. (2018, December). Infant and young feeding practices in India: Current status and progress towards SDG targets. In *Proc Indian Natn Sci Acad* (Vol. 84, No. 4, pp. 853-865).

Habtewold, T. D., Islam, M. A., Sharew, N. T., Mohammed, S. H., Birhanu, M. M., & Tegegne, B. S. (2017). SystEmatic review and meta-aNAlysis of infanT and young child feeding Practices (ENAT-P) in Ethiopia: protocol. *BMJ open*, *7*(8), e017437.

Hegde, J., Manjula, L., & Venkatesha, K. R. (2017). Infant feeding practices in an urban tertiary care hospital: A descriptive longitudinal study. *Indian Journal of Child Health*, *4*(4), 496-502.

Horwood, C., Haskins, L., Engebretsen, I., Connolly, C., Coutsoudis, A., & Spies, L. (2020). Are we doing enough? Improved breastfeeding practices at 14 weeks but challenges of non-initiation and early cessation of breastfeeding remain: findings of two consecutive cross-sectional surveys in KwaZulu-Natal, South Africa. *BMC public health*, *20*, 1-12.

Ijaz, B., Kareem, O., & Asif, A. (2019). Frequency of Breast feeding among working women of Multan. *The Professional Medical Journal*, *26*(12), 2196-2200.

Indicators for assessing infant and young child feeding practices: definitions and measurement methods, World Health Organization and the United Nations Children's Fund (UNICEF), 2021

Infant and Young Child Feeding - Nutrition Section May 2011 Programmes, UNICEF New York.

Isam, M., Ketbi, A., Noman, S. A., Ali, A. A., Darwish, E., Fahim, M. A., & Rajah, J. (2018). Knowledge, attitudes, and practices of breastfeeding among women visiting primary healthcare clinics on the island of Abu Dhabi, United Arab Emirates.

Javalkar, S. R. (2019). Assessing WHO's IYCF indicators in Mangalore Taluk-A Cross sectional Study. *Indian Journal of Public Health Research & Development*, *10*(6), 76-80.

Johnston, M. L., & Esposito, N. (2007). Barriers and facilitators for breastfeeding among working women in the United States. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *36*(1), 9-20.

Kabir, A., & Maitrot, M. R. L. (2017). Factors influencing feeding practices of extreme poor infants and young children in families of working mothers in Dhaka slums: A qualitative study. *PloS one*, *12*(2), e0172119.

Kadale, P. G., Pandey, A. N., & Raje, S. S. (2018). Challenges of working mothers: balancing motherhood and profession. *International Journal of Community Medicine and Public Health*, *5*(7), 2905-2910.

Kantawala S and Shah E, (2020) ASSESSING THE DIETARY DIVERSITY SCORE OF COMPLEMENTARY FOODS CONSUMED BY CHILDREN (6 – 23 MONTHS) OF URBAN VADODARA. Department of foods and nutrition, Faculty of family and community sciences, The maharaja Sayajirao University of Baroda, Vadodara.

Kassa, T., Meshesha, B., Haji, Y., & Ebrahim, J. (2016). Appropriate complementary feeding practices and associated factors among mothers of children age 6–23 months in Southern Ethiopia, 2015. *BMC pediatrics*, *16*(1), 1-10.

Kebede, T., Woldemichael, K., Jarso, H., & Bekele, B. B. (2020). Exclusive breastfeeding cessation and associated factors among employed mothers in Dukem town, Central Ethiopia. *International breastfeeding journal*, *15*(1), 6.

Kekalih, A., Februhartanty, J., Mansyur, M., & Shankar, A. (2019). Dietary diversity beliefs and practices among working mothers in Jakarta: a qualitative study. *Vol. 25 Supplement, 2019*, *25*, 1.

Kishore, E., & Junapudi, S. S. (2018). A study of breast feeding practices among mothers of infants in an urban slum, South Indian city, Nellore. *International Journal of Contemporary Pediatrics*, *5*(2), 320.

Kogade, P., Gaidhane, A., Choudhari, S., Khatib, M. N., Kawalkar, U., Gaidhane, S., & Zahiruddin, Q. S. (2019). Socio-cultural determinants of infant and young child feeding practices in rural India. *Medical Science*, *23*(100), 1015-22.

Kumar, V., Arora, G., Midha, I. K., & Gupta, Y. P. (2015). Infant and young child feeding behaviors among working mothers in India: Implications for global health policy and practice. *International Journal of MCH and AIDS*, *3*(1), 7.

Kyampire, D., Mulira, J., Sharma, K. N., & Lawoko, S. COMPLIANCE TO EXCLUSIVE BREASTFEEDING AMONG PROFESSIONAL WORKING MOTHERS OF CHILDREN AGED 0-23 MONTHS IN URBAN UGANDA.

Lassi, Z. S., Rind, F., Irfan, O., Hadi, R., Das, J. K., & Bhutta, Z. A. (2020). Impact of infant and young child feeding (IYCF) nutrition interventions on breastfeeding practices, growth and mortality in low-and middle-income countries: systematic review. *Nutrients*, *12*(3), 722.

Lauer, E. A., Armenti, K., Henning, M., & Sirois, L. (2019). Identifying barriers and supports to breastfeeding in the workplace experienced by mothers in the new Hampshire special supplemental nutrition program for women, infants, and children utilizing the total worker health framework. *International journal of environmental research and public health*, *16*(4), 529.

MacVane, C. Z., Fix, M. L., Strout, T. D., Zimmerman, K. D., Bloch, R. B., & Hein, C. L. (2017). Congratulations, you're pregnant! Now about your shifts...: the state of maternity leave attitudes and culture in EM. *Western Journal of Emergency Medicine*, *18*(5), 800.

Manzione, L. C., Kriser, H., Gamboa, E. G., Hanson, C. M., Mulokozi, G., Mwaipape, O., ... & Crookston, B. T. (2019). Maternal Employment Status and Minimum Meal Frequency in Children 6-23 Months in Tanzania. *International journal of environmental research and public health*, *16*(7), 1137.

Mekuria, G., & Edris, M. (2015). Exclusive breastfeeding and associated factors among mothers in Debre Markos, Northwest Ethiopia: a cross-sectional study. *International breastfeeding journal*, *10*(1), 1-7.

Mogre, V., Dery, M., & Gaa, P. K. (2016). Knowledge, attitudes and determinants of exclusive breastfeeding practice among Ghanaian rural lactating mothers. *International breastfeeding journal*, *11*(1), 1-8.

Mohite, R. V., Kshirsagar, V. Y., & Yalamanchili, S. S. (2020). BREASTFEEDING PRACTICES AMONG WORKING AND NON-WORKING WOMEN: A COMPARATIVE STUDY FROM RURAL MAHARASHTRA, INDIA. *Journal of Critical Reviews*, *7*(19), 5051-5056.

Molla, M., Ejigu, T., & Nega, G. (2017). Complementary feeding practice and associated factors among mothers having children 6–23 months of age, Lasta District, Amhara region, Northeast Ethiopia. *Advances in Public Health*, *2017*.

Mona, K., & Reddy, R. H. (2018). A cross-sectional study to assess the prevalence of breastfeeding practices among women working in software companies in Whitefield, Bengaluru. *International Journal of Medical Science and Public Health*, *7*(11), 900-904.

Moyo, G. T., Magaisa, T., Pagiwa, A., Kandawasvika, R., Nyanga, L., Gomora, Z., & Oldewage-Theron, W. (2020). Barriers and facilitators of exclusive breastfeeding: Findings from a Barrier Analysis Conducted in Mwenezi and Chiredzi Districts, Zimbabwe. *World Nutrition*, *11*(3), 12-21.

Na, M., Jennings, L., Talegawkar, S. A., & Ahmed, S. (2015). Association between women's empowerment and infant and child feeding practices in sub-Saharan Africa: an analysis of Demographic and Health Surveys. *Public health nutrition*, *18*(17), 3155-3165.

Nagar, N. S., Thomas, E., Nagar, S. S., & Godara, N. R. Study on breastfeeding practices among rural women in the field practice areas of a tertiary care teaching hospital. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, *8*(2), 463.

Nair S. and Vora H, (2014). ASSESSMENT OF PERCEPTIONS AND ADVOCACY TO SOCIALLY MOBILISE THE COMMUNITY REGARDING IYCF PRACTICES IN SEMI-TRIBAL SET-UP OF VADODARA DISTRICT. Department of foods and nutrition, Faculty of family and community sciences, The maharaja Sayajirao University of Baroda, Vadodara.

Nambiar V and Khanna T, (2016). Examining and strengthening food and nutritional practices and developemental progress among children (0 – 3 years) in rural setup.

Department of foods and nutrition, Faculty of family and community sciences, The maharaja Sayajirao University of Baroda, Vadodara.

Nambiar V and Motiwala Q, (2015). Mapping drivers of food and nutrition security among tribal mothers and child pair of Kanwat block of Vadodara. Department of foods and nutrition, Faculty of family and community sciences, The maharaja Sayajirao University of Baroda, Vadodara.

National Family Health Survey – 3 (2005 – 06) Gujarat Fact sheet

National Family Health Survey – 3 (2005 - 06) India Fact sheet

National Family Health Survey – 4 (2015 – 16) Gujarat Fact Sheet

National Family Health Survey – 4 (2015 – 16) India Fact Sheet

National Family Health Survey – 5 (2019 – 20) Gujarat Fact Sheet

National Guidelines on Infant and Young Child Feeding, Ministry of Human Resource Development Department of Women and Child Development, Food and Nutrition Board, Government of INDIA, 2004.

Navarro-Rosenblatt, D., & Garmendia, M. L. (2018). Maternity leave and its impact on breastfeeding: a review of the literature. *Breastfeeding Medicine*, *13*(9), 589-597.

Nkrumah, J. (2016). Maternal work and exclusive breastfeeding practice: a community based cross-sectional study in Efutu Municipal, Ghana. *International breastfeeding journal*, *12*(1), 1-9.

Oddo, V. M., & Ickes, S. B. (2018). Maternal employment in low-and middle-income countries is associated with improved infant and young child feeding. *The American journal of clinical nutrition*, *107*(3), 335-344.

Ogbo, F. A., Dhami, M. V., Awosemo, A. O., Olusanya, B. O., Olusanya, J., Osuagwu, U. L., ... & Agho, K. E. (2019). Regional prevalence and determinants of exclusive breastfeeding in India. *International breastfeeding journal*, *14*(1), 1-12.

Ogunba, B. O. (2015). Effect of maternal employment on infant feeding practices in Southwestern Nigeria. *Food and Nutrition Sciences*, *6*(07), 597.

Osibogun, O. O., Olufunlayo, T. F., & Oyibo, S. O. (2018). Knowledge, attitude and support for exclusive breastfeeding among bankers in Mainland Local Government in Lagos State, Nigeria. *International breastfeeding journal*, *13*(1), 1-7.

Parikh, R. H., Tolani, J. N., & Shah, N. D. (2019). Knowledge and attitude of mothers regarding feeding practices among children of 6 months to 2 years of age visiting a tertiary care centre of Ahmedabad, Gujarat, India. *International Journal of Contemporary Pediatrics*, *6*(5), 2132.

Patnaik, B. C. M., & Agarwal, M. M. (2014). An Introspection Into Awareness of Maternity Benefit Act 1961 In Semi-Urban Area. *Journal Impact Factor*, *5*(9), 13-17.

Polineni, V., Boralingiah, P., Kulkarni, P., & Manjunath, R. (2016). A comparative study of breastfeeding practices among working and non-working women attending a tertiary care hospital, Mysuru. *Natl J Community Med*, *7*(4), 235-40.

Pratiwi, I. R., Alibasjah, R. W., & Sulistiyana, C. S. (2019, August). THE CORRELATION BETWEEN MOTHER'S KNOWLEDGE, EDUCATION AND FAMILY INCOME WITH NUTRITIONAL STATUS OF TODDLER (AGED 1-5 YEARS). In *Proceedings of the International Conference on Applied Science and Health* (No. 4, pp. 182-187).

Rabbani, A., Padhani, Z. A., Siddiqui, F. A., Das, J. K., & Bhutta, Z. (2020). Systematic review of infant and young child feeding practices in conflict areas: what the evidence advocates. *BMJ open*, *10*(9), e036757.

Rai, M., & Bhutia, D. T. Study of Breastfeeding Practices in Children Living in East District of Sikkim.

Rana, B. M., Chandwani, H., Sonaliya, K., & Prajapati, A. (2017). A descriptive study to assess factors affecting core indicators of infant and young child feeding practices in urban area of Gujarat State, India. *Int. J. Community Med. Public Health*, *3*, 1101-1106.

Randive Admane, D. R. (2020). A Study on Effectiveness and Impact of Maternity Benefit (Amendment) Act, 2017 on Employment in Unorganized Sector with Reference To Construction Company (West Nagpur, Maharashtra, India). *International Journal of Advanced Science and Technology*, *29*(3), 6298 - 6311.

Rapid Survey on Children 2013 – 14

Rathaur, V. K., Pathania, M., Pannu, C., Jain, A., Dhar, M., Pathania, N., & Goel, R. (2018). Prevalent infant feeding practices among the mothers presenting at a tertiary care hospital in Garhwal Himalayan region, Uttarakhand, India. *Journal of family medicine and primary care*, *7*(1), 45.

Raval, D., Jankar, D., & Singh, M. (2011). A study of breast feeding practices among infants living in slums of Bhavnagar city, Gujarat, India. *Religion*, *2*(2), 19.

Regassa, N. (2014). Infant and child feeding practices among farming communities in Southern Ethiopia. *Kontakt*, *16*(4), e215-e222.

Rimes, K. A., Oliveira, M. I. C. D., & Boccolini, C. S. (2019). Maternity leave and exclusive breastfeeding. *Revista de saude publica*, *53*, 10.

Sabin, A., Manzur, F., & Adil, S. (2017). Exclusive breastfeeding practices in working women of Pakistan: A cross sectional study. *Pakistan journal of medical sciences*, *33*(5), 1148.

Saleem, S. M. (2020). Modified Kuppuswamy socioeconomic scale updated for the year 2020. *Indian Journal of Forensic and Community Medicine*, *7*(1), 1-3.

SANTHI, S. N., & KAVITHA, S. (2014). THE SOCIO-ECONOMIC STATUS OF WOMEN EMPLOYEES IN THE ORGANISED SECTOR PARTICULARLY OF WOMEN TEACHERS IN COLLEGIATE SERVICE.

Sathe, P. P., Kotnis, S. D., & Mangulikar, S. K. (2016). A comparative study of breast feeding practices in working women. *Int J Community Med Public Health*, *3*, 3387-90.

Seksaria, S. A., & Sheth, M. K. (2014). Mass media campaign to improve infant and young child feeding practices amongst tribal mothers of Chikhli taluka, Gujarat. *American International Journal of Research in Humanities, Arts and Social Sciences*, *191*.

Senanayake, P., O'Connor, E., & Ogbo, F. A. (2019). National and rural-urban prevalence and determinants of early initiation of breastfeeding in India. *BMC Public Health*, *19*(1), 1-13.

Sharma, I. K., & Byrne, A. (2016). Early initiation of breastfeeding: a systematic literature review of factors and barriers in South Asia. *International breastfeeding journal*, *11*(1), 1-12.

Shubha, D. B., Angadi, N., & Nagarajachari, A. (2016). Infant and young child feeding practices of working and nonworking mothers in urban slums of Davangere city. *Int J Med Sci Public Health*, *5*(3), 1-5.

Sisay, W., Edris, M., & Tariku, A. (2016). Determinants of timely initiation of complementary feeding among mothers with children aged 6–23 months in Lalibela District, Northeast Ethiopia, 2015. *BMC public health*, *16*(1), 1-9.

Soomro, J. A. (2015). *Factors affecting breastfeeding practices in working women of Pakistan* (Master's thesis).

Srivastava, A. S., & Gawande, K. B. (2018). Factors influencing perception and knowledge of exclusive breast feeding practices among nursing mothers in rural area of Thane district of Mumbai. *International Journal of Community Medicine and Public Health*, *5*(6), 2486.

Taddele, M., Abebe, L., & Fentahun, N. (2014). Exclusive breastfeeding and maternal employment in Ethiopia: a comparative cross-sectional study. *Int J Nutr Food Sci*, *3*(6), 497-503.

Tsai, S. Y. (2014). Employee perception of breastfeeding-friendly support and benefits of breastfeeding as a predictor of intention to use breast-pumping breaks after returning to work among employed mothers. *Breastfeeding Medicine*, *9*(1), 16-23.

Unadkat, S., Khan, M. F., Solanki, A. J., Rathod, M., Rojasara, B., & Vagadiya, V. A Study on Breast Feeding and Weaning Practice in Infants Attending Well Baby Clinic of Tertiary Care Hospital in Jamnagar.

Vilar-Compte, M., Teruel, G., Flores, D., Carroll, G. J., Buccini, G. S., & Pérez-Escamilla, R. (2019). Costing a maternity leave cash transfer to support breastfeeding among informally employed Mexican women. *Food and nutrition bulletin*, *40*(2), 171-181.

Wanjohi M, Griffiths P, Wekesah F, Muriuki P, Muhia N, Musoke RN, et al. Sociocultural factors influencing breastfeeding practices in two slums in Nairobi, Kenya. International Breastfeeding Journal. 2016; 12(1): 5–10.

World Health Organization. (2009). Infant and young child feeding : model chapter for textbooks for medical students and allied health professionals. World Health Organization. https://apps.who.int/iris/handle/10665/44117

ANNEXURE

Annexure 3.1

Institutional Ethics
Committee for Human
Research
(IECHR)

FACULTY OF FAMILY AND COMMUNITY SCIENCES
THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

Ethical Compliance Certificate 2020 – 2021

This is to certify that **Ms. Pathak Riddhikumari Dineshchandra**'s study titled, "**Barriers & Facilitators promoting IYCF practices among Working Mothers in Urban Vadodara – A Pilot study**" has been approved by the Institutional Ethics Committee for Human Research (IECHR), Faculty of Family and Community Science, The Maharaja Sayajirao University of Baroda. The study has been allotted the ethical approval number **IECHR/FCSc/2020/61.**

Prof Mini Sheth
Member Secretary
IECHR

Prof Shagufa Kapadia
Chairperson
IECHR

Annexure 3.2

DEPARTMENT OF FOODS AND NUTRITION
FACULTY OF FAMILY & COMMUNITY SCIENCES
THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA
VADODARA 390 002 - INDIA

INFORMATION LETTER

I, Riddhi Pathak the student of Sr.M.sc. in the Department of Foods and Nutrition at The Maharaja Sayajirao University of Baroda carrying out research under the guidance of Dr. Shruti Kantawala.

The proposed topic of my research is "BARRIERS AND FACILITATORS PROMOTING IYCF PRACTICES AMONG WORKING MOTHERS IN URBAN VADODARA". This letter contains information regarding the research.

We are carrying out research in which we want to identify the barriers and facilitators regarding IYCF practices among working mothers of infants (0 month - 1 year of age) of urban Vadodara. Breastfeeding is the ultimate food for first 6 months of life for a baby followed by complementary feeding, which should start when breast milk is no longer sufficient by itself along with breast milk till 23 months. MBA is Maternity Benefit ACT, 1961 (amendment 2017) is to protect the dignity of motherhood by providing for the full and healthy maintenance of woman and her child when she is not working and Infant and Young Child Feeding practices is directly affect the nutritional status of children under two years of age and, ultimately, impact child survival. However, many working mothers have a lack of awareness about the importance and implementation of MBA and IYCF practices which may lead to child growth faltering.

With the help of an interview, I will ask you some questions, answers of which will be noted.

The question will be regarding socioeconomic status, obstetric history, their current IYCF practices, and knowledge regarding MBA. If you don't want to disclose certain information, then you are free to omit them. **The information given by you will be confidential and used only for study purposes.** At the end of the research, the result will be shared with you.

Thank You for your willingness and participation in this research.

By,
Guide: Dr. Shruti Kantawala
Student: Riddhi Pathak (+91 6354727092)
Department of Foods and Nutrition,
The Maharaja Sayajirao University of Baroda.

CONSENT FORM

I am thereby ready to allow myself in this research. I have understood that in this interview, I have to answer certain questions related to IYCF practices and MBA. I have read all the information regarding this research or the information has been read out to me. I have got the opportunity to ask questions regarding this and I have got satisfactory answers to my questions.

Therefore, I willingly consent to participate.

Name: _____ Date: _____

Age: _____ Contact no._____

માહિતી પત્ર

હું રિધ્ધી પાઠક, બરોડા ની મહારાજા સયાજીરાવ યુનિર્વસિટી માં ફુડ્સ એન્ડ ન્યુટ્રિશન વિભાગમાં સિનિયર એમ.એસ.સી. ની વિદ્યાર્થીની, ડો.શ્રુતિ કાંટાવાલાના માર્ગદર્શન હેઠળ સંશોધન કરી રહી છું. મારું સંશોધન વિષય " બેરીયર્સ એન્ડ ફેસિલિટેટર્સ પ્રમોટિંગ આઈ.વાય.સી.એફ પેકિટસીસ અમોન્ગ વર્કિંગ મધર્સ ઓફ અર્બન વડોદરા". આ પત્ર માં અમે સંશોધન કરી રહયા છીએ તે અંગે માહિતી આપેલ છે.
જેમાં અમે વર્કિંગ મધર્સ (જેના બાળકોની ઉમર ૦-૧૨ મહીનાની)ની આઈ.વાય.સી.એફ પ્રેકિટસીસ અને મેટરનીટી બેનીફીટ એકટ, ૧૯૬૧ (એમ.બી.એ) અંગેની જાગૃતિ નુ મૂલ્યાંકન કરવા માંગીએ છીએ. સ્ત્રી અને તેના બાળકની સંપૂર્ણ અને તંદુરસ્ત સંભાળ પૂરી પાડતી વખતે માતાના ગૌરવનુ રક્ષણ કરવાનું છે, જ્યારે તે કામ કરતી નથી તેની માહિતી મેટરનીટી બેનીફીટ એકટ, ૧૯૬૧માં દર્શાવેલ છે. અને આઈ.વાય.સી.એફ પેકિટસીસની સીધી અસર ૨ વર્ષ સુધીના બાળકોની પોષણની સ્થિતી પર થાય છે.

ઘણી વર્કિંગ મધર્સમાં એમ.બી.સે અને આઈ.વાય.સી.એફ પેકિટસીસના મહત્વ અને અમલીકરણ વિશે જાગૃતિનો અભાવ છે જેનાથી બાળકની વૃદ્ધિનો અવરોધ થઇ શકે છે.

એક ઇન્ટરવ્યુની મદદથી, હું તમને કેટલાક પ્રશ્નો પૂછીશ, જેના જવાબો નોંધવામા આવશે. પ્રશ્ન સામાજીક આર્થિક સ્થિતી, પ્રસુતિ ઇતિહાસ, એમ.બી.એ. સંબંધિત જાણકારી અને હાલની આઈ.વાય.સી.એફ પ્રેકિટસીસ વિશે હશે. જો તમે અમુક માહિતી જાહેર કરવા ઇચ્છતા ન હોય તો તમે તેને અવગણવા મુકત છો.

તમારા દ્વારા આપવામાં આવેલ માહિતી ગોપનીય રહેશે અને ફકત અભ્યાસના હેતુ માટે જ તેનો ઊપયોગ કરવામાં આવશે.

સંશોધનના અંતે, પરિણામ તમારી સાથે રજુ કરવામા આવશે.

આ સંશોધનમાં તમારી ઇચ્છા અને ભાગીદારી બદલ આભાર.

સંશોધન માર્ગદર્શકઃ ડો.શ્રુતિ કાંટાવાલા
સંશોધન માટે વિદ્યાર્થી : રિધ્ધી પાઠક (+૯૧ ૬૩૫૪૭૨૭૦૯૨)
ડિપાર્ટમેન્ટ ઓફ ફુડ્સ એન્ડ ન્યુટ્રિશન
ફેકલ્ટી ઓફ ફેમિલી એન્ડ કોમ્યુનીટી સાયન્સીસ
ધ મહારાજા સયાજીરાવ યુનિર્વસિટી ઓફ બરોડા

સંમતિ પત્ર

હું આ સંશોધન માટે મારી જાતને પરવાનગી આપવા તૈયાર છુ. હું સમજી ગઇ છું કે આ મુલાકાતમાં, મારે આઈ.વાય.સી.એફ પેકિટસીસ અને એમ.બી.એ. સંબંધિત કેટલાક પ્રશ્નોના જવાબ આપવાના રહેશે. મેં એ સંશોધન સંબંધિત બધી માહિતી વાંચી છે અથવા વાંચી સંભળાવી છે.

તેથી હું સ્વેચ્છાએ ભાગ લેવાની સંમતિ આપુ છું.

નામ : _____ તારીખ : _____

ઉમર : _____ મોબાઇલ નં. : _____

Annexure 3.3

Household Questionnaire

Date: _____ ID: _____ Block: _____ Area _____

SES			
1.	Name of Mother		
2.	Age of Mother		
3.	Religion 1) Hindu 2) Muslim 3) Jain 4) Christian 5) Other (specify)		
4.	Caste 1) SC 2) ST 3) OBC 4) General		
5.	Type of family: 1) Nuclear 2) Joint 3) Extended		
6.	Total no. of family member		
7.	Total no. of children		
8.	Educational Qualification of a) Mother b) Husband c) HOF	1) Profession or Honours 2) Graduate 3) Intermediate or diploma 4) High school certificate 5) Middle school certificate 6) Primary school certificate 7) Illiterate	
9.	Occupation of a) Mother b) Husband c) HOF	1) Legislators, Senior Officials & Managers 2) Professionals 3) Technicians and Associate Professionals 4) Clerks 5) Skilled Workers and Shop & Market Sales Workers 6) Skilled Agricultural & Fishery Workers 7) Craft & Related Trade Workers 8) Plant & Machine Operators and Assemblers 9) Elementary Occupation 10) Unemployed	

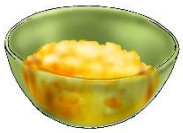
10.	Other source of income: 1) Agriculture 2) Poultry 3) House/Shope rent 4) Other (specify) 5) NA	
11.	Total monthly income of the family:	
12.	No. of earning member in the family	
13.	Living in a type of house 1) Own house 2) Rented/Govt. house 3) Other	
14.	what is the main source of drinking water for member of your household? 1) Piped water inside the house 2) Piped water outside the house but inside the yard 3) Public tap 4) Bottled water 5) Tube well/Bore well 6) Rainwater collection	
15.	Do you treat your water in any way to make it safer to drink? 1) Yes 2) No - Jump to Q. 17 3) Don't know - Jump to Q. 17	
16.	If Yes, What do you do to the water to make it safer to drink? 1) Boil 2) Add bleach/chlorine 3) Strain it through a cloth 4) Use water filter 5) Let it stand and settle 6) Other 7) Don't know	
17.	Is there toilet facility available in the household? 1) Yes 2) No	
18.	What kind of mass media do the members of household usually use? (Multiple ans.) 1) TV 2) Radio… 3) News paper 4) Mobile phone 5) All of the above	

Obstetric characteristics of Respondent		
19.	Type of current delivery 1) Normal 2) Caesarean	
20.	Outcome of current delivery 1) Full-term 2) Preterm	
21.	Place of delivery 1) At private hospital 2) At govt. hospital 3) Home 4) Other	
22.	How many ANC you attained? 1) Less than 4 2) 4 3) More than 4 4) Don't know	
23.	Did you receive counselling about Feeding practices during ANC? 1) Yes 2) No	
24.	Have you received post-natal care? 1) Yes 2) No	
25.	How many times you were gone for PNC?	
26.	Did you get information about proper child feeding practices during PNC follow up? 1) Yes 2) No	
27.	Name of child	
28.	Age of child (in month) / Birth date of child 1) 0-6 month 2) 6-12 month	
29.	Birth weight of child	
30.	Birth order of child	
31.	Gender of child 1) Male 2) Female 3) Other	
32.	Did you face any difficulty while breastfeeding your baby?	

Practices followed by working mother of children (0-12 months)

Early initiation and breast feeding		
33.	Do you have prior experience of breastfeeding? 1) Yes 2) No	
34.	When did you initiate breastfeeding to this child? 1) Within 1 hour 2) Same day after 1 hour 3) Within 3 days 4) After 1 week 5) Other	
34.1	If within 1 hour, then who helped you to initiate?	
34.2	If not within 1 hour, then what is reason for that?	
34.3	If not within 1 hour, what was given to the child till breastfeeding was initiated?	
35.	Did you give colostrum to the child? 1) Yes 2) No	
36.	Did you give any Prelacteal to your child? 1) Yes 2) No	
36.1	If yes, why did you give? 1) Cultural belief 2) Had caesarean so child had to be given something 3) Child was hungry & breastmilk didn't come 4) Other	
36.2	If no, who advised you to not give any prelacteal?	
37.	Is your child currently breastfed? 1) Yes 2) No – Jump to Q 38	
37.1	If yes, please specify about type of breastfeeding 1) Breastmilk only 2) Breastmilk and plain water 3) Breastmilk and other milk or formula 4) Breastmilk and non-milk liquids 5) Breastmilk and complementary foods	
37.2	Do you breastfeed child during night? 1) Yes 2) No	

37.3	What is frequency of breastfeeding? What is frequency of breastfeeding to child in a day & night?	Day _____ Night _____
38.	If no, then at which age (month) breastfeeding was discontinued?	
39.	Do you give any formula milk to your child? 1) Yes 2) No	
40.	If yes, who advised to you?	
41.	Do you continue breastfeeding when child getting ill? 1) Yes 2) No	
42.	Till what age was the child exclusively breastfed (not even water)?	
Complementary feeding		
43.	Do you know what is complementary feeding? 1) At completion of 6 month of age whatever food given to child 2) Don't know 3) Other (specify)	
44.	Have you started to give complementary food to this child? 1) Yes 2) No	
45.	At which age do you initiate complementary feeding? 1) At less than 6 months of age 2) At 6 months of age 3) At completion of 6 month of age 4) At after completion of 6 month of age 5) At 1 year 6) Don't know	
46.	If not initiate CF at completion of 6 month of age, then what is a reason for initiating complementary feeding before (early) or after (late) 6 month of age? 1) Breast feeding was sufficient 2) Breast feeding was not sufficient 3) Mother working 4) Child may not be able to digest 5) Other (specify) 6) Don't know	
47.	According to you what is a reason to initiate complementary feeding at completion of 6 month of age? 1) Child will be healthy 2) Hunger will be satisfied 3) Child will not cry 4) Breastmilk alone not satisfied 5) Counselled by AWW/Health functionary	

	6) Other (specify) 7) Don't know	
48.	Do you continue breastfeeding along with complementary feeding? 1) Yes 2) No	
49.	What is a frequency of complementary feeding to this child? 1) 2-3 times 2) 3-4 times 3) On demand	
50.	What is quantity of CF? 1) Full cup  2) ¾ cup  3) ½ cup 	
51.	What is a consistency of the complementary food? 1) Solid food  2) Semi solid mashed food  3) Liquid food 	

52.	Which food group do you include in complementary feeding in past 24 hours? (multiple answer) 1) grains, cereals 2) legumes and pulses 3) dairy products (milk, yogurt, cheese) 4) flesh foods (meat, fish, poultry and liver/organ meats) 5) eggs 6) vitamin-A rich fruits and vegetables 7) other fruits and vegetables. 8) Breast milk 9) roots and tubers 10) nuts & oilseeds	
53.	Do you give any processed food to your child? If yes, then specify name of processed food	
54.	Is child get quality food 1st in the family or people like father, grandparents get quality food 1st than child?	
55.	Have you wash your hand with soap? 1) Yes 2) No	
56.	If yes, then when you wash? (multiple answer) 1) Before preparing food 2) After preparing food 3) Before feeding the child 4) After feeding the child 5) All of the above	
57.	What care you take during feed the child? (multiple answer) 1) Both mother and child wash hands 2) Cleanliness of spoon/bowl 3) Temperature of the food 4) Food should not be stale 5) Safe drinking water 6) All of the above	
58.	Who fed to this child 1) by himself/herself 2) by mother 3) by grandmother 4) by other family member 5) by caregiver	
59.	In which manner a food is served to the child? 1) In the same plate in which mother eats 2) In the same plate in which other children eat 3) In a separate bowl 4) Other (specify)	

60.	What changes do you done in quantity of food when child getting ill? 1) Give less than usual 2) Give same as usual 3) Give more than usual 4) NA	
60.1	If give more than usual then, who advised to you for the same?	
61.	Is your child bottle fed? 1) Yes 2) No	
62.	Has your child been admitted in NRC/CMTC anytime? 1) Yes 2) No	
63.	What is reason for admitting the child in NRC/CMTC? 1) Illness 2) Severe underweight 3) Severe wasting 4) Other (specify)	
64.	Do you avoid any food during complementary feeding? 1) Yes 2) No	
64.1	If yes, then which food do you avoid?	
64.2	If yes, then why you avoid those particular food?	
Awareness about MBA		
65.	Do you know what is MBA? 1) Yes 2) No	
66.	If yes, do you know which facility cover under MBA? (multiple answers) 1) Paid Maternity leave (26 week) 2) No increased benefit for third child 3) Adoption/Surrogacy 4) Crèche facility 5) Prior intimation 6) Don't know	
67.	During the last pregnancy maternity leave had been provided by your workplace? 1) Yes 2) No 3) Left the job	
68.	Type of maternity leave 1) Paid	

	2) Unpaid 3) Both (3 month paid & 3 month unpaid)	
69.	What is a duration of maternity leave?	
70.	If you received maternity leave or left the job then now have you return to work yet or not? 1) Yes 2) No	
71.	If yes, then have you taken your child at your workplace? 1) Yes 2) No 3) Work from Home	
72.	If no, then generally where you put your child? 1) At our own home with other family member 2) Crèche 3) At Neighbour's home 4) Other	
73.	What breastfeeding habit was adopted on returning to work after maternity leave? 1) Breastfeeding break 2) Breastfeeding at the workplace 3) Express breast milk 4) Breastfeeding after work 5) NA	
74.	If you express breastmilk, then how do you express breast milk? 1) Expressing by manual (hand-operated) 2) Expressing by pump 3) NA	

Annexure 3.4

Kuppuswami Classification

Table 1: Education of Head of the family

Sr.no.	Education of Head of family	Score
1.	Post-graduate or professional degree	7
2.	Graduate degree	6
3.	Intermediate or post-high school diploma	5
4.	High school certificate	4
5.	Middle school certificate	3
6.	Primary school or literate	2
7	Illiterate	1

Table 2: Occupation of Head of Family

Sr. no.	Occupation of Head of family	Score
1.	Legislators, Senior Officials & Managers	10
2.	Professionals	9
3.	Technicians and Associate Professionals	8
4.	Clerks	7
5.	Skilled Workers and Shop & Market Sales Workers	6
6.	Skilled Agricultural & Fishery Workers	5
7.	Craft & Related Trade Workers	4
8.	Plant & Machine Operators and Assemblers	3
9.	Elementary Occupation	2
10.	Unemployed	1

Table 3: Total monthly income of the Family

Sr.no.	Monthly Family Income in Rupees (2020)	Score
1.	≥ 199,862	12
2.	99,931–199,861	10
3.	74,755 –99,930	6
4.	49,962–74,755	4
5.	29,973– 49,961	3
6.	10,002–29,972	2
7.	≤ 10,001	1

Table 4: Kuppuswamy's SES classification

Sr. no.	Score	Socioeconomic class
1.	26-29	Upper (I)
2.	16-25	Upper middle (II)
3.	11-15	Lower middle (III)
4.	5-10	Upper Lower (IV)
5.	<5	Lower (V)

Annexure 3.5

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

सत्यं शिवं सुन्दरम्

CONTACT US

Contact number:

1) Riddhi Pathak - 9898291246

2) Dr. Shruti Kantawala - 9898516439

NCC - NUTRITION COUNSELING CENTRE
DEPARTMENT OF FOODS & NUTRITION
FACULTY OF FAMILY AND COMMUNITY SCIENCES
THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA
FATEHGUNJ - VADODARA
NCC CONTACT NO. - 1) 02652795526
2) 9898790340

WHAT IS IYCF ?

WHO and UNICEF recommended

1) Early initiation of breastfeeding within 1 hour of birth

2) Exclusive breastfeeding for 6 months (180 days)

3) Nutritionally adequate and safe complementary feeding starting from the age of 6 months with continued breastfeeding up to 2 years of age or beyond.

“

IYCF - INFANT & YOUNG CHILD FEEDING PRACTICES

WHAT IS EXCLUSIVE BREASTFEEDING - EBF ?

- EBF means that an infant receives only breast milk from his or her mother or a wet nurse, or expressed breast milk, and no other liquids or solids, not even water, with the exception of oral rehydration solution, drops or syrups consisting of vitamins, minerals supplements or medicines.

WHAT IS COMPLEMENTARY FEEDING?

- Complementary feeding is defined as the process starting when breast milk is no longer sufficient to meet the nutritional requirements of infants, and therefore other foods and liquids are needed, along with breast milk.
- The target range for complementary feeding is generally taken to be 6 to 23 months of age, even though breastfeeding may continue beyond two years.

BIRTH TO 6 MONTHS:EARLY AND EXCLUSIVE BREASTFEEDING

- Put your baby to your breast immediately after birth, definitely within 1 hour
- Mother's first yellow milk provides immunity and protects the baby from diseases & infections
- do not give any prelacteal food like honey or ghee

- Breast milk provides all nutrients and contains sufficient water.
- Do not give your baby anything else to eat or drink, not even honey or water in the first 6 months. Your baby needs only breastfeeding till 6 months of age.
- Even during very hot weather, breast milk will satisfy your baby's thirst.

- Your baby should be breastfed on demand both during the day and night. Frequent feeding increases breast milk flow.
- Don't forget to feed the baby at night (Activate hormone)
- Feed at least 8 to 12 times in 24 hour
- In hot & humid climate feed 10 to 12 times in 24 hour

BENEFIT OF BREASTFEEDING

BENEFIT FOR MOTHER

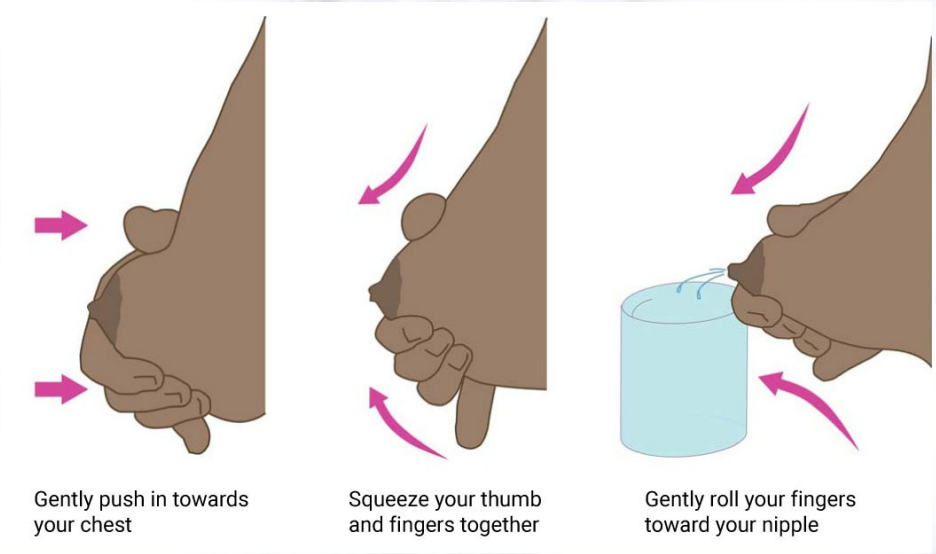
- Mother less likely to become pregnant in early month
- Faster maternal recovery and weight loss post-partum
- Lower risk of maternal cancers (ovarian and breast cancer)
- Less post-partum depression

BENEFIT FOR BABY

- Improve growth and nutritional status
- less likely to die
- Increase bonding
- Less diarrhea and respiratory infection
- Less ear infection, GI disorder, skin condition
- Lower risk of chronic disease (diabetes, heart disease, asthma, cancer)
- Lower risk of overweight /obesity
- Improve cognitive and motor development

WHEN YOU ARE SEPARATED FROM YOUR BABY

- **Take an extra time for the feeds before separation from baby and when you return home.**
- **Express and store breast milk before you leave your home so that your baby's caregiver can feed your baby while you are away.**
- **will keep the milk flowing and prevent breast swelling.**
- **Expressed breast milk (stored in a cool, covered place - refrigerator) stays in good condition for 8 hours, even in a hot climate.**
- **Store breast milk in a clean, covered container. Milk can be stored 6 to 8 hours in a cool place and up to 72 hours in the back of the refrigerator.**
- **Give baby expressed breast milk from a cup. Do not use bottle.**
- **Expressing can be done by hand or using a breast pump (hand pump or electric).**



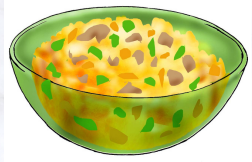
- Timely – meaning that they are introduced when the need for energy and nutrients exceeds what can be provided through exclusive and frequent breastfeeding.
- Adequate – meaning that they provide sufficient energy, protein and micronutrients to meet a growing child's nutritional needs.
- Safe – meaning that they are hygienically stored and prepared, and fed with clean hands using clean utensils and not bottles and teats.
- Properly fed – meaning that they are given consistent with a child's signals of appetite and satiety, and that meal frequency and feeding method actively encouraging the child, even during illness, to consume sufficient food using fingers, spoon or self-feeding are suitable for age.

WHAT IS CF?

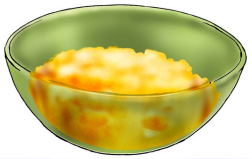
At completion of 6 months of age whatever food given to a child

> "COMPLEMENTARY FEEDING - CF

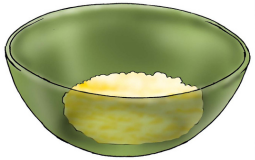
MEASURMENTS OF CUPS



Full cup



Three-quarters (3/4) cup



One-half (1/2) cup

Source: IYCF Image Bank

YOUR BABY NEED VARIETY OF FOOD

Cereal, Grain and roots & tubers

Legume and pulses, Nuts and oilseed

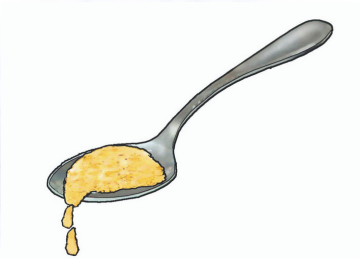
Dairy product, meat, fish and egg

Fruits and vegetables

Vitamin A rich fruits and vegetables

FEED MORE AS BABY GROW

6 MONTHS



- Continue breastfeeding
- On completion of 6 month, start feeding baby with 2–3 table spoons of soft, well-mashed foods 2–3 times a day
- Introduce one food at a time, such as a small amount of vegetables, followed by fruits, dal and cereals
- Increase amount of the feed slowly

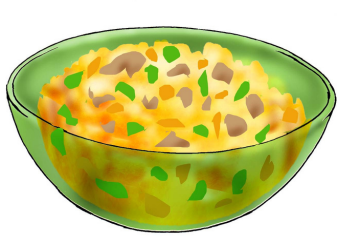
NOTE

- A snack is an extra food between meal
- 1 tablespoon=15 gm
- 1 Cup = 250 ml

6 - 9 MONTHS

- Continue breastfeeding
- Change consistency to lumpy feeds given 3–4 times a day
- Feed 2–3 times and 1–2 snacks
- Increase quantity and diversity of the feeds
- Introduce one new food at a time such as khichri, dalia Include at least 4 food groups such as: 1) cereals, 2) green vegetables and fruits, 3) oil, ghee; 4) mashed dal/fish/egg (only hard-boiled)

9 - 12 MONTHS



- Continue breastfeeding
- After 9 months, feed at least half katori of food that requires chewing 3–4 times a day
- After 12 months, introduce family foods, give 3/4th–1 katori, 3–4 times each day along with 1–2 snacks
- Give finely chopped foods that baby can pick up using thumb and fingers. Allow children to eat with own hands, even if they mess up

Source: IYCF Image Bank

THINGS TO REMEMBER

- Between the age of 6 months and 2 years, a child needs to continue breastfeeding

- If you are not breastfeeding, feed your baby two cups (500 ml total) of milk every day

- Avoid giving a baby tea, coffee, soda, and sugary or coloured drinks. Limit amount of fresh juices

- During illness give the baby small frequent meals and more fluids, including breast milk or other liquids. Encourage the baby to eat a variety of (his or her) favourite soft foods. After illness feed more food and more often than usual for at least 2 weeks

- When feeding a baby between 6 and 12 months old, always give breast milk first before giving other foods.

- When your baby first start to eat Give your baby 1 or 2 tablespoons of soft food three times each day. Gradually increase the frequency, amount, thickness and variety of food Enrich the baby's porridge and mashed foods with breast milk, mashed groundnuts, fruits and vegetables, and start animal source foods as early and as often as possible

- Infants only need a very small amount of oil (no more than one half (1/2) teaspoon per day)

- Always feed the baby using a clean open cup. Do not use bottles, teats, or cup with a mouthpiece

Source: IYCF Image Bank

The Maternity Benefits Act, 1961

WHAT IS MBA - MATERNITY BENEFIT ACT ?

MBA

- The Maternity Benefit Act, 1961 extends to the whole of the Indian Union and applies to every factory, mine, plantation and circus industry including any such establishments belonging to the government but excluding all the establishments covered under the provisions of the Employees State Insurance Act, 1948.
- The object of the Maternity Benefit Act, 1961 is to protect the dignity of motherhood by providing for the full and healthy maintenance of a woman and her child when she is not working.
- Recently, in 2017, the Act was amended and a substantial increase in the fully paid maternity period was introduced.

SERVICES UNDER MBA

- Crèche Facility
- Paid Maternity Leave
- No increased benefit for a third child
- Adoption/ Surrogacy
- Prior Intimation

KEY HIGHLIGHT OF MATERNITY BENEFIT ACT - MBA

PAID MATERNITY LEAVE

- 26 weeks of paid maternity leave provided to pregnant women irrespective of sector.
- In which the mother can take leave before 8 weeks of delivery and 18 weeks after delivery.

NO INCREASED BENEFIT FOR THIRD CHILD

- Maternity Benefit is only available for the first two children.
- Women having two or more surviving children shall only be entitled to 12 weeks of Maternity Benefit of which not more than 6 weeks shall be taken prior to the date of the expected delivery.

ADOPTION/ SURROGACY

- A woman who adopts a child below the age of 3 months, or a commissioning mother (biological mother, who uses her egg to create an embryo implanted in any other woman) will be entitled to maternity benefit for a period of 12 weeks from the date the child is handed over to the adopting mother or the commissioning mother

CRÈCHE FACILITY

- Every establishment having 50 or more employees are required to have a mandatory crèche facility within a prescribed distance from the establishment, either separately or along with other common facilities.
- The woman is also to be allowed 4 visits a day to the crèche, which will include the interval for rest allowed to her.

PRIOR INTIMATION

- Every establishment will be required to provide the woman with information about every benefit available under the Act at the time of her initial appointment.

HUMAN MILK BANK

- A human milk bank is a center to collect, screen, test and store donor milk collected from healthy lactating mothers.
- In India, these centers are called Comprehensive Lactation Management Centres (CLMCs).
- India has 80 CLMCs across differentstates.
- India's first human milk bank was established in 1989 at Sion Hospital, Mumbai.

MILK BANK IN GUJARAT

Vadodara

- Kashiba Children Hospital
- SSG Hospital

Surat

- SMIMER Hospital

Source: Human Milk Banking Association of India