

**INFANT AND YOUNG CHILD FEEDING PRACTICES IN
JHARKHAND: A CRITICAL ANALYSIS OF
KNOWLEDGE AND COUNSELING SKILLS OF
FRONTLINE HEALTH WORKERS**

*Thesis submitted to Jawaharlal Nehru University
for the award of the degree of*

DOCTOR OF PHILOSOPHY

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CENTRE OF SOCIAL MEDICINE AND COMMUNITY HEALTH

SCHOOL OF SOCIAL SCIENCES

JAWAHARLAL NEHRU UNIVERSITY

NEW DELHI-110067

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*Thesis submitted to Jawaharlal Nehru University in Partial fulfilment of
the requirements for the award of the degree of*



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Prof. Rajib Dasgupta**

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2021**



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DECLARATION

Date: 20th December 2021

This is to certify that the thesis titled “**Infant and Young Child Feeding Practices in Jharkhand: A Critical Analysis of Knowledge and Counseling Skills of Frontline Health Workers**” submitted by me under the guidance of Prof. Rajib Dasgupta for the award of the degree of **Doctor of Philosophy** is my bonafide work and has not been previously submitted for any other degree of this university or any other University.

Place: New Delhi

Date: 20th December 2021

Kirti Rakshit Barla

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CERTIFICATE

It is hereby recommended that this thesis may be placed before the examiners for evaluation.

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“Dreams are not what you see in sleep, it is the thing which doesn't let you sleep” –
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LIST OF ABBREVIATIONS

ACASH	Association for Consumers Action On Safety and Health
AMB	Anemia Mukht Bharat
ANC	Antenatal Care
ANM	Auxiliary Nursing Midwives
ARI	Acute respiratory infection
ASHA	Accredited Social Health Activist
AWC	Anganwadi Centre
AWW	Anganwadi Workers
B.Ed.	Bachelor of Education
B.Sc. Nursing	Bachelor of Science in Nursing
BCC	Behavior Change Communication
BDO	Block Development Officer
BFHI	Baby-Friendly Hospital Initiative
BLW	Baby-Led Weaning
BPL	Below Poverty Line
BPNI	Breastfeeding Promotion Network of India
CDI	Child Development Index
CDPO	Child Development Project Officer
COVID 19	Coronavirus disease 2019
CSSM	Child Survival and Safe Motherhood
DLHS	District Level Household Survey
ECCE	Early Childhood Care and Education
FGD	Focus Group Discussions
FHW	Frontline health workers
GDP	Gross Domestic Product
GNR	Global Nutrition Report
HBNC	Home Based Newborn Care
HBYC	Home-Based Care for Young Child
HCR	Head Count Ratio
ICDS	Integrated Child Development Service
IIPS	International Institute for Population Sciences

IMCI	Integrated Management of Childhood Illness
IMNCI	Integrated Management of Neonatal and Childhood Illness
IMR	Infant Mortality Rate
IMS Act	Infant Milk Substitute Act
IYCF	Infant and Young Child Feeding
JSY	Janani Suraksha Yojana
MAA	Mother's Absolute Affection
MCH	Maternal and Child Health
MCP card	Mother and Child Protection card
MDGs	Millennium Development Goals
MoHFW	Ministry of Health and Family Welfare
MPCE	Monthly Per Capita Expenditure
MTC	Malnutrition Treatment Centre
MUAC	Mid-upper arm circumference
MWCD	Ministry of Women and Child Development
NCD	Non-communicable diseases
NFHS	National Family and Health Survey
NHP	National Health Policy
NNP	National Nutrition Policy
NPAN	National Plan of Action on Nutrition
NRHM	National Rural Health Mission
NSSO	National Sample Survey Office
PHC	Primary Health Centre
PLA	Participatory Learning Appraisal
PMSMA	Pradhan Mantri Surakshit Matritva Abhiyan
POSHAN	Prime Minister's Overarching Scheme for Holistic Nutrition
PTG	Primitive tribal group
RCH	Reproductive and Child Health
RMNCH+A	Reproductive, Maternal, Newborn, Child and Adolescent Health
RSoc	Rapid Survey on Children
SC	Schedule Caste
SDGs	Sustainable Development Goals
ST	Scheduled Tribes

THR	Take Home Ration
TNAI	Trained Nurses' Association of India
U5MR	Under 5 Mortality Rate
UNICEF	United Nations Children's Fund
VHAI	Voluntary Health Association of India
VHND	Village Health and Nutrition Day
VHSNC	Village Health, Sanitation and Nutrition Committee
WBTi	World Breastfeeding Trends Initiative
WHO	World Health Organisation
WPR	Work Participation Rate

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CHAPTER 1

INTRODUCTION

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1.1 Introduction (Need of the study)

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CHAPTER 1

INTRODUCTION

1.1. Introduction (Need of the study)

According to WHO, globally 150.8 million children under the age of five have been reported stunted and 50.5 million wasted (WHO, 2018). Approximately three-quarters of the world's children who are “stunted” live in South Asia and Sub-Saharan Africa. Around 40% of children in Sub-Saharan Africa and 39% in South Asia are stunted children less than 5 years (Roba, 2016). India is responsible for the largest number of wasted children in the world; 25.5 million, i.e., one-third of wasted children worldwide (Global Nutrition Report, 2018). In another report, the GNR in 2018 states that world’s one-third of the stunted children lives in India (Kar, 2019). India has the most stunted growth children with 46.6 million, followed by Nigeria (13.9 million) and our neighbour Pakistan with 10.7 million (Kar, 2019). Stunting is a largely measurable consequence of inadequate nutrition and repeated outbreaks of infections in a child's first 1,000 days of life. One of the underlying reasons is malnutrition in the early 1,000 days of child life i.e. from pregnancy to the first two years of child life - is one of the underlying reasons (Kar, 2019). Decreased cognitive and physical development, decreased productive capacity, and poor health are some of the long-term effects of stunting. In a study, it is evident that adults who have impaired intellectual performance were malnourished in their early childhood (Pollitt E, et al., 1995). As per estimate their earnings are 20% less on an average compared to those who are nourished (Save the Children Report, 2012). The previous years and experience reveal the effect of malnutrition in developing countries can translate into losses in annual GDP of up to 2-3 percent.

After seven decades of development plans and programs, India has the distinction of having the largest number of poor people in the world. Although its economy is growing, poverty remains a major challenge. As a result, South Asia has become the world's largest centre of extreme poverty. However, poverty in India is on the decline. Total population living in extreme poverty are about 84 million, which corresponds to around 6% as of May 2021. In 2020, the incidence of multidimensional poverty decreased significantly from 54.7% in 2005 to 27.9% in 2015-2016 (Global MPI, 2020) A study by the World Economic Forum in 2020 found that, according to the last census, the Poor in India in 2013 about 220 million Indians were spending less than 32 rupees per day - the poverty line for rural India. Per capita GDP of India was 6.45% compared to the world GDP but in 2019 it was higher at 18.4%.

According to the IMF's World Economic Outlook (April 2021), India ranks 144th out of 194 economies in terms of (nominal) GDP per capita (IMF World Economic Outlook, 2021). With India pursuing lofty goals in the global economic pecking order, one sobering factor that worries its grassroots needs urgently to be addressed: malnutrition, undernutrition, and the resultant stunting - all of which can prevent the country's rapid ascent.

According to the 2019 Global Hunger Index, India ranks 103 out of 119 countries. India suffers from severe hunger with a score of 31.1 (World Hunger Index, 2019). The issue of malnutrition has gained momentum in recent years after striking numbers from research such as the National Nutrition Survey Report (ICNNS) 2016-2018, the Index Report World Hunger 2019, a report on the "State of the world's children" by UNICEF and other. India is the "youngest" country in the world with the largest population of children. Children under four represent 9.7 percent of the population (Census of India, 2011). Ensuring good health for so many of the population is an undeniably important agenda and challenge for the government. The number of children under five years of age affected by chronic undernutrition (stunting or low height for age) has increased to 200 million. Geographically, it is observed that the percentage of malnourished children in Asia is more than 70%, 26% live in Africa, and 4% in Latin America and the Caribbean. According to a global survey report released by Save the Children on 19 July 2012, India ranks 112 among the 141 countries in terms of the Child Development Index (CDI). The recent global study mentioned above also indicates that 42% of children in India are underweight and 58% of children are stunted at age two. In another UNICEF study, nearly one-third of under-five mortality was reported to be attributable to malnutrition (UNICEF, 2013). The health of the child has also been recognized for the future health of the nation as children become the next generation of parents and workers (Neogi S, 2009). Children are the assets of a developed and progressive nation. Every year, 7.6 million children die before they reach the age of five, most of them preventable or treatable, and almost all of them in developing countries. In UNICEF data, 69% of deaths among children under 5 years are due to malnutrition (UNICEF, 2020). A malnourished child is up to 10 times more likely to die from easily preventable or treatable illness compared to a fed child. A child suffering from chronic malnutrition is more vulnerable to acute malnutrition during food shortages, economic crises, and other emergencies.

Therefore, an adequate and appropriate feeding practice is important in infants and young children. Poor feeding practices, such as inadequate breastfeeding, offering the wrong

foods, and not ensuring that the child gets enough nutritious food, contribute to malnutrition in developing countries. Thus, in such a situation feeding in both quantity and quality is important in children for overall development. An improvement in feeding practices will lead to the prevention of malnutrition and its consequences which shows a decrease in under-five mortality. Based on these facts, WHO and UNICEF developed the Global Strategy for Infant and Young Child Feeding (IYCF) to refresh the world's attention towards the importance and impact of feeding practices on infants and young children. The National Guidelines on IYCF emphasized childhood malnutrition which ensues in the initial two years of life is nearly irreversible.

The global nutrition targets to achieve the Goals by '2025' to decrease the number of stunted children who are less than 5 years of age by approximately 40%. It was recommended by WHO to increase a) coverage stunting prevention activities, b) to improve the nutrition of women of reproductive age, c) to support optimal breastfeeding and complementary feeding practices and d) to provide community-based strategies to prevent infection-related causes of stunting (WHO, 2020). Breastfeeding practices and complementary feeding are essential to the survival and development of children. In many developing countries, nutritional problems in infants and young children are closely linked to feeding practices. Also, feeding practices have an impact on physical growth, which is considered one of the best indicators of the well-being of children. Poor feeding practices means that numerous children remain vulnerable to unalterable outcomes of stunted growth, poor mental development, and higher risk of major communicable diseases. These feeding practices become more critical in developing countries like India, where the burden of diseases is high and access to safe water and sanitation is low. As exclusive breastfeeding ensures the best start with vital nutrients in children, complementary feeding ensures to fill the gap of nutrients and needs of a child after six months, and as long as breastfeeding continues. After six months of exclusively breastfeeding child needs more vitamins, minerals, protein, and carbohydrates than are usually breast milk. Breast milk alone is not enough to provide the energy and calorie needed for the healthy growth of a child's body. This period is considered to be the most vulnerable time in childhood and requires special attention from family and community when malnutrition begins in many infants and contributes significantly to the high prevalence of malnutrition in children under 5 years of age (Motee A and Jeewon R, 2014).

In addition to this, nutritional deficiency leads to growth impairment and health degradation in early childhood. Findings from infant and child feeding studies have indicated

that inappropriate feeding practices can have intense consequences for the growth, overall development, and survival of children, particularly in developing countries (Saha KK et.al, 2008). Hence, it is evident that if an adult is malnourished during the first 2 years of his life later, he will be stunted, which means the adult is several centimetres shorter than his potential height. More importantly, young children bear an enormous share of the burden of illness resulting from a lack of hygiene. India still loses between 0.4 and 0.5 million children under the age of five due to diarrhoea. Infant mortality and under-five mortality rates have declined over the years for the country, and in many states, these have stagnated in recent years. One reason is the failure to make significant progress in improving the state of personal hygiene at home (Tubid D., 2015).

The health of mothers and children and their nutritional status are closely associated with each other. Improvement in IYCF begins by ensuring the complete health and nutritional status of women and their families at different stages of their life. Mothers and children form a genetic and common unity. They share common difficulties of poor nutrition and health. All that is done to solve these problems worries mothers and children together. However, despite governments several efforts in providing nutritive food support to poor children, the prevalence of undernutrition remains high. India is home to a large population of people suffering from malnutrition and hunger and infant and maternal mortality to make health care accessible and affordable for all. At this stage it is important to understand that treating sick children is only a short-term solution, hence, there is a need to prevent malnutrition. Reviewed literature recommends that the factors of feeding practices rely on dietary intake and hygiene whereas, there is a need to understand the social aspects, biological determinants, changes in food habits, and availability of health services.

It was evident that community interferences are the active sources in reducing neonatal and maternal mortality and improving health through changes in nutritional behaviour. Within the family caregiver or mother plays an important role in the Infant and Young Child Feeding practices. Similarly, Frontline Health Workers have a significant role in building awareness regarding feeding practices among mothers whose child is less than 2 years. They are the first line of contact of lactating mothers for receiving proper guidance on rearing and feeding a new-born child. Frontline Health Workers (FHWs) are the community-level health professionals who meet these needs and function as agents of change to promote behavioural change in health among community members. However, in effectively promoting optimal IYCF practices the knowledge and counseling skills of Frontline Health Workers

plays an important role. “Health and nutrition go hand in hand” thus, Village Health and Nutrition Day (VHND) is a very promising concept to improve the health condition of the village through increased focus on their nutrition behaviour. Village Health and Nutrition Day (VHND) is designed to be used successfully as the state's first venue for contact with primary health care.

The role of Frontline Health Workers becomes more prominent and important during the time of health emergencies. Due to this pandemic, most of the country's health parameters are showing slow growth or decline. Pandemic is also one of the situations which could highly affect the feeding practices of the target group i.e., children. Given the urgency of health problems such as COVID 19 and its impact on infant mortality, malnutrition, our country needs a large number of health professionals to meet the needs of the population. As the COVID 19 spreads in an Indian community, these health workers are recognized as a primary point of contact at the village level for all kinds of work and to be utilized as an asset for disseminating information and awareness on basic precautionary to be taken while breastfeeding and child-rearing. During any such kind of pandemic, most of the people in villages relied on Frontline Health Workers' knowledge and experience.

Hence, based on the facts it has become more than important for a researcher to analyse the knowledge, skills, and responsibilities of Frontline Health Workers impacting the Infant and Young Child Feeding practices. It is also important to explore how best they are trained to fight and work at the time of a health emergency. As known, the knowledge and attitude of mothers regarding child feeding practices depends on various factors. The first source of information and awareness regarding feeding practices is either their relatives, friends, neighbours, or Frontline Health Workers. The quality of information is highly dependent on the quality of knowledge and skills these informants carry. Hence, it is evolved from the literature reviewed that the knowledge and skills of Frontline Health Workers play a crucial role in the mothers feeding practices impacting the health and overall development of the child.

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CHAPTER 2

REVIEW OF LITERATURE

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CHAPTER 2

REVIEW OF LITERATURE

2. Overview

This chapter is based on the secondary data for which different articles, books, research papers, surveys and programs are referred and studied in detail. The literature reviewed all the significant resources on the child feeding practices to develop an understanding of the topic. And it also helped to identify the cause and effect of the topic, its importance, and the gaps in the knowledge of child feeding practices. It further enabled the conceptualization, development of research questions and objectives for the research study. The research literature review is discussed in different sections of this chapter in detail as follows.

- Establishing an understanding of the child feeding practices and how different terms are defined. (Section 2.1)
- Illustrating the importance of feeding practices in a child's health and overall development (Section 2.2)
- Discussing the status of child feeding practices in the Indian and Jharkhand context (Section 2.3)
- Explaining the various determining factors of child feeding practices (Section 2.4)
- Discussing in detail the role of the Frontline Health Workers in child feeding practices (Section 2.5)
- Developing an understanding of Village Health and Nutrition Day and its significance in Child feeding Practices (Section 2.6)
- Developing and discussing the reasoning on the need for this study (Section 2.7)

2.1. Understanding the Infant and Child feeding practices (Concepts and Definitions)

The major public health problems exist because a large number of infants and young children suffer from malnutrition. The basic causes of infant and child malnutrition revealed in most of the literature is due to poor food intake and practices, which also causes permanent physical defects and mental retardation in some survivors. There are cultural attitudes, values, practices, and beliefs about food consumption among different groups in a community. Each community have their own way of eating and belief about food, some foods are popular and some are disliked. It is a good idea to discover the reasons for these attitudes towards

different foods. Such practices include exclusive breastfeeding from birth to the first six months, followed by adequate and appropriate complementary food with continued breastfeeding up to 2 years and beyond.

The World Health Organization (WHO) and the United Nations Children's Emergency Fund (UNICEF) have formulated a global strategy for Infant and Young Child Feeding and recommendations in the form of guiding principles for the complementary feeding of the breast-fed child to draw attention to the effect of nutritional practices on health, and growth of infants and children (WHO, 1995). The three recommendations are given by WHO on IYCF practices are:

- If not breastfed, children should be continued breastfeeding or appropriate feeding with calcium-rich foods.
- Feeding solid or semi-solid food a minimum number of times per day according to age and breastfeeding status.
- According to breastfeeding status foods including from the minimum number of food groups per day.

Hence, the following guidelines must be followed to maintain nutritional balance in a child (Tubid, 2015).

- Timely - means that children are introduced with complementary food when there is a need for energy and nutrients that exceeds that can be provided through exclusive breastfeeding.
- Adequate - providing enough micronutrients, protein, and energy to meet the nutritional requirements of a growing child.
- Safe - prepared hygienically with clean utensils and fed with clean hands.

In the Indian context, there is no clear trend in the initiation of breastfeeding. Initiation is as early as 0 to 2 hours after delivery or as late as the 5th day after birth. A greater predisposition towards initiation on the second and third day of birth. Whether it's urban or rural location, there is no uniformity on the aspect of initiation. Studies conducted earlier on infant feeding practices in rural Himachal Pradesh showed 70 to 90 percent introducing breastfeed on the first day. On the other hand, 65 percent of women in central rural Karnataka initiated breastfeeding by the second day (Banapurmath et al., 1996, Shariff and Farsana,

1990). Another study in rural Uttar Pradesh found that 44 percent of mothers initiated breastfeeding on the third day, approximately 35% percent on the fourth day, and about 17% on the fifth day postpartum. In the urban area of Himachal Pradesh, 18 percent of mothers initiated breastfeeding within 24 hours (Dattal et al, 1984) and 82 percent of mothers in the slums of Bangalore did so within the same period (Prabhakara et al., 1987).

Early initiation of breastfeeding is clearly noticeable amongst tribal communities. In tribal communities, mothers appear to initiate breastfeeding within 24 hours after birth. A report about pregnancy and childbirth practices among the Amat Gonds of Raipur districts observed that mothers continue breastfeeding as long as they had milk. In case, the mother conceives again, she continues feeding the child with her milk till the foetus is five months old or till pregnancy is confirmed. In such cases, a mother uses alluring things such as roti, channa, murra, or tea to make the child forget the mother's milk. Despite all these efforts if it persists and the child is not giving it up then a bitter paste of neem is applied to the breast of the mother. This is for a reason children got an aversion to sucking (Dube L., 1949). The result of studies conducted on lactation and dietary intake habits of the tribes of Nilgiri in Tamil Nadu indicate that tribal women in the region breastfed their children up to two to three years. Although the supplementary foods are started in the early half of the first-year researchers described them as of poor quality (Belavady B et al., 1959, Rizvi, S.N.H., 1985). Similarly, mothers of Gonds of Tamia breastfed their children until they could walk and take food by their hands (Sampath R, 1964). The feeding practices among the Santhal tribe in northern Orissa found that children are given honey or jaggery after the child's birth. They are breastfed after 12 hours and encouraged in the children till the mother conceives again (Swain L, 1985, Bahl L, 1979). The reasons quoted in different papers for the delay in initiation of breast milk are the belief of delay in milk flow, to prevent feeding colostrum, performing certain ceremonies before initiating feeding, on account of cesarean deliveries, and inappropriate hospital policies. A study concluded that the socio-demographic factors such as sex of the baby, literacy parity, maternal age, and the socio-economic condition do not influence the breastfeeding practices whereas the type of delivery had a significant effect on the initiation of the breast milk and its pattern (Banapurmath CR, 1995). In a study of breastfeeding practices in villages of central Karnataka, the researcher concludes that delayed initiation, rejection of colostrum, and use of prelacteal feeds are common among rural mothers of Karnataka. Bottle-feeding has penetrated quite widely into the villages and even commercial weaning foods have begun to be adopted by a few rural households. 17% of infants were started on the bottle by 4 months, 24.9% by 6 months and 49.4% by one year of

age quoting the main reason for commencing bottle feeding were not enough milk (Banapurmath CR et al, 1996).

Another important factor feeding practice is the introduction of complementary food after 6 months of child's age. Mudgal S. and Rajput V.S. in a survey on infant feeding practices of tribals of Madhya Pradesh found that semi-solid food was given within 6 months and only cereals are given. Almost 2/3rd of the surveyed women stated that food should not be restricted for a sick child (Mudgal S. and Rajput V.S., 1979). A similar study conducted among the Santhal tribe in northern Orissa found that supplementary feeding is introduced at the age of seven months and they use to give soft rice, gruel, and pulses as a major supplementary food (Swain L, 1985). There are further studies that state the age of introduction of complementary feeding as one to two years. The study conducted on the health care of the Oraon children from Barambe village in Ranchi district revealed that the children are dependent on the mother's milk till the age of one year and after completing one year baby are given solid foods (Narayan, 1983). There are mothers of all socio-economic groups in Bhopal who introduce semi-solid food at the age of one year and mostly include carbohydrates (Bhandari and Patel, 1973). Similarly, Bahl reported about the infants feeding practices among the tribals in Himachal Pradesh, at the age of 13 to 24 months 92 percent of children receive semisolid foods. (Bahl L., 1979). Some studies revealed that weaning starts when a child starts walking. Children are completely weaned at the age between 2 to 2 and a half years. Studies also revealed that there is no correlation between the sex and the age of weaning starting and completing (Dave P. et al, 1984). The A.P.A.U. report in 1983 revealed that 25 percent of children of tribal families of East Godavari district were fed on breast milk without supplementary food till three years of age. Children hardly receive any supplementary food till they are breastfed (A.P.A.U. report, 1983). Studies state a high correlation between the act of weaning and socio-economic status. 75 percent of upper-class mothers wean their babies at nine months and 70.7 percent of mothers continue breastfeeding up to 2 years (Walia B.N.S. et al, 1974). In another study, most mothers of the higher socioeconomic group started solids food at about 6 months while mothers of the lower socioeconomic group start it after one year (Datta Banik, N.D., 1975).

2.1.1. Concepts used and related to child feeding practices

Malnutrition is derived from the combination of two words *malus* and *nutrire*. *Malus* means bad and *nutrire* means to nourish. Malnutrition includes both the terms Undernutrition

(deficiency of one or more essential nutrients) and Overnutrition (an excess of a nutrient or nutrients).

According to UNICEF, “malnutrition is commonly used for undernutrition, but it is also referred to as over-nutrition technically” (UNICEF, 2006). People are considered malnourished, if their diet does not contain sufficient calories and protein for overall growth or if they are not able to completely utilize nutritious food due to illness i.e., undernutrition. If they consume too many calories, they can be also malnourished i.e. over nutrition (UNICEF, 2006).

Children's undernutrition was defined in three anthropometric dimensions: underweight, stunting and waste. *Underweight* was measured by dividing the weight of a child by the average weight for a child of that age and sex; *Stunting* was measured by dividing the height of a child by the mean height for a child of that age and sex; and *wasting* was measured by dividing the weight of a child by the mean weight for a child of that height and sex, compared to the WHO standards (Subramanian et al., 2010).

Breastfeeding - The process of breastfeeding has a time dimension. The establishment of breastfeeding needs a certain time and even the weaning is a slow process. Many points such as when breastfeeding was started, how long it was continued, when the first supplement (either milk or other food) was introduced and when breastfeeding was stopped, all become important in this connection.

A child was considered to be breastfed only if breastfeeding was continued beyond 20 days of age. That ensured about 15 days of breastfeeding leaving the maximum period of five days to start breastfeeding. All those children in whose case breastfeeding was stopped before 20 days of age were considered as ‘never breastfed’ (Gopujkar P.V. et al, 1984).

Supplementary food refers to all kinds of foods given in addition to breast milk (Gopujkar P.V. et al, 1984).

Substitute food refers to all foods given to infants not receiving breast milk (Gopujkar P.V. et al, 1984).

Complementary feeding - it refers to “the timely introduction of safe and nutritious foods in addition to breastfeeding” for infants and children under 2 years (i.e., clean, nutrient-rich

foods introduced at six months of age). These foods are given to children of age 6 to 24 months (Zohra, 2013)

According to the World Health Organization (WHO), “complementary feeding should be timely, adequate, appropriate, and given in sufficient quantities”. To improve complementary feeding practices several strategies have been used. ¹

As the baby grows and the amount of milk starts to decrease, there is a need for other sources of food to complete the feeding. This kind of food is called Complementary food. Complementary feeding should be introduced at around 6 months of age along with continued breastfeeding up to 2 years. Complementary foods attempt to bridge the calorific gap by introducing the child to semisolid foods, new textures and flavours and by sharing the family diet.

During the initial period i.e. starting months of complementary feeding, the complementary foods should be given one or two times along with the breastmilk and not in its place. By the 8 months, a child should start receiving complementary foods between breastfeeding at least three times a day and at least 4 times a day in the second year.

Weaning (introduction of complementary feeding) is a very important moment, both for the family and for the infant itself. It can play a major role in the growth and future health of a child. The term ‘to wean’ means ‘to accustom’ and it describes the process by which the infant gradually becomes accustomed to the full adult diet (Cameron and Hofvander, 1983).

The European Food Safety Authority (EFSA) and by the European Society for Pediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN) proposed weaning definition as;

“Weaning is the time when infants introduce food different from milk in their diet, together with a gradual reduction of the intake of milk (either breast milk or formula), to finally and gradually acquire their family’s diet model” (Alvisi P., 2015).

Baby-Led Weaning (BLW) and self-weaning is a method for introducing complementary foods for infants; in this mode, infants feed on food by hand instead of being spoon-fed with purées by parents. In both methods, infants should be fed milk, ideally exclusively breastfed

¹ World Health Organization: Nutrition: complementary feeding.

[http://www.who.int/nutrition/topics/complementary_feeding/en/] retrieved on 27th December 2017

on demand and they should be offered complementary foods from 6 months. BLW has many benefits, such as improving relationships during shared family meals, promoting infant self-sufficiency, saving time and money, and perhaps encouraging healthy eating for parents. However, there are certain risks associated with this practice, such as the risk of insufficient iron intake, the risk of high NaCl consumption, the risk of insufficient energy intake, and the risk of suffocation. (Alvisi P. 2015).

Child Care: it refers to a range of caregiving behaviours that directly affect a child from infancy through roughly six years such as feeding, bathing, comforting, responding to distress, protecting from harm and infection, seeking medical treatment, nursing, stimulating cognitive development, and providing an emotionally positive environment (Engle, 1992).

Infant: An infant is a child from birth to the completion of 12 months. The infant's age was recorded in completed months (Gopujkar P.V. et al, 1984).

2.2. Importance of Feeding Practices in Child's Health

It is well known that the period of 6-24 months is one of the most critical periods of infant growth. The incidence of stunting is highest in this period that children have a high demand for nutrients and there are limitations in the quality and quantity of food available, especially after exclusive breastfeeding (Imdad, 2011). It was suggested that in addition to disease prevention strategies supplementary feeding interventions targeting this "critical" are the most effective in reducing malnutrition and promoting growth and proper development (Imdad, 2011).

There are some of the facts derived from various studies on the effectiveness of interventions and feeding practices on children's morbidity and mortality. Based on the evidence of the effectiveness of infant and child feeding practices, optimal breastfeeding could prevent 13% of deaths occurring in children less than 5 years of age globally, while appropriate complementary feeding practices would result in an additional 6% reduction in under-five mortality (Jones, 2003). From the save the children report published in 2012, it is evident that in developing countries, breastfed children are 6 times more likely to survive in the early months of life than non-breastfed children. The stunting rates of children at 12 months could be cut by 20 percent if all children in the developing world received adequate nutrition and feeding of solid foods while breastfeeding. One million child deaths can be prevented if breastfeeding is practised optimally (Save the Children Report, 2012).

Undernutrition in early childhood could result in some reduction of adult body size, but as growth continues for 18 years, subsequent nutrition is good, the effect should be limited. The interesting possibility is that undernutrition in early childhood can lead to an inability of the brain to reach its full-size potential and it is not unreasonable to assume that it can also predispose to inhibition of intellectual development and the optimal personality (Stoch M.B., 1963).

Inadequate growth in poor countries is generally the consequence of infectious disease and low nutrient intake, especially inadequate energy and protein intake, relative to nutritional requirements (Mitra M., et.al, 2004).

Malnutrition is accompanied by other factors that affect the child's development, such as repeated infections and a poor social environment. In public health nutrition intervention programs, all children up to 5 years should not be assumed as identical. To provide additional foods, priority should be given to children under 2 years of age and to women in their last trimester of pregnancy. Older children will need extra food intake to meet their need of energy, protein, and other nutrients but it is unlikely that attempts to "rehabilitate" the stunted child's nutrition. Hence, where there are many stunted children in a community, focus should be on social factors rather than only rehabilitation of nutrition (Waterlow J.C., 1974).

The health and nutritional status of millions of infants and the onset that will influence their subsequent growth and development during childhood will be determined by the mode of feeding as they grow up. The importance of the subject of infant feeding hardly needs to be emphasized. This is a subject that does not concern just a million babies that will be born each year in our country and the millions of mothers who will raise them. It is a subject that deeply concerns the quality of care and nourishment of the most valuable of our national assets: our human resources. There is pressure on traditional infant feeding practices that should also be of concern. The development process inevitably releases forces that can affect infant feeding practices. Urbanization, industrialization, the reduction of the "communication gap" between the city and the village, the increase in employment opportunities for women, and other developmental factors influence the lifestyle, work, family structure, and value systems in our communities not only urban areas but also in the vast rural country; and these cannot fail in turn to influence infant feeding practices (Gopujkar et al, 1984).

Nutritional experiments on calves suggest that the effect of undernutrition on maturity size is most pronounced if it occurs during the period of maximum growth and also according

to its duration in relation to the period of total growth. When applied to human nutrition, this concept suggests that undernutrition in early childhood could have the greatest effect on brain growth (Stoch, M.B., 1963).

It is found that feeding practices in infants has an impact on stunting but clearly not on wasting. It is due to the fact that wasting is termed as a recent and severe process resulting in weight loss, or an end result of long-term malnutrition and poor health, further being malnourished indicates linear retardation in growth (Kumar et.al. 2006). Whereas, optimal child feeding practices results long-term benefits, i.e. improved children nutritional status. A study conducted in 2006 states that, a community with low frequency of wasted cases and with a growth in stunted cases reflects the long-term nutritional impact and health practices of the population (Kumar et.al. 2006).

The study was conducted in Peruvian newborns from the underprivileged and periurban community on feeding practices and morbidity due to infectious diseases. It reveals that children 6 to 12 months old after the interruption of breastfeeding suffer from an increased risk of incidence and prevalence of diarrhoea. Upper and lower respiratory tract infections occurred with a lower prevalence in newborns exclusively breastfed. The prevalence of skin infections by feeding category was not as consistent, but exclusively breastfed infants had fewer skin infections during the first months of life and older infants who continued breastfeeding had fewer Infections than those who did not (Brown et.al, 1989).

Morbidity and mortality in children are linked to three main circumstances i.e. neonatal infections, diarrhoea, and pneumonia in them. In a systematic research, children with the early initiation of breastfeeding shows a significant reduction in neonatal mortality. In support a study shows that exclusive breastfeeding up to 6 months prevents deaths up to 13 percent among children less than five years of age (Tubid D., 2015). In addition, breastfeeding offers positive connections between mother and child. It contributes to the emotional development among the infants and children impacting their overall brain development. Further, it breastfeeding plays a defensive role against childhood obesity and reduces several chronic diseases risk among children (asthma and diabetes) and in adults life (heart diseases), contributing to long-term benefits. Timely breastfeeding provides children optimal nutrition to prevent infections. Similarly, age-appropriate initiation and continuation of complementary feeding significantly reduces burden of disease and stunting among children. In a study,

appropriate additional feeding prevents 6 percent of estimated deaths among children under five. It has better impact on the rates of morbidity and malnutrition. Hence, it can be concluded, that optimal breastfeeding and complementary feeding among children prevents death (Tubid D., 2015).

2.3. Status of feeding practices in the Indian context

Malnutrition is a widespread problem in India and of astonishing magnitude. Malnutrition is considered one of the leading causes of infant mortality in India (Mitra, 2004). NFHS 4 data has reported Infant Mortality Rate (IMR) as 41 (per 1000 live birth) and Under 5 Mortality Rate (U5MR) 50 (per 1000 live birth). Data also shows an increase in the prevalence of diarrhoea (reported) in the last 2 weeks preceding the survey from NFHS 3 (9.0%) to NFHS 4 (9.2%).

Table 2.1: Nutritional status of children in India

Types of Malnutrition	NFHS 3 (2005-06)	RSoC (2013-14)	NFHS 4 (2015-16)
Children under five years who are stunted (%)	48	38.7	38.4
Children under five years who are wasted (%)	19.8	15.1	21
Children under five years who are underweight (%)	42.5	29.4	35

Sources: (NFHS 3, 2006), (RSoC, 2014) and (NFHS 4, 2016)

Recently in 2013-14 a Nationwide Rapid Survey on Children (RSoC) was conducted by the Ministry of women and Child Development and UNICEF. The result of the data comparable of NFHS 3 and RSoC highlights three major facts, first a marked improvement in the child malnutrition, and second a large-scale improvement in exclusively breastfeeding ratio among children under six months. Where third finding that raises concern is the decline in Infant and Young Child Feeding (IYCF) practices which was already quite poor. The comparable data from NFHS 3 to NFHS 4 shows a decline in underweight among the children under five years (42.5% to 35%). Whereas, the comparable data of RSoC to NFHS 4 shows a significant increase (29.4% to 35%) in the percent of underweight children below five years. Similarly, the percent of wasted children in NFHS 4 (21%) data recorded an increase from both NFHS 3 (19.8%) and RSoC (15.1%).

According to NFHS data, children suffering from contagious diseases are only one out of ten. Same number of children received more fluids to drink than usual (NFHS 3, 2005). In case of children with diarrhoea i.e. half of the children (49%), received fluids of same quantity consumed as usual before two weeks of the survey (NFHS 3, 2005). On contrary to the general recommendations given during episodes of diarrhoea, it is reported that 10 percent of children have received much less drinking than as usual and about 4 percent children received nothing to drink. Due to this, out of 10, 4 children suffering from diarrhea have their fluids decreased. Very limited cases have been reported regarding children receiving increased fluids. It is also interesting to know that even in educated mothers, only 17% of children have received increased fluids during diarrhoea (NFHS 3, 2005).

Inappropriate and inadequate child feeding practices have reasons as delayed initiation and inadequate breastfeeding practices, dilution of milk, delayed initiation of complementary feeding i.e. early or untimely initiation of foods and fluids other than breast milk), special preparation and feeding of low energy and nutrient-dense food, and reduced food during sickness.

Table 2.2: Distribution of child feeding practices in India

Infant and Child Feeding Practices	NFHS 3 (2005-06)	RSoC (2013-14)	NFHS 4 (2015-16)
Children breastfed within one hour of birth (%)	25	44.6	41.6
Children age 0-5 months exclusively breastfed (%)	46	64.9	54.9
Children (6 – 9 months) receiving solid or semi-solid food and breast milk (%)	53	50.5	42.7
Minimum number of times food intake	21	36.3	Nil
Had a minimum food diversity	Included in 21 (minimum number of times)	19.9	Nil

Sources: (NFHS 3, 2006), (RSoC, 2014) and (NFHS 4, 2016)

The NFHS 4 data of children aged 0 – 5 months exclusively breastfeeding shows interesting findings. There is a decline recorded from RSoC to NFHS 4 as 64.9% to 54.9% where there is an improvement from NFHS 3 to NFHS 4, 46% to 54.9%. However, the result on children (6–9 months) receiving complementary food and breast milk shows a decline from NFHS 3 (53%) to RSoC (50.5%) to further in the year 2015-16 NFHS 4 data (42.7%).

All the states in northern (Rajasthan, Delhi, Himachal Pradesh, Haryana, Punjab, Uttaranchal and Jammu and Kashmir), western (Goa, Gujarat and Maharashtra) and southern (Karnataka, Tamil Nadu, Andhra Pradesh and Kerala) regions reported a decline in the children receiving complementary feeding. In northern states, the decline ranges from 1.1 percent (Uttaranchal) to 13.7 percent (Haryana). The western states have reported a decline of 2.2 percent (Maharashtra) to 4.7 percent (Gujarat) and in Southern states, it ranges from Tamil Nadu (13.7%) to Kerala (30.8%). In the Eastern region where West Bengal (4.9%) has shown an improvement in percentage of children receiving solid food along with breastmilk.

Whereas, Bihar (23.8%), Jharkhand (13%), and Odisha (10.5%) has reported a high percentage of decline. Chhattisgarh (4.8%) in central regions shows an improvement in complementary feeding, where Madhya Pradesh (7.9 %) and Uttar Pradesh (8.6 %) reported a decline.

Depending on the myths and misconception regarding initiation of breastfeeding, it results in delay from few hours to several days. The misconception and belief is that the first (colostrum) breast milk is harmful for the child's health. Mother's initial activities and preference towards the child feeding often depends on feeding practices followed by the close family members (elders) and within the community. As a result, due to early initiation of fluids and foods, babies were deprived of colostrum milk and also exposed to infectious diseases.

The prevailing beliefs and fears shows a negative impact on mothers work ability. It is believed that mother health weakens while breastfeeding. The compulsory working of mother's outside the home has contributed to trifling of breastfeeding practices. In majority of the families, exclusive breastfeeding is practiced among children less than six months. The most common foods given at very early of children are animal milk, water, bottle water, honey, rice, dalia, halwa and biscuits. Children are deprived of essential nutrients due to such practices exposing them to contagious diseases. Sociocultural beliefs and present economic realities, are deeply rooted and hard to change in children with adequate breastfeeding. .

One of the most important reason in maximum number of households for delay in initiation of complementary food to children is the cultural and rituals practiced within the community. Other researchers have also justified the reason for the late initiation of solid food in children is because of the elder's perception that semisolid foods has a detrimental effect on their health.

Similarly, the children food during illness were modified due to reasons such as cultural and social beliefs and mothers own knowledge regarding feeding practices

2.3.1. Feeding practices trends in Jharkhand:

In RSoC data, following the previous method of mapping the interstate distribution of acute and chronic malnutrition is determined by calculating the terciles for both the parameters (wasting and stunting) and track the changes in the locations. Jharkhand shows no

changes from NFHS 3 to RSoC. Jharkhand and Madhya Pradesh lies in the category with high stunting and wasting rather than all other states.

Table 2.3: Distribution of stunting and wasting across states

	Stunting			Wasting					
	Low			Medium			High		
	Moved to (2013-14)	Moved from (2005-6)	*No change	Moved to (2013-14)	Moved from (2005-6)	*No change	Moved to (2013-14)	Moved from (2005-6)	*No change
<i>Low</i>	Sikkim	Goa, Jammu & Kashmir	-	Delhi, Nagaland, Mizoram	Kerala, Tamil Nadu	-	Kerala, Tamil Nadu, AP, Goa	-	-
<i>Medium</i>	Haryana, Uttarakhand, Assam, Jammu & Kashmir	Andhra Pradesh, AP, Nagaland, Sikkim	Punjab, Manipur	-	Odisha	Rajasthan, Himachal Pradesh	West Bengal, Odisha, Maharashtra, Andhra Pradesh, Karnataka	-	-
<i>High</i>	-	West Bengal, Delhi, UP, Assam, Mizoram	-	Bihar, UP, Meghalaya	Gujarat, Haryana, Maharashtra, Uttarakhand, Karnataka	Chhattisgarh	Gujarat	Bihar, Meghalaya	Jharkhand, Madhya Pradesh

*from NFHS-3 (2005-06) to RSoC (2013-14); UP: Uttar Pradesh; AP: Arunachal Pradesh.

Source: Dasgupta R., (2016), *Rapid Survey of Wasting and Stunting in Children: What's New, What's Old and what's the Buzz? Indian Pediatrics*

The notable projects were implemented at the broad (national and state) level to improve the child feeding and rearing practices. Projects to assist the ICDS at Rajasthan, Uttar Pradesh, West Bengal, and Dular project in Jharkhand. These projects have key features as household-level counseling through community-level resource workers, community participation, group meetings, and regular weighing of children. Although studies show a small change in child care and feeding practices, the impact on nutritional status was only marginal (Ramji, 2009).

Table 2.4: Nutritional status of children in Jharkhand state

Nutrition status among children in Jharkhand	NFHS 3 (2005-06)	RSoC (2013-14)	NFHS 4 (2015-16)
Children under five years who are stunted (%)	47.2	47.4	45.3
Children under five years who are wasted (%)	35.8	15.6	29
Children under five years who are underweight (%)	54.6	42.1	47.8

Sources: (NFHS 3, 2006), (RSoC, 2014) and (NFHS 4, 2016)

Jharkhand reported very little improvement in stunting (47.2% to 47.4%) from the NFHS 3 (2005-2006) to RSoC (2013-14) but large gains in wasting (35.8% to 15.6%). However, RSoC (2013-14) to NFHS 4 (2015-16) shows an increase in children who are wasted (15.6% to 29%) and underweight (42.1% to 47.8%). Whereas NFHS 3 to NFHS 4 data on stunted, wasted, and underweight showed minimal progress in stunted children compared to wasted and underweight children.

Child marriages have been reported common in parts of the state. The reasons for child marriages could be illiteracy, poverty, or social dogma. Pakur showed the highest incidence of marriage among children. Koderma, Ranchi, Ramgarh, and Sahibganj also reported high cases of child marriages. The other neighborhoods except for Deoghar, West Singhbhum, Giridih, Lohardaga, Dumka, and Simdega reported an average incidence of child marriages (Jharkhand Economic Survey, 2015). Child marriages shows great impact on mother and child's health as well as on the perception of a woman/ young mother towards the feeding practices.

Table 2.5: Distribution of IYCF Practices in Jharkhand State

Infant and Child Feeding Practices in Jharkhand	NFHS 3 (2005-06)	RSoC (2013-14)	NFHS 4 (2015-16)
Children breastfed within one hour of birth (%)	10.9	32.7	33.2
Children (0-5 months) exclusively breastfed (%)	57.8	64.3	64.8
Children (6–9 months) receiving solid or semi-solid food and breast milk (%)	65.3	53.7	47.2
Fed for minimum number of times	43	35.7	Nil
Had a minimum number of diversity	28	17.8	Nil

Sources: (NFHS 3, 2006), (RSoC, 2014) and (NFHS 4, 2016)

Trends of IYCF practices data of Jharkhand from NFHS 3 to RSoC to further NFHS 4 shows a mixed result. The data of IYCF practices in Jharkhand shows an improvement in ‘breastfeeding within one hour of birth’ and ‘exclusively breastfed’ as 10.9% to 32.7% to 33.2%, respectively. Whereas, there is a decline from 65.3% (NFHS 3) to 53.7% (RSoC) in the feeding practices of children (6–9 months) receiving complementary food and breast milk which further shows a decline in NFHS 4 data as 47.2%. It also reported a decline in the percentage of children fed for the minimum number of times in a day and the minimum number of diversity in the foods.

The percentage of breastfeeding immediately or within 24 hours of birth was higher among urban children (44.8%) than among rural children (29.5%) (Rapid survey on children, 2015). This may be due to the higher level of awareness of the benefits of first milk (colostrum) in mothers in urban than in rural areas.

In 2013-14, among all social categories, mainly children from scheduled tribes (37.4%) were placed immediately after birth, followed by children in the general category

(34.6%). Only 32.6 percent of the children of scheduled caste (SC) and 29.5 percent of the other children in the backward class (OBC) were breastfed immediately or within 24 hours of birth. The largest number of children aged 0 to 5 months in the SC category (66.7%) were exclusively breastfed. Broadly speaking, 61.3% of children in the programmed tribe (ST) received complementary foods in 2013-14 (Jharkhand Fact sheet, Rapid survey on children, 2015).

Table 2.6: Jharkhand District wise data of IYCF Practices

Districts	Children under age 3 years breastfed within one hour of birth (%)	Children under age 6 months exclusively breastfed (%)	Children age 6-8 months receiving solid or semi-solid food and breastmilk (%)	Breastfeeding children age 6-23 months receiving an adequate diet (%)	Total children age 6-23 months receiving an adequate diet (%)
Bokaro	0	74.2	62.5	8.3	7.7
Chatra	27.2	42.2	63.9	10.1	10
Deoghar	33.6	70.5	NA	7.9	7.9
Dhanbad	20.1	63.8	NA	8.6	7.6
Dumka	31.4	71.8	NA	17.1	17.2
Garhwa	32.1	51.8	48.1	7.6	6.9
Giridih	39.5	68.2	NA	2.2	2
Godda	40.6	79.6	NA	6.6	6.3
Gumla	31.7	53.1	NA	9.6	9.1
Hazaribagh	41.5	74.7	NA	1.5	1.5
Jamtara	32.9	67.8	42.4	9.1	9.1
Khunti	30.1	70	29.3	13.4	13.1
Koderma	19.2	61.9	NA	4.4	7.2
Latehar	31.6	48.2	NA	6	7.7
Lohardaga	55.5	49.9	NA	8.6	7.8
Pakur	40.6	76	NA	6.5	6.2

Palamu	34.6	48.5	NA	3.5	4.4
Pashchimi Singhbhum	31.5	66	NA	2.5	2.4
Purbi Singhbhum	25.1	55.9	43.1	15	14.1
Ramgarh	36.1	71.2	46	6.6	6.4
Ranchi	38.4	71.3	60.5	5.2	7.1
Sahibganj	29.5	68.1	NA	5.4	5.3
Saraikela Kharsawan	44.1	65.3	NA	5.5	5.1
Simdega	34.1	64.9	NA	17.8	18.3

Sources: National Family and Health Survey 4 (2015-16)

In NFHS 4 'Jharkhand', 16 district does not show the percentage of children age 6-8 months receiving solid or semi-solid food and breastmilk. Whereas among 8 districts whose data are collected for the percentage of children age 6-8 months receiving solid or semi-solid food and breastmilk Khunti (29.3%) reports the lowest percentage and Chatra as highest with 63.9% which is still less than the average percentage of children in Jharkhand receiving complementary food and breastmilk during NFHS 3 (65.3%).

2.4 . Determining Factors of Child Feeding Practices

According to UNICEF in the year 1990 model of care, child survival, growth and development not only depends on dietary intake and health but also the amount and quality of care given by the caregiver. In the causality matrix of malnutrition, an underlying important determinant is care given to the child. There is growing awareness that cultural and behavioral practices about child-rearing practices affect children's nutrition. The data in the study reveals that non-exclusive breastfeeding during the first six months; Supplementary feeding delayed; Sexual preference (preferring boy child); Reduction of food during illness; Low energy and nutrient density of weaned foods; Lack of special efforts to modify and/or personalize the child's diet; and the dilution of milk were the main flaws in feeding practices (Chaturvedi et.al. 2009).

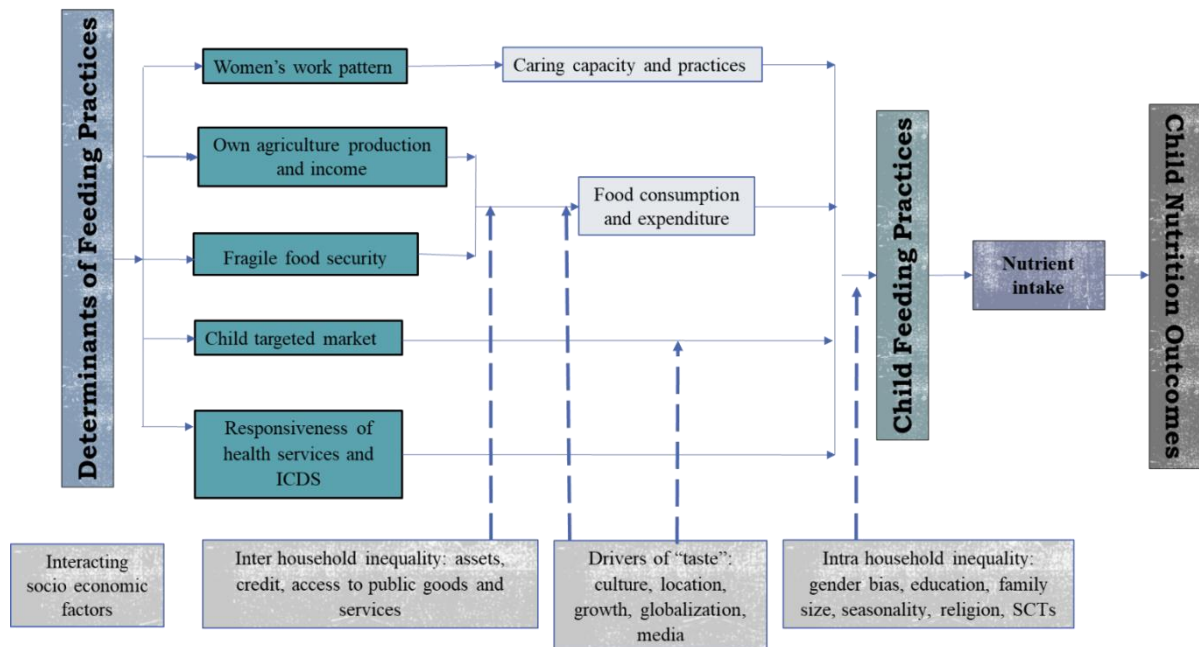
Thus, six factors are impacting the appropriate and adequate feeding practices of children below 2 years of age. The domains which build the concept of feeding practices

among the children below 2 years of age are the role of the caregivers, social and economic context, child-targeted market, fragile food security, biological factors for both mother and the child and responsiveness of ICDS. In the role of caregivers, mothers play an important and giving care to young ones is perceived and assumed as a mother task where other family members play a critical role in it.

These variables are discussed and studied in past by most of the researchers under broad domains such as;

- Interacting socio-economic factors: inter and intra household inequality
- Women's work pattern and its effect on feeding practices
- Own agriculture production and income
- Fragile food security/seasonal food paucity
- Child targeted market – A market aimed at children with wide availability and consumption of ready-to-eat food
- Responsiveness of ICDS and health care system (health services and personnel)

Figure 2.1: Determining factors for Feeding practices in Young Children



Sources: Gautam et.al. (2016) and Chaturvedi et.al. (2016)

2.4.1. Interacting socio-economic factors: inter and intra household inequality

Increases awareness that cultural and behavioural practices about child-rearing practices influence child nutrition. Apart from this, the availability of resources to caregivers impacts the child's nutrition which includes factors such as knowledge and belief about child-rearing, health and nutritional status of the caregivers, monitoring of resources, and autonomy of child care, workload and social support (Ramji S., 2009).

The impact of childcare practices on child nutrition is demonstrated in a study conducted in Accra. A composite child care index (for children aged 4 months or older) was created using traditional feeding practices, preventive health-seeking behaviour and interaction between caregivers and child. Poor care was found to be associated with a considerably higher occurrence of children with growth retardation and underweight, while the care index did not influence the prevalence of wasting in children (Ruel M. et.al. 2009). The introduction of solid foods should be pleasure for the family, ethnic in nature and with regional feeding habits considering the child's nutritional needs. (Alvisi et.al. 2015)

Nutritional Report 2015, gives an underlying reason for India's high rates of stunting and variability in progress are complex and intertwined; breastfeeding and complementary feeding, child health, income inequality, food security and diet quality, caste and class, and most also the hygiene and health status of women. In a large and multi-ethnic country such as India, the extent and kinds of child malnutrition varies from region to region, depending on geographical factors, socio-economic factors, eating habits, literacy levels, climate, beliefs (Mitra, 2004).

A study based on the DHS data sets used for 5 Latin American countries reveals that feeding practices are more important for children of lower socioeconomic status rather than higher and mothers had primary schooling than no schooling. Maternal schooling or education in terms of better nutrition and health for older rather than younger children. (Ruel M.T., 2002). Education alone is not effective where education along with certain settings is more effective. (Imdad A., 2011). Apart from the mother's education, her age and utilization of ANC and PNC visits impact the child feeding practices (Gautam, 2016).

However, the WHO (1985) pioneering global study comparing the mother's performance on socio-economic aspects and in their various ethnic groups highlights issue of infant's breastfeeding and their maternal capacity to cope. Gopalan in the year 1992 found

that Poor nutritional status affects milk production but does not lead to a crisis as long as the infant's needs are met (Gopalan and Puri, 1992). In the same paper an argument has been made, that children born to an undernourished mothers are malnourished themselves, in such conditions the risk is lower due to the fact lower demand have low threat to the potential mothers to lactate(Gopalan and Puri, 1992).

Common health issues children have during 0 to 24 months are ARI (Acute respiratory infection), diarrhoea and fever. During this time children need more attention and care from their mother/caregivers. Hence, mothers are encouraged to feed their children, who are suffering from diarrhoea normally and also to increase their fluid intake. These practices also help them to reduce the risk of lack of fluids in the body and decrease the negative effects of diarrhoea on the child's nutritional status. To assess knowledge of good treatment practices, mothers with a child with diarrhea.

2.4.1.1. The present situation of poverty in India

Poverty is a social phenomenon in which certain segments of society are incapable of satisfying every necessities of our life. It is a denial of a range of material needs such as nutritious food, drinking water, shelter, health care, education, etc. Therefore, multi-dimensional poverty measures provide a better understanding of the nature of poverty - at the local, regional, national and global levels. Ogwumike (2001) defines poverty as a condition in which a family or individual is unable to meet the needs of life, including consumable and non-consumable items which are the minimum requirements to support the means of subsistence. He also referred to it as a condition of deprivation that could be in the form of social inferiority, isolation, weakness, vulnerability and humiliation.

India was the first country in the world to define poverty as the total lowest-spending class capita expenses, which are required to intake a minimum of 2400 kcal/day in rural areas and 2100 kcal/day in urban areas. The same elements are converted into financial terms and the poverty line is defined as a minimum level of income or expenditure, which are periodically updated. The last line of poverty updated is Rs.356.30 in rural areas and Rs.538.60 in urban areas in 2004-05 (Planning Commission, 2007). In India, while the planning commission estimates the number and percentage of BPL, the state identifies the poor through the BPL census conducted to coincide with the five-year plans.

Jharkhand is a state which is rich in natural and mineral resources, as well as has an active, hardworking and dynamic human population. According to census in 2011, the state total population is 3.3 crore, with a population growth of 22.42 percentage annually. The total population of Jharkhand forms about 2.72 percent of the total population of India. Of its total geographical boundary, about 79.95 percent of the state is rural and 24.05 percentage falls in its urban area. The major concerns/issue of the state are poverty, depleting natural resources, reduced agriculture produces, devolution of powers, mortality, malnutrition and water and sanitation (Water Supply and Sanitation Department, 2013). Jharkhand falls short of the national average in almost all the development indicators (Planning Commission Report, 2012).

Table 2.7: State-wise poverty estimates (% below poverty line) (2004-05, 2011-12)

BPL as % of Total Population		
State	2004-05	2011-12
WORST 5		
Chhattisgarh	49.4	39.93
Jharkhand	45.3	36.96
Manipur	37.9	36.89
Arunachal Pradesh	31.4	34.67
Bihar	54.4	33.74
BEST 5		
Goa	24.9	5.09
Kerala	19.6	7.05
Himachal Pradesh	22.9	8.06
Punjab	20.9	8.26
Puducherry	14.2	9.69

Source: Review of Expert Group to Review the Methodology for Estimation of Poverty (2009) Planning Commission, Government of India; Press Note on Poverty Estimates, 2011 – 12 (2013) Planning Commission, Government of India; PRS.

The above table 2.7 shows a five worst and best BPL % of total population states in India. There is a clear understanding of inter-state disparities showing wide gap in the percentage of poor people under the poverty line and the poverty levels declining at a certain rate. From the year 2004-05 to 2011-12 Jharkhand state shows a poverty decline of 8.34%,

which is almost half of the national level decline (15.3%). Apart from Jharkhand, other states shows worst decline in poverty are Chhattisgarh, Manipur and Bihar. Whereas, three states Mizoram, Arunachal Pradesh and Nagaland during this period, show an increase in the percentage of the population below the poverty line. Although poverty levels continue to remain high, it has decreased during the period of time in the area. The incidence of rural poverty in Jharkhand in terms of HCR (Head Count Ratio) was 65.5 percentage in 1983-1984 decreased to 42.9 percentage, which is still very high. Rural poverty has always been higher than the national average. The Monthly Per Capita Expenditure (MPCE) of the state has been lower than the national average both in the nominal and real terms both in the urban and the rural areas in the state indicating the miserable condition of the people. Jharkhand is the fifth poorest state of India with total 51.6 % of BPL population below the poverty line (Water Supply and Sanitation Department, 2013). Even, the World Bank has identified Jharkhand as one of the poorest states in the country with a clear contrast between rural and urban poverty. About 49 percentage of the total population is below the poverty line. Rural poverty is more than urban (Singh et.al, 2012). The main causes of rural poverty identified are agro-ecological and social factors. The factors which inflict poverty in the state are natural calamities, poor infrastructure, high population, low irrigation coverage and difficult terrains (Singh et.al, 2012). More than 50 to 80 percent of the poor population are in two-third of the districts of Jharkhand.

Table 2.8: District wise distribution of Poverty in Jharkhand

BPL (percentage)	Districts
80 % and above	Gumla, Simdega, West Singhbhum, Latehar
70-80 %	Lohardaga, Seraikela, Kharsawan
60-70 %	Ranchi (including Khuti), Dumka, Jamtara
50-60 %	Deoghar, Pakur, Sahebganj, Garhwa
40-50 %	Giridih, Koderma. Godda, Hazaribagh, Giridih
Below 40 %	Bokaro (36.22percentage), Dhanbad (8.3percentage), Deoghar

Sources: Annual Report 2004-05, Department of Food, Civil Supplies and Commerce, Government of Jharkhand pp.50. Cited in Rural poverty in Jharkhand

At least, 12 out of 22 old districts, more than 50 percent of the population is estimated to be BPL. In most of these districts, tribes and the schedule castes population are considerably high. In Latehar, West Singhbhum and Simdega BPL population exceed 80 percent. This may be because it is an area heavily affected by Naxal, so the survey may not have been conducted properly, as teachers and Sevak panchayats might not reach the remote villages (Sharan, 2013). The districts like Hazaribagh in the coal and mining curve also have significant levels of BPL population indicating that, even with mining activities, people's poverty can continue while economic activities have developed predominantly in isolation and enclaves.

Poverty levels are lowest in districts with higher levels of urbanization. The three districts namely Bokaro and Dhanbad have an urban population of 45.26 percentage and 52.37 percent respectively. However, even in these districts, some blocks are very poor and underdeveloped groups. These districts are inhabited by Santhals and Savars a PTG which is poor to all standards (Sharan, 2013).

Apart from all these facts, the other important causes/reasons for rural poverty in Jharkhand are due to lack of education, poor land holdings of small and marginal farmers, lack of employment opportunities at local level, overall poor infrastructure within the community, due to poor quality of natural resources (water, laterite and red soils) (Singh et.al, 2016);

Sharan in 2013 has classified the major poverty groups in Jharkhand as Primitive tribal groups (PTG), Farmers (landless, marginal and small) in Backward agricultural zones, artisans (carpenters, blacksmiths), Schedule castes (SC's) who are landless and agriculture workers, widow and deserted women, poor in the urban areas especially tribals, project displaced people and retrenched and other workers due to industrial sickness in Jharkhand. PTG are those groups who live in remote areas, have a low level of education and possess the poor quality of the land.

Jharkhand holds 6th rank in the scheduled tribe (ST) population. Out of 24 districts, 15 districts fall under the Fifth schedule area which includes 112 blocks out of 259 blocks (Water Supply and Sanitation Department, 2013). The districts like Gumla, Pakur, Singhbhum, Ranchi, Lohardaga, Dumka and Giridih have a higher concentration of scheduled tribe population. From 1991 to 2001 the WPR of the (ST) population in the state is 46.30%. In the same year, the WPR (male) recorded a decline, about 53 % to 52 % while the

(female) WPR has shown an increase from 38.30 to 40.60 percentage.² Jharkhand enjoys the status of tribal-state because its population comprises 28 percent of tribal communities. About 60 percent of tribals (Schedule caste and Schedule tribes) are still below the poverty line (Singh et.al, 2016). Scheduled Tribe (ST) in Jharkhand are the poorest in the state. The poverty incidence among the ST is 53 percent as compared to the others 25 percentage. It is reported that ST women are more anemic than others. There is about 85 percent of anemic Schedule Tribe women in 2005-06 whereas others are about 57.6 percentage. Similarly, about 80.5 percentage of schedule Tribe children reported anemic as compared to others 56.7 percentage. The infant mortality rate and under-five mortality of STs are much higher than the others as 93 compared to 75.5 and 138.5 compared to 92.7 respectively (Water Supply and Sanitation Department, 2013). The incidence of poverty in non-scheduled households is less than the scheduled caste (SC) and Schedule Tribe (SC) (Gang et.al. 2008).

The size and type (irrigated or non-irrigated) of landholding is one of the major factors to define the vulnerability of any household. Tribal communities have either small size of land or non-irrigated land which made them more vulnerable in terms of income and food security. In total net sown area about 12.77 percentage are net irrigated area because of its undependable rainfall (Government of Jharkhand). Approximately 90 percent of backward agricultural zones were mono cropping and has low irrigation facilities. About 80 percent of total farmers are marginal and small farmers in Jharkhand. This entire situation makes the farmers in Jharkhand to be categorised under poverty groups. Approximately 45 percent of the area is non-agricultural and 32 percent is cropland that is unsuitable for agricultural production and only 23 percentage is cultivated.

In Jharkhand, paddy, wheat, maize, legumes and oilseeds (Niger, flax and mustard) are grown in about 92 percent of the cultivated area. Crop productivity is low and the deficit reference to demand and supply is 52 percentage for cereals, or 65percentage for fruits, 51 percentage in case of milk and 34 percentage in case of fish. Only one crop is grown during the Kharif season in most parts of the state (mono cultivation of rice in the monsoon). Most agricultural households are small and marginal with almost 83 percent of operational farms below 2.0 hectares. Wheat, corn, legumes and oilseeds such as Niger, flax seeds and mustard

² Census 2011, Retrieved from <http://www.census2011.co.in/census/state/jharkhand.html> on 15th November 2018

are grown. Crop productivity is low. Over the past ten years, agriculture could not grow in the state according to expectations, resulting in high rural poverty (Singh et.al, 2016).

In the case of Jharkhand, poverty is highest among the labour households both in rural and urban areas. Poverty levels are lower among the self-employed workers and lowest among salaried and regular workers as compared to the wage labourers. About 80 percent of the rural population of the state is dependent on agriculture (Jharkhand an Investment Destination). About 59 percent of the workforce is dependent on agriculture alone as a source of livelihood and about 70 % of state population is dependent on both farming and forestry comparatively. The total workforce engaged in agriculture generates only about 20 percent of GDP (Singh et.al, 2016). For the tribal population, this is more than the source of livelihood, it's a "way of life" (Government of Jharkhand). The major problems related to agriculture in Jharkhand is the lack of irrigation facilities, primitive method of farming, the absence of scientific input, underdeveloped infrastructure, and poor marketing facilities. The economy of Jharkhand gets its revenue from the mineral resources, industrial sector, agricultural sector and other sectors such as cottage, industry, silk goods and IT industry. The Jharkhand economy survey 2011 reported a decline in the primary sector in the last decade where the tertiary and secondary sectors have performed relatively well. In the primary sector, agriculture growth remained stagnant because it's inadequate irrigation. Livestock is the second important economic activity of households, but productivity is very low due to the domestication of local and indescribable breeds of animals (Singh, 2016).

Poverty leads to migration in the region to improve the standard of living and to manage the risk. Migration is a common option usually taken by the poor groups living in rural areas. Poor employment opportunities lead to labour migration (Planning Commission Report, 2012). In the study, it was found that outside state migration was more in BPL migrants. The age group up to 20 years and migration reduces as the age of the migrant increases (Singh et.al, 2016).

Bihar and Jharkhand are ranked amongst the most insecure states in terms of food and nutrition security (the World Food Program Booklet). The evidence indicates that in Jharkhand, about 2 percentage of the population suffers from acute and chronic hunger and 10 percentage from seasonal food insecurity (National Survey of Samples II). According to NSSO data, 10.46 percent of households in Jharkhand face seasonal food insecurity. The data also revealed that about 2.5 percent of households face chronic food shortages. Among food-

insecure families, 64 % of them faces two to three months of food scarcities, while up to 28 % do not have adequate diet for four to five months and more than 6 months (half the year), 6 % of poor households are starving. Among ST families the occurrence of food uncertainty is high. Only three to four months of the year families have assured food stock i.e. during winter after the harvest from the end of October to the beginning of November. Food supplies tend to be short by the end of the winter, and the food shortage period begins in mid-summer (June) and many cases continue until the end of October month. There are many areas in Jharkhand where, during the hunger season, people often reduce their consumption of cereals and turn them into roots such as gethi, chakora saag and other forest products (Sharan, 2013). Due to poor access to resources and base, malnutrition and hunger still exists within our society. The condition of SCs and PTGs in particular is pathetic because they are essentially landless and dependent on migration for income. There are other groups too, whose food security remains fragile, such as people living in degraded forest areas, drought-prone areas and the victims of displacement.

The stagnation of the tribal economy and the consequent poverty of the tribes are partly due to this discrimination and the deprivation of women cultivated in the tribes. The causes of the discrimination are wage differentials, the low labor transfer of women due to lack of geographical, occupational, and professional mobility among them and the relative lack of human capital among them. In agricultural operations, plowing and digging are taboos for women workers who have reduced their occupational mobility. The male-dominated society has placed the major burden of the Madaiti system on female workers while the bulk of the benefit is harvested by male members for their use. Even when agricultural workers have become aware of exploitation and discrimination against them by their male counterparts, they do not have the will, the opportunity, the courage, or the ways to express their views and their grievances. This explains not only the existence of discrimination against women but also its perpetuation which is one of the major causes of poverty in the Jharkhand tribal regions.

Discrimination and exploitation of women relatively place more money and time in the hands of the tribal man. The reasons are the idleness and alcoholism of tribal men, which causes waste of money and labor power. Men because of their alcoholism and extravagance do not save enough money to invest in productivity-increasing fixed capital. At most, they meet the requirement of working capital in their field, but also in insufficient quantity, so that part of the land remains at a disadvantage due to lack of money. Women workers do not have

enough surplus to meet the fixed capital needs of the agricultural sector. Thus, women's inability and human extravagance have caused stagnation of the tribal agricultural economy and thus perpetuated poverty in the region (Jayaswal, 1996).

2.4.2. The work pattern of women and its impact on child feeding practices

The status of women in a society reflects significantly the level of 'social justice in the society'. Women's status within the society is often described, in terms of income, employment, education, health and fertility, and their roles in the family, community and society (Deogharia, 1996). It is comprehended that the role of women within the tribal communities is crucial. Tradition and culture have a strong impact on the occupational status of women. P. C. Deogharia in 1996, has categorized the different types of work into five groups for analyzing the working pattern. These groups are;

- Own cultivation
- Agricultural laborers (wage earners)
- Work other than agriculture
- Forest-based work, collecting firewood, fruits and other forest products and selling them and
- Other activities.

Work in women's life is multidimensional. Married women have to perform various activities in different spheres such as household, agriculture and workplace. The work pattern and workload depend on the area they are working in and the work they do are mostly unpaid. However, there are jobs they do to earn for their family. Based on the women's work pattern and workload, women within a community may be housewives, working women and women left behind. Housewives further can be identified as women having land and women as landless. Both their work pattern and work burden will not be the same.

Most of the women worked as housewives looking after their family members and household. Usually, their day began early in the morning before anyone gets up and sleeps late in the night after everyone in the family goes to bed. In between this period, they carry different household and agricultural activities. Work such as house cleaning, washing clothes, cooking, looking after animals (cows and goats), caring for children, caring elders and agricultural work. It is also observed that women are highly involved in miscellaneous work which includes animal care, fetching water, etc. Often women are awake into the night caring

for their children (Homma, 2005). The collection of firewood has become more difficult because it is less accessible and takes time. The result was less income combined with less firewood available for themselves and less nutrition (Gummadi, 2014).

There is a clear gender demarcation in agriculture work. The division was between activities like sowing and ploughing were defined as male activities and rest such as carrying, weeding, transplanting, etc. were regarded as female activities. The maximum participation of women was in the cultivation of rice (78.18 percentage), followed by wheat (12.76 percentage), field peas (3.22 percentage) and black grams (2.41 percentage). Women in agriculture play a crucial role in a wide range of activities and contribute to the sustainable development of agriculture. In addition to routine domestic work, tribal women work in agricultural fields, forests for long hours. Overall production, if seen in terms of hours worked, is low (Gummadi, 2014). Although women are the main contributors in the agricultural sector production of the tribal economy, their share in the return is marginal. This egalitarian structure, community life and integrated reciprocity have remained more or less intact in the Jharkhand. In such societies, flagrant economic discrimination against women agricultural workers is very pronounced. Women from large farmers do not participate as wage laborers, rather they involved themselves in self-employment activities. Most of the workers are marginal workers.

Minor forest products are an important source of income in many tribal communities, particularly those with less than five hectares of land. Women and children participate almost exclusively in the collection of minor forest products, their storage, processing and marketing. Tribal women earned an average of 158 women-days / years and 150 women-day employment in forest products (Gummadi, 2014). Increased government control over forests has resulted in the distribution of the tribal economy, which negatively affects the lives of tribes, especially women. The appointment of external agents for the collection of forest products not only affected their livelihoods but also made women's work more difficult.

The workload on women increases when their counterparts/husbands migrate to other places for work. Due to the lack of sufficient work and an unorganized labour market, a large number of tribal workers migrate to the urban areas after the harvesting season in search of work. Some females also accompanied their male counterparts and some stay back in the village to look after their family and land. These migrations can be seasonal or permanent depending on various personal and social factors.

During migration season, two cases can be assumed that either woman takes the responsibility of the household or it is taken by the other male member of the family. In the first case, left behind women have to look after the family, children and elders in the absence of the male members in the household. In addition, the responsibility of the family property is also assigned to them increasing their overall burden. The daily routine is hectic, varies from the collection of firewood, daily work, Child care and strange jobs in the field of agriculture. However, women in the village are not allowed to plow agricultural fields and this tenderness relieves women to a large extent from the daily hardships. It found that receiving migrant remittances did not reduce women's working hours; rather than taking on the extra burden of family responsibility for child care, agriculture and the elderly (Shaheed, 1981 and Parida, 2005).

The overall absence of husbands has not only increased the workload of women but the absence has also been added to their mental stress. This is because leaving behind women means that they must be dependent on others for decision-making, and even they had to perform all activities and dual responsibilities of the family alone. In addition, fears of sexual harassment from close relatives make the situation worse (Bhaskar, 2014).

2.4.2.1. Impact of women work/employment on child feeding practices

Early literature has two different thoughts on the linkage or impact of women's employment on the child feeding practices or its nutritional status. One set of researchers believes that there is no evidence showing the link between women's employment and child nutritional status. Further, they don't find any effect of the workload of women on the child health outcomes. Researchers also found no negative evidence on child nutritional status due to the wages and reasonable incomes earned by the women. On the other hand, few researchers showed that women who are paid low or work in the informal sector, their children are more likely to have poor anthropometric status.

Women's employment has two parameters that show an effect on the child's nutritional status and feeding practices. These are wages or income women earn/paid and time worked. When women contribute financially to the household, several studies have found that women's control over these gains can dramatically increase food expenditures and basic needs. Some studies show the positive effect of good wages rate on child feeding and negative impact of time, but it is difficult to judge the result because few studies have quantified these parameters.

The economic participation of the mother should have a constructive effect on the families overall income further impacting the nutritional status of the children. Hence, there is a clear progressive relationship between the mothers work load and child nutritional status. The surplus earned by the females is more likely to enhance the nutritional condition and calorie consumption of the family. Mothers who are independent household decision-makers have been considered to improve the nutritional status of their young children.

At the same time in India, a large part of children are breast-fed (exclusively breast-fed) for up to six months. In the Indian context, the risk of infant mortality in early childhood was highest in Kerala and it increases in case of working woman and so the vice versa (Gummadi, 2014). They found that the working mothers had less time i.e. within a limited time period they have look after their children and also breastfeed them. Specifically, it is reported that children in the poorest strata of a population have higher probability of child death among those mother who is employed (Gummadi, 2014). Their program of long hours of work continues even during pregnancy, natal and postnatal stages. They have a negative energy balance, a high morbidity rate and a low child survival rate. They suffer from taboos and superstitions and remain deprived of the benefits of existing development and welfare programs (Gummadi, 2014).

2.4.3. Role of caregivers on child feeding practices

A child experiences differ in his wellbeing and overall nutritional development as it is the outcome of the quality of care they get from their caregivers. A mother plays a vital role in the life of a child. It has been documented that for a healthy future of the young population, good health plays an important role. Child overall health development is a straight and clear result of care given to them at the household level. In both modern and traditional society, the primary guardian is mother for the child's health. Hence, time spent by the mother on child care is considered to be an important contributing factor in the child holistic development.

Despite work at home and emerging roles outside the home which involve long hours of activity away from home, the mother remains the main child care provider. In rural community, along with the household work, women have to look after their domestic livestock, poultry and even they have to sell their farm goods in the market. In such circumstances, added responsibilities i.e. work outside the home adds on the burden on her household daily routine work, limiting their time with children and family. In a report, it is shared that the mothers have the tendency spend least time with less than five children was

more visible in undernourished children households compared to those children with better-nourishment. Although, all mothers have very little time for their children still they find time to cook for them and feed them separately, whereas they lack time for children's other needs. Even during pregnancy, mother's poor nutritional condition and lack of time impacts the care given to their health and nutrition, which ultimately affects the fetus, (which is to be born). In particular, decreases in the time that working mothers have to address child morbidity (especially diarrhea) can compensate for the nutritional gains from increased incomes through commercialization (De Walt, 1993); And health care spending has declined rather than increased with maternal employment, probably because of these time constraints (Berman et al., 1997).

A mother's upbringing and feeding are mostly influenced by her culture, family, experience and generation to which she belonged. The child feeding practices not only get affected by the women stepping out of the home to work or women's employment but the type, profile and location of work also put a major impact. It is thought that women who work at home may have an advantage in child care and feeding. Women working at home involve their children with bottle feeding so that they can do their home activities in contrast to what people believe.

Mother's work pattern, time-constrained, workload and dwindling family support further determine the care given by the caregivers/mother to their children (Gautam, 2016 and Dasgupta R., 2016). These factors lead to inappropriate and inadequate home feeding practices which are very significant for the mental and physical growth of a child.

The study reveals that proper training should be given to adolescent girls, pregnant women and lactating mothers to promote and protect the optimal IYCF practices to improve the children nutritional status (Kumar et.al. 2006).

In case of mothers who are working for long hours away from home, i.e. engagement in various household chores and income generating activities, the younger children within the family is taken care by the elder siblings. In such cases, it needs to be noted that most all the younger children are taken care of by their female elder siblings and not by the elder brothers. In many households, grandparents also go out to work for earnings. For the poor mother and due to time constraint, elder sister was seen as the only feasible solution because she receives very little support from her husband. The elder child in the family who are young themselves, devotes a large part of the day in taking care of their young brothers and sisters and figuring

out how to arrange quality of care for their siblings. In an unhealthy situations, unknowingly elder children play and feed their younger brothers and sisters with contaminated hands. As a result, it is unlikely that the young child will be given sufficient food and exposed to infection.

2.4.4. Impact of Fragile food security on the feeding of children

A research paper highlights that child feeding practices are also determined by the fragile food security which is nothing but the shortage of food. The principal factors are chronic poverty, lack of storage for lean months and there is also lack of bulk purchase. Due to this, the food intake within the family is inadequate i.e. in both quality and quantity (Chaturvedi et.al. 2009). A study conducted at Bankura district of West Bengal on IYCF Practices has found the main thrust areas concerning inappropriate feeding practices, the late introduction of complementary food, low frequency and insufficient quantity of foods (Sinhababu A., 2010).

2.4.5. Child targeted market impact

As it is known, the packaged food adversely effects the health of an individual. Among all age groups small children are highly impacted by this. Even industries manufacturing these items target these groups. In the present scenario where either mother is working lady or a housewife these kind of food items come in handy for them to feed their children. A study reveals that due to workloads and time-constrained, mothers introduce their children with ready to eat food items that are easy to access and get in the market but not healthy for children. This habit of feeding among the children reduces the preparation and eating of homemade foods which are more nutritious and healthier than these ready-made food items (Chaturvedi et.al. 2009).

2.4.6. Impact of caregivers biological factors on child feeding practices

The vicious cycle of malnutrition states that a weak mother has higher probability to deliver a weak child which continue to persist. One of the leading causes of malnutrition in women and children is anemia and stunting in children. According to the Jharkhand Social Welfare Department latest figures, nearly 78% of women in the state have been affected by anemia. It is important to prevent anemia in women because they are carriers of the future generation (Jharkhand Economic Survey, 2015). Tribal mothers reported higher cases of anemia, and girls get less than anticipated nutritional value. Finally, the entire tribal

community suffers from a lack of adequate food intake. (Kanitkar and Sinha, 1988). A study has proposed that children require good care only when they have low birth weight and those with poor dietary intake. Children who are healthy and adaptable may grow well and thrive in the absence of good care (Zeitlin et.al, 1990).

According to the recent UNICEF report "Nourishing India's Tribal Children" - Indian tribal communities remain the most disadvantaged social group in the country (UNICEF, 2014). It is undeniable that their deprivation is influenced by a spider cord of factors ranging from poverty and hunger due to loss of land and forestry, poor housing habits and poor quality. Quality of basic food and nutrition services during critical life periods, distance, weak governance and inadequate accountability mechanisms. More than half of India's tribal children under the age of five are stunted and fail to reach their potential for growth and development. Stunting children is potentially the greatest threat to children's growth and development. Uprooted children have stunted bodies, stunted brains and stunted lives. Children who are stunted are more likely to get sick, fall back into the classroom, and when they start working, they do not behave as well and earn less than their non-stunted peers (UNICEF, 2014).

The National Mission in Rural Health is working to reduce under-5-mortality and has developed and implemented exclusive strategies in this area. Malnutrition is attributed to more than one-third of the deaths in the country. In the Indian context, the infant undernutrition rate is high, with 43 % children under five years are underweight and about 48 % are stunted. As interpreted, the major causes for falling trend growth in children is due to IYCF practices, which begins in the first two years of life, termed as the critical period of life. One of the main reasons for early nutritional deficiency is the inadequacy and under-optimization of IYCF practices, which further aggravated by reoccurrence of diseases and low birth weight (Tubid, 2015).

2.4.7. Responsiveness of health services and ICDS

Breastfeeding practices were better among children born in government institutions, highlighting the role of health facilities in improving IYCF practices (Gupta, 2015). A comparative study conducted to analyse the feeding practices in the ICDS and Non-ICDS areas shows a positive impact of ICDS intervention on the nutritional status of children. The ICDS area reported more satisfactory infant feeding practices than the non-ICDS (Chaturvedi

et.al, 1990). However, some studies reported dissatisfaction regarding ICDS services and their failure in improving the nutritional status of the children (Kumar et.al. 2006).

Some researchers believe that achieving the goals of the ICDS program is highly dependent on the effectiveness of Anganwadi Workers, who in turn depend on their knowledge, attitudes and practices (Chattopadhyay, 1999). More than 80 percent of FHWs were well aware of the timing of the early initiation of breastfeeding, avoidance of pre-lacteal diet, exclusive breastfeeding, and breastfeeding during diarrhoea, fever and breast cancer, the optimal duration of breastfeeding and age initiation of complementary feeding. However, less than 50% of FHWs had a good understanding of indicators such as the timing of early breastfeeding for cesarean section, interval/frequency of breastfeeding, complications of breastfeeding, and consistency of complementary foods (Kohli S, et al., 2017). From the previous studies it is concluded that there was a need to improve the knowledge and awareness among the Anganwadi Workers, but unfortunately, it is reported the most underrated feature for their employment profile (Bhasin et al., 2001). The correct knowledge and perception of the promotion of complementary feeding practices is recorded around 40% in ICDS AWWs (Parikh, 2011). This, therefore, raises a critical question on the gap between the knowledge of AWWs and the practice of complementary feeding within the community. Hence, AWWs equipment is the main work that needs to be done to improve numbers (Parikh, 2011). In the similar line of study, it is clear that awareness of ICDS services in the community increases with an increase in the education (Thakare, 2011). In the similar study researcher indicates that the efficiency of AWWs is correlated with the fees (payments) they receive as salary and their job workload (Thakare, 2011).

Most of the Frontline Health Workers perceive that the training and support provided reflects the strategic framework. According to human perception if an activity is included in the training module and closely monitored, than that activity is given weightage by the participant, and later is more likely to be performed as a responsibility by them. Similarly, if any task is linked with incentives then it is considered to be more important than the rest of the work. Incentives provide social recognition, value for the work they do, and financial gains they derive from the activity. The Frontline Health Workers have their perception of the needs of the community and are sensitive to these needs. (Kohli S, et. al, 2017).

2.5. Frontline Health Workers and Their Role in Child Feeding Practices

WHO Study Group developed a widely accepted definition of the Frontline Health Worker (FHW) as, Frontline health workers should be members of the community where they work, should be selected by the communities, should be answerable to the communities for their activities, should be supported by the health system but not necessarily a part of its organization, and have short training than the professional workers”.³

In the year 1940, the Indian National Congress Planning Committee recommends the training of one health worker for every 1000 people in 5 years (Bose A, 1983). The Srivastava committee reports in 1975 proposed CHW as an integrated part of the health service system. The committee also suggested that community health workers should not supplant or compete in any way with the formal health system. The Pioneering Conference Alma Ata Conference on Primary Health Care (1975) called for Frontline Health Workers to be a central agency for advancing primary health care. Calls for the establishment of national FHWs programs to serve the village communities, unreached people and their unaddressed health needs.

2.5.1. Anganwadi Workers (AWWs)

In 1975, the Government of India launched the ICDS system at the state level, addressing the health complications of young children in the entire country. Among all the programs, ICDS is one of the largest child care programs in the world focused on child health, hunger, malnutrition and related issues. ICDS is a major program channel to address the rights of the child's survival, protection, participation and development.

Till December 2015, the total operational Anganwadi Centres in India are approximately one crore thirty five lakhs. The objective of ICDS related to nutrition and IYCF are⁴

- To build a firm foundation for the proper physical and social complete development of the children.
- To develop nutritional and healthy status of children less than six years.

³ An evaluation report published by NRHM, ASHA - Which way forward? Evaluation of ASHA programme, http://www.Child%20Feeding/ASHA%20AWWs/Evaluation_of_ASHA_Program_2010-11_Report.pdf retrieved on 23rd February 2018

⁴ Anganwadi Workers – A Profile, retrieved from http://shodhganga.inflibnet.ac.in/bitstream/10603/37010/1/10_chapter%203.pdf retrieved on 1 April 2018

- To lessen the frequency of mortality, morbidity, and malnutrition.
- To improve the capabilities of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education.

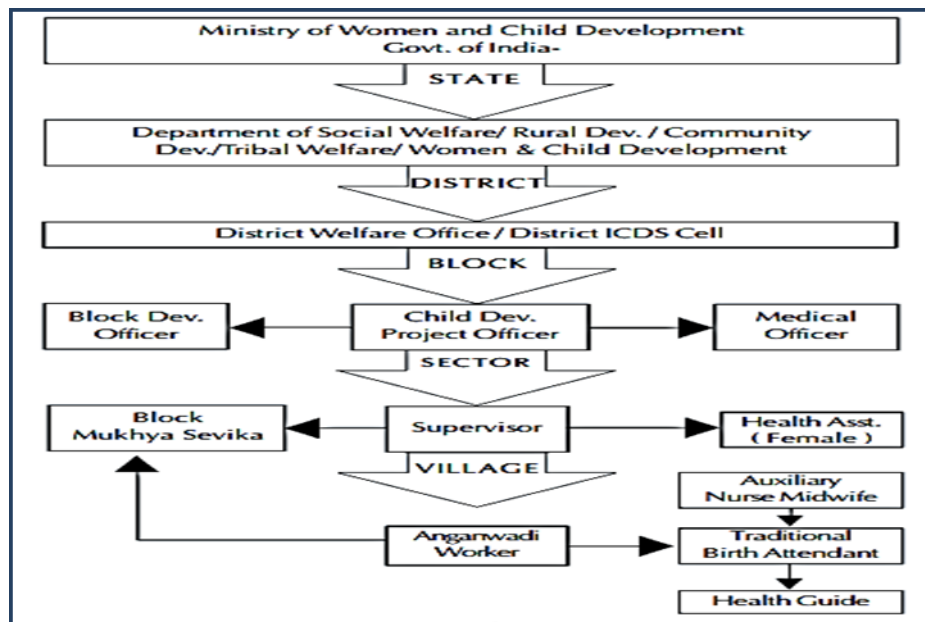
The Anganwadi worker and her assistant as Anganwadi helper are the ICDS core officials who manage the Anganwadi Centre and implement the ICDS system in coordination with officials from the health, education, rural and health departments. The word Anganwadi is derived from the Hindi word “Angan” which means “courtyard shelter”. The Anganwadi worker is chosen from the village, trained on topics under the broad topic of health, nutrition and childcare for four months. As discussed earlier also that each AWW covers a total population of about 1000 people as a link between the community and organized health care services. Their prime responsibility for which they are assigned is to put effort on the health needs and educational requirements of children up to 6 years. Their services also include the health and nutrition of pregnant women, breastfeeding mothers and adolescent girls. Anganwadi Workers are trained against the threat of infant mortality, child malnutrition, children poor education, common health problems and also fight against diseases that can be prevented. They provide services to villagers, poor families and the sick across the country to help them access health services, immunization, healthy nutrition, hygiene and a healthy learning environment for infants, toddlers and children.

The Anganwadi Workers should be a woman (18-44 years) from the same village and should be acceptable by the local community people. The government of India has given instructions regarding the selection of Anganwadi Workers that they can be a committee composed of the district social worker, BDO, CDPO, primary health centre doctor, panchayat / Taluka block committee chairman, district representatives of the State Welfare Advisory Council District and any other non-public servant that the state government considers appropriate.

Four types of beneficiaries are benefitted from ICDS schemes. These beneficiaries are children less than 6 years, pregnant women, lactating mothers, and adolescent girls between 11 to 18 years. Among these two beneficiaries children below 6 years and expectant and nursing mothers for the IYCF practices. The services provided to these beneficiaries related to IYCF are supplementary nutrition supply, growth monitoring of children, health check-up, and awareness on health and nutrition and referral services in emergency.

Anganwadi Workers benefit from the additional feeding supports for 300 days each year. By distribution of supplementary nutrition, AWCs attempt to bridge the calorie gap between the recommended and average national intake for children and women in low-income and disadvantaged communities. Growth Monitoring and nutritional status monitoring are two important actions undertaken by the Anganwadi Workers. Children under three years of age weighed once a month and three to six years children are weighed quarterly. Weight/age growth charts are kept for all children under six. This helps to discover the flatter growth and helps to assess their nutritional status. In addition, very malnourished children receive special extra nutrition and are referred to medical services for well-being. The long-term goal of the AWWs is to build the capacity of women (15-45 years) and to address their children and families health, nutrition and overall development needs.⁵

Figure 2.2: Organizational setup for Anganwadi Workers



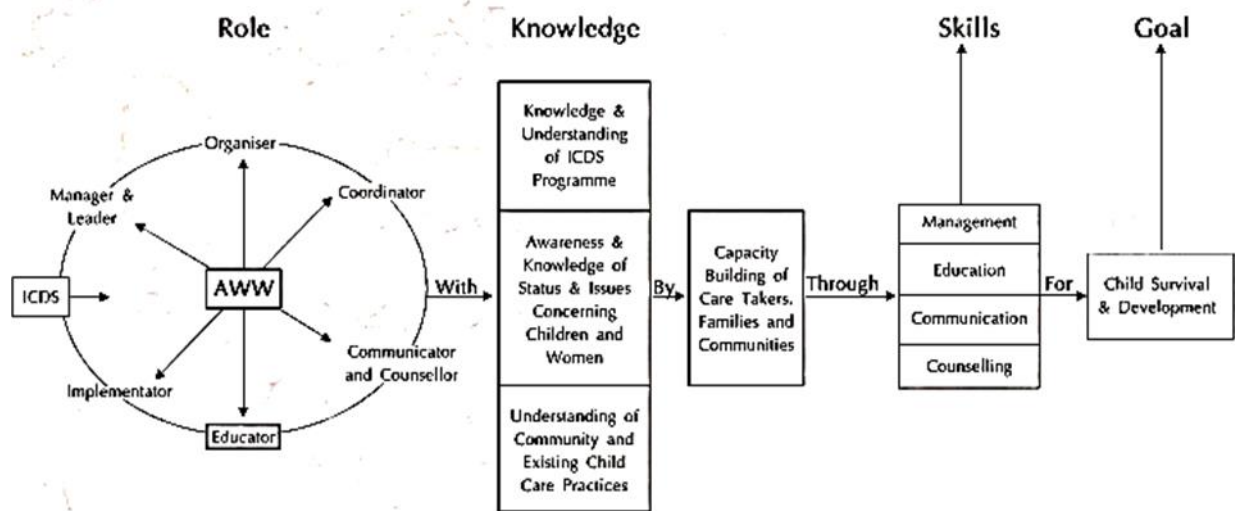
Source: An evaluation report of ASHA published by NRHM, 2011

For an ICDS project, a CDPO is largely responsible for the assigned projects, planning and executions (NRHM, 2011). A CDPO is supported by a team of 4-5 Supervisors who guide and oversee the AWWs work. In larger ICDS projects, a Child Development Assistant Project Officer is also part of the team. An Anganwadi supervisor also called “Mukhya Sevika”, is responsible for supervising 20 AWWs in rural, 25 in urban and 17 in tribal projects. A supervisor guides a AWWs in the planning and organization of ICDS

⁵ Nutrition, Health and Education (NHED) is a key component of the Anganwadi worker. This is part of the BCC strategy (Behavior Change Communication).

service delivery to AWC and also provides on-site advice and training when needed. A AWWs is a community-based front-line volunteer worker chosen from the local community (NRHM, 2011). The selection is made by a committee at the project level. A AWWs is an honorary worker who receives a monthly honorarium. An Anganwadi helper is assigned to assist the Anganwadi worker at each AWC and is honored monthly. The health services provided in ICDS, is by a group of health officials' including the 'general physician', 'lady health officer', ANM and the 'female health worker of the PHC and Sub-Centres (NRHM, 2011). At the community level, ASHA is the first gateway to meet all demands of underserved sections related to health of the population, focusing on women and children (NRHM, 2011).

Figure 2.3: Roles, Knowledge and Skills of AWWs



Source: An evaluation report of ASHA published by NRHM, 2011

The roles and responsibilities of AWWs regarding infant and child feeding practices are⁶:

- Organize supplementary nutrition for children (0 to 6 years), pregnant and lactating women. Providing education on nutrition and counseling on IYCF to mothers.
- Conduct home visits to educate parents to enable mothers to plan an effective role in child growth and development with a focus on newborns. To keep files and records as prescribed. Assist PHC staff in the implementation of the health component of the program such as vaccination, health check, prenatal and post-natal check, etc.

⁶ Anganwadi Workers – A Profile, retrieved from http://shodhganga.inflibnet.ac.in/bitstream/10603/37010/11/10_chapter%203.pdf retrieved on 1 April 2018

- Share the information collected as part of the ICDS schemes with the ANM. However, ANM will not rely solely on information obtained from AWWs records.

The current ECCE training module for AWWs was published by the MWCD in 2017. The training focuses only on the Early Childhood Care and Education (ECCE) portion of the training. The purpose of this module is to help trainers train Anganwadi Workers so that they can plan and carry out appropriate ECE activities for children from 3 to 6 years old. It also includes a component on the psychosocial development of children under the age of 3, to help Anganwadi Workers. In addition, very malnourished children receive special extra nutrition and are referred to medical services for well-being. Advice parents/caregivers on early stimulation. Training is conducted in phases and sessions.⁷

Among the training themes,⁸ care and nutrition counseling impart knowledge and skills regarding IYCF which is carried out for 6 days, focusing on sub-themes as significance of good nutrition, healthy nutrition facilities available in ICDS, nutritious diet and wellbeing of infants and young children, counseling and breastfeeding support to strengthen IYCF practices, complementary feeding: bridging nutritional gaps, exploring low-cost nutritional recipes, management of low birth weight, stages of growth monitoring and personal hygiene (Swachh Bharat).⁹

2.5.2. Auxiliary Nursing Midwives (ANM)

ANMs are the backbone of the health service delivery system, particularly in rural areas and even for the economically backward and disadvantaged sections of society in urban areas. These semi-skilled professionals are the first point of contact for the community and the health service delivery system. They possess the minimum of medical and educational qualifications and receive training deemed essential to their functioning. They are placed at the lowest level of the organizational hierarchy. All defined health programs at the policy level are finally implemented by MPs. At the same time, the responsibility to collect all relevant information from the target population also lies with them. This information is

⁷ ECCE training module for Anganwadi Workers, 2017 retrieved from wcd.nic.in/.../EEC%20Training%20Module%20for%20Anganwadi%20Workers.pdf

⁸ The 26 days job training course for AWWs covers the broad training themes on introduction to ICDS program, early childhood care education and development, care and nutrition counseling, health services and convergence, Community Mobilization, Awareness, Advocacy and IEC, Organization and Behaviour Management, supervised practices and evaluation.

⁹ Job Training Course for Anganwadi Workers module retrieved from <http://nipccd.nic.in/syllabi/jtc.pdf>

transferred to higher consecutive levels and eventually reaches the level where it is used as a basis for the formulation of all health policies and programs.

They were initially incorporated simply to provide health services during childbirth, but as health services policy evolved, ANMs were given additional responsibilities such as maternal and child health services, family planning, for example, malaria, tuberculosis and investigative work and reports. ANMs were working in rural health services before the next NRHM meeting, but the roles of ANM were reorganized and their numbers increased based on contractual NRHM hiring.

2.5.3. Accredited Social Health Activist (ASHA)

The NRHM (2005) created a new cadre of health workers called Accredited Social Health Activist (ASHA) to promote safe institutional deliveries and provide Postnatal Care (PNC) to rural women (NRHM, 2005). The massive cadre of the community health worker; ASHA is the newest addition to the local health officer in rural India. ASHAs are envisaged at the base of rural health services to sensitize their community on state health boards, the health system and to facilitate the use of the public health system through mobilization, motivation and counseling. Their work focuses on Maternal and Child Health (MCH), including pregnancy, childbirth, and newborn care, immunization of children and pregnant women, and family planning.

Under the ASHA Guidelines, NRHM, MoHFW, GoI, in 2005, written down the selection criteria for ASHA workers. She must be a resident of the same village and preferably in the 25 to 45 age bracket. She should be able to communicate with community people and have qualifications for up to eight classes (NRHM, 2011). This can only be relaxed if no qualified person with this qualification is available. Appropriate illustration of deprived population groups should be confirmed to better serve these groups.

The roles and responsibilities of ASHA related to IYCF are as follows (NRHM, 2011);

- ASHA will take steps to raise awareness and inform the community about the determinants of health such as nutrition, sanitation and hygiene practices, living and working conditions, information on existing health services and the need to use health and family welfare services (NRHM, 2011).

- She will advise women on birth readiness, the importance of safe child's delivery, breastfeeding and complementary feeding, immunization, contraception and the prevention of common infections, including reproductive infection, sexually transmitted infections and early childhood care (NRHM, 2011).
- She is also responsible to mobilize and facilitate the community about the health services available in the village (ICDS, Sub-Centre and Primary Healthcare Centres) for immunization, antenatal control, postnatal control, sanitation and other services provided by the government (NRHM, 2011).
- She will organize, accompany or provide support for pregnant women and children requiring treatment/admission to the nearest pre-identified health centres, i.e. Primary Health Centre/Community Health Centre / First Referral Unit. (NRHM, 2011).

The training module for ASHA regarding infant and child feeding practices covers topics on the introduction of health, hygiene, healthy food, health centre (Anganwadi Centre), home remedies, immunization, breastfeeding and infant feeding. Under the topic of maternal and child health, one section out of ten includes nutrition. In the first section, the knowledge imparted was only on the importance of breastfeeding. ASHAs incentives are based on their activities and it varies from one state to another, because different states have different guidelines.¹⁰ Annually these guidelines are restructured i.e. it varies from one year to another and from state to state.

2.6. Village Health and Nutrition Day and its significance in Child feeding Practices

Government of India in 2005 launched National Rural Health Mission (NRHM) “to improve the health outcomes for marginalized, vulnerable and millions of rural people that encompassed health, nutrition and sanitation services to deliver health care to all in equivalent proportions”. (Saxena et. al., 2015). Across the country Village Health and Nutrition Day (VHND) in 2007 has been implemented as a community platform where the community is connecting with the health systems and facilitating convergent actions. (VHND, 2007). On the VHND, villagers can interact freely with health staff and obtain basic information and services. They can also learn more about the preventive and promotional aspects of health care, which will encourage them to seek health care in appropriate facilities.

¹⁰ Activities includes such as - cataract, DOT family planning, malaria slides, and support in the water and sanitation program.

Since the Village Health and Nutrition Day (VHND) will take place in a site very close to their home, the villagers will not have to spend money or time to travel. MOHFW, GOI in 2007, issued a directive for its effective execution. Village Health and Nutrition Day (VHND) is a complex task because of inter-departmental convergence and needs a detailed and well-planned strategy, but still, most of the states have adopted it for improving service delivery. VHNDs need convergent actions from the Ministry of Health and Family Welfare (MoHFW) and the Department of Women and Child Development (DWCD) at state, district and block levels to plan, implement and monitor the program and the community through VHSNC (VHSND, 2019).

Under the guidelines, the VHND must be organized once a month in the AWCs of the village. AWCs have been identified as the centre for service delivery in primary health services. VHND guidelines suggested *“the provision of a package of services, including the registration of pregnant women and the vaccination of all eligible children, with a particular focus on the abandonment of pregnant women and children, monitoring growth and good management of malnourished children, family planning services and health education among others”* (VHSND, 2019).

The purpose of VHND has five primary objectives with a few additional (Panigrahi et. al., 2015). These primary and major objectives as purposes are (Panigrahi et. al., 2015);

1. Ensure early registration - identification and referral of high-risk children and pregnant women
2. Provision of essential and comprehensive health and nutrition services to beneficiaries
3. Provide an effective platform for interaction of service providers and the community
4. Provide information to families on the care of mothers and children at the household and community level through discussion of various health topics
5. Ensure the establishment of linkage between health and ICDS to promote maternal and child survival program

The government's commitment towards the achievement of SDGs has resulted in the launch of several flagship programs to provide holistic health and development services to the nation. These flagship programs are Ayushman Bharat, POSHAN Abhiyaan and Swachh Bharat Mission. Ayushman Bharat are the program launched to strengthen the delivery of comprehensive primary health care through the health centres; POSHAN Abhiyaan to improve the nutritional status of children and women with a strong emphasis on community-

level interventions and community participation, and the Swachh Bharat mission to universalize safe sanitation (VHSND, 2019). In addition, it complements several more recent programs such as HBNC and home care for young children HBYC, PMSMA and Anemia Mukht Bharat (AMB). These are the programs focusing on and addressing the issues of Anaemia at all age groups, strengthening Antenatal care and family planning.

2.6.1. Comparison of service packages for Village Health Day in 2007 and 2019 guidelines

As the years passed by, with different policies and interventions initiated in the background by the government of India, the VHND was termed Village Health, Sanitation and Nutrition Day (VHSND) to reflect its cross-sectional nature (VHSND, 2019). As discussed above, later in the years the word “Sanitation” is added in the term VHND giving equal emphasis to health and hygiene. Village Health, Sanitation and Nutrition Day (VHSND) is an extension of VHND as a government policy initiative to improve access to maternal and child health, nutrition and sanitation services at the village level in India (VHSND, 2019). Village Health, Sanitation and Nutrition Day has four main components, health, nutrition, early childhood development and sanitation. The health components include reproductive, maternal, newborn, child and adolescent health including immunization, communicable diseases and Non-communicable diseases (NCD). Nutrition components include growth monitoring, breastfeeding, complementary feeding, maternal nutrition, micronutrient and dietary diversity. Age-appropriate play and communication for children included in the early childhood development component and sanitation component consist of hygiene and handwashing, use of safe drinking water, construction and use of toilets (VHSND, 2019).

As per the 2019 guidelines the specific objectives of VHSND are stated as (VHSND, 2019);

- Improve the availability of health, nutrition, early childhood development and sanitation community-level services
- Provide information and publicize government rights and regimes related to health, early childhood development, nutrition and sanitation
- Serve as an advisory platform to improve health, nutrition and sanitation individual, family and community practices

- Identify cases requiring referrals or families requiring support and link them to appropriate service providers in the sector concerned.

In 2019, the VHND guidelines of 2007 were updated as VHSND guidelines 2019 with a more focused area depending on the new policies and initiatives taken up to meet the SDG targets. The national guidelines issued by the government are analysed in a comparative table format (Table 2.9) to understand this extension of services and components in VHND from 2007 to 2019.

Table 2.9: Comparison of service packages for Village Health Day in 2007 and 2019 guidelines:

Components	SERVICES PACKAGES	
	2007 Guidelines (VHND)	2019 Guidelines (VHSND)
Health	<p>Maternal Health</p> <ul style="list-style-type: none"> • Early registration of pregnancies. • Antenatal Care. • Referral for pregnant women in complications and also for safe abortion to approved MTP Centres. • Counseling on topics such as Care during pregnancy and danger signs, birth preparedness, the importance of nutrition, institutional delivery, availability of funds under the JSY for referral transport, post-natal care, breastfeeding and 	<p>Maternal Health</p> <ul style="list-style-type: none"> • Early registration • Antenatal care – confirmation of pregnancy, various tests during pregnancy, TT vaccination, IFA and calcium supplementation. • Postnatal care – IFA and calcium supplementation • Family planning • Reproductive tract infections – screening for RTI / STI including HIV / AIDS and referrals. • Counseling on topics early registration, MCP card, care during pregnancy, maternal nutrition, micronutrient

	<p>complementary feeding, newborn care and family planning.</p> <ul style="list-style-type: none"> • Organizing group discussions on maternal deaths (if any), that have occurred during the previous month to identify and analyse the possible causes. • Counseling on reproductive tract infections and sexually transmitted infections. <p>Child Health</p> <ul style="list-style-type: none"> • Registration of new birth • Complete routine immunization and dropouts • Doses of Vitamin A • Weights and height measurement • Provision of supplementary food for grades of mild malnutrition and referral for cases of severe malnutrition • Provision of supplementary food for grades of mild malnutrition and referral for cases of severe malnutrition • Organizing ORS depots at the session site 	<p>supplementation, breastfeeding, complementary feeding, rest and exercise.</p> <p>Child Health</p> <ul style="list-style-type: none"> • Complete routine immunization • Vitamin supplementation • Counseling on the importance of immunization, vaccine-preventable diseases, next immunization, adverse events following immunization and MCP card. • Early Childhood development – development screening using MCP card and refer to RBSK <p>Adolescent Health</p> <ul style="list-style-type: none"> • Screening for anemia and tracking BMI • Identification of clinical problems and referral to AFHCs
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	<ul style="list-style-type: none"> • Counseling for the care of new-borns and feeding, to mothers on home management and where to go in even of complications, nutrition supplementation and balanced diet and management of worm infestations <p>Communicable Diseases</p> <ul style="list-style-type: none"> • Group communication activities for raising awareness about signs and symptoms of leprosy, suspected cases, elimination of breeding sites for mosquitoes, and management of fever cases. • Awareness generation about symptoms of TB <p>Gender</p> <ul style="list-style-type: none"> • Communication activities for prevention of prenatal sex selection, the illegality of prenatal sex selection, and special alert for one-daughter families. • Communication on the Prevention of Violence 	<ul style="list-style-type: none"> • Distribution of sanitary napkins • IFA supplementation to out of school adolescents <p>Communicable Diseases</p> <ul style="list-style-type: none"> • Identify signs and symptoms of tuberculosis and refer as per protocol <p>Non Communicable Diseases</p> <ul style="list-style-type: none"> • Counseling on screening services, health lifestyle, substance abuse, and Ayushman Bharat <p>Gender Issues</p> <ul style="list-style-type: none"> • Counseling on prevention of pre-natal and sex selection, the illegality of prenatal sex selection, violence against Women, Domestic Violence Act and One Stop Centre.
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	<p>against Women, Domestic Violence Act, 2006.</p> <ul style="list-style-type: none"> • Age at marriage, especially the importance of raising the age at marriage for girls. <p>AYUSH</p> <ul style="list-style-type: none"> • Home remedies for common ailments are based on certain common herbs and medicinal plants like Tulsi found in the locality. • Information related to other AYUSH components, including drugs for treating conditions like anemia. 	
<p>Nutrition</p>	<p>Diseases due to nutritional deficiencies can be prevented by giving information and counseling on:</p> <ul style="list-style-type: none"> • Healthy food habits. • Hygienic and correct cooking practices. • Checking for anemia, especially in adolescent girls and pregnant women; checking, advising, and referring. 	<ul style="list-style-type: none"> • Awareness generation on appropriate nutrition promotion of women in reproductive age group – group counseling and awareness generation on nutrition and health education • Growth monitoring – weight, height, plotting on growth charts, screening for severe acute malnutrition and BMI for adolescent • Anemia prevention and

	<ul style="list-style-type: none"> • Weighing of infants and children. • Importance of iron supplements, vitamins, and micronutrients • Food that can be grown locally. • Focus on adolescent pregnant women and infants aged 6 months to 2 years. 	<p>management in children and women – screening, Anemia Mukd Bharat (AMB), and Deworming.</p> <ul style="list-style-type: none"> • Vitamin A supplementation and counseling • Counseling on uses of iodised salt and double fortified salt • Supplementary nutrition – distribution of supplementary food at Anganwadi Centre and counseling as per POSHAN Abhiyaan guidelines • Counseling on exclusive breastfeeding, complementary feeding, nutritional management of SAM, provision of clinical care at the nutritional rehabilitation centre and POSHAN Abhiyaan. • Counseling on Anemia causes, iron-rich food, and prevention of worm infestation.
Sanitation	<ul style="list-style-type: none"> • Identification of households for the construction of sanitary latrines 	<p>Water, Sanitation and Hygiene</p> <ul style="list-style-type: none"> • Linking families with the appropriate service

	<ul style="list-style-type: none"> • Guidance on where to go and who to approach for availing of subsidy for those eligible to get the same under the Total Sanitation Campaign. • Avoidance of breeding sites for mosquitoes. • Mobilization of community action for safe disposal of household refuse and garbage. 	<p>provider</p> <ul style="list-style-type: none"> • Counseling on the importance of sanitary latrines, safe drinking water, hand hygiene, Swachhta Abhiyaan, and Nirmal Gram Puraskar.
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Sources: *Guidelines for Village Health and Nutrition Day (VHND) (2007 and 2019) quoted from (VHSND, 2019)*

2.7. Discussion (The research so far and the major concern)

Although much of the research has been done on the nutritional status of ICDS beneficiaries, evaluation of nutritional and health services provided by the Anganwadi Centres, very little attention has been shifted or placed focusing on the knowledge and skills of Frontline Health Workers especially, related to complementary feeding. Anganwadi Workers are the program resource person whose knowledge and skills have a direct impact on the implementation of the program. Although the government spends a lot of money on the ICDS program, the impact is very inefficient.

Most studies have focused on the foods, the devices used and the timing rather than the feeding process, the choices, and options available to the mother and how the infant is initiated into the process. AWWs, ASHAs, and ANMs are the first contact point of caregivers for receiving information on child feeding practices. These FHWs are supposed to be skilled to promote IYCF and also to counsel the caregivers on the good feeding practices of their children. From the literature review, it is found that during the training the emphasis on development of knowledge and orientation of workers reported disproportionate on breastfeeding rather than focusing on the age-appropriate complementary feeding practices. Being one from the community, she is more likely to be aware of the problems and constraints a mother encounters during feeding a child. Therefore, it will be important to

examine whether in practice they modify and put their training to use to address the real-life complexities or not.

Today, Frontline Health Workers have become an integral part of the health system. This study taking a step ahead focuses on their work responsibilities, issues of efficiency, health adequacy and quality of support systems, working conditions, pay structure of Frontline Health Workers, and its implications in feeding practices. This study captures the real field issues and informs decision-makers about the gaps and possibilities to choose for the improvement of feeding practices for children less than 2 years.

Hence, after reviewing the literature at this juncture it seems important to analyse the factors which are responsible for the decline in complementary feeding among children below the age of 2 years. The study attempts to find out, how socio-economic, demographic, cultural norms, food habits and lifestyle are influencing the feeding practices. Further, the study will examine the role and functioning of the government system, agencies and frontline workers in combating undernutrition. Although about 40 percent of studies amongst those who assessed FHWs knowledge on IYCF studied their knowledge regarding complementary feeding, the number of complementary feeding indicators assessed was limited (Kohli S, et al., 2017). Therefore, there is a need for more research on FHWs knowledge of best practices for complementary feeding. Further, the study tries to understand how these frontline workers modify their training and knowledge to disseminate proper information to the mother of children below 2 years on feeding practices and meet their expectations of good health.

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CHAPTER 3

METHODOLOGY AND RESEARCH DESIGN

Chapter contents:

- 3. Overview**
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- 3.2. Conceptualization**
 - 3.2.1. Conceptual framework
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CHAPTER 3

METHODOLOGY AND RESEARCH PLAN

3. Overview

This chapter tries to rationalise the research methodology used in this study. ¹¹The two proposed frameworks (Figure 3.1 and Figure 3.2) look at social investigation to explore the unfolding insight of the trust and commitment building process. Accordingly, this study examines causal effects through qualitative and further strives to explore the knowledge and skills of the Frontline Health Workers and its impact on the infant and child feeding practices. Therefore, this chapter aims to highlight the following

- Provide a brief explanation of the problem statement (Section 3.1)
- Develop the conceptualization and conceptual framework for this study (Section 3.2)
- Formation of research questions and research objectives for the planning of the study. (Section 3.3 and Section 3.4)
- Justify and explore the qualitative research methodology to be used in this study (Section 3.5)
- Explain the inclusion and exclusion criteria for the data collection and factors minimizing the study biasness (Section 3.6 and Section 3.7)
- Detail discussion on the limitation of the study faced by the researcher (Section 3.8)
- Describes the outline of the thesis (Section 3.9)

3.1. Problem Statement

The data from NFHS 3 (53%) to RSoC (50.5%) and NFHS 4 (42.7%) reveals a decline in the percent of children aged 6 to 9 months receiving solid and semi-solid foods and breast milk. Similarly, data during the survey period DLHS 3 and NFHS 4 also show a decline in children aged 6 to 9 months receiving solid and semi-solid foods and breast milk

¹¹ The research design and analytical path of any research program should have a specific methodological direction based on its research objective and framework.

by 14.4% (57.1% to 42.7%). The shift taking place in a decade from NFHS 3 to NFHS 4 at the National level, shows a clear decline of 9.9 percent in the children receiving breastmilk with semi-solid or solid food. Alike, most of the states show a similar decline with varying percentages. Out of 29 states, only four states (Manipur (1.4%), Nagaland (1.7%), Chhattisgarh (4.8%), and West Bengal (4.9%)) have shown an improvement in the proportion of children receiving complementary food and breastmilk. But in the rest of the 22 states (except those 3 states where their percentage is not recorded; support fewer than 25 cases whose weight is not measured) the intake of complementary feeding among children has declined. Among these 22 states, 12 states show a decline higher than the national average (9.9 %). These states are Haryana (13.7%), Sikkim (23.6%), Meghalaya (10.1%), Assam (10.2), Mizoram (13.5%), Arunachal Pradesh (26.6%), Bihar (23.8%), Jharkhand (13%), Odisha (10.5%), Karnataka (23.7%), Tamil Nadu (13.7%) and Kerala (30.8%). Among the high-concentration of states, Bihar (23.8%), Jharkhand (13%) Odisha (10.5%) and Assam (10.2%) has reported extreme decline.

Jharkhand reported the second-highest decline in the children (6 to 9 months) percentage getting solid and semi-solid foods in continuation of breastfeeding, along with high stunting and wasting. Jharkhand reported very little improvement in stunting from the NFHS 3 (2005-2006) to RSoC (2013-14) but large gains in wasting. However, RSoC (2013-14) to NFHS 4 (2015-16) shows an increase in children who are wasted and underweight. Jharkhand does not show any changes from NFHS 3 (2005-06) to RSoC (2013-14). Whereas, the trends of IYCF practices data of Jharkhand from NFHS 3 in 2006 to RSoC in the year 2014 continuing to NFHS 4 in 2016 shows a mixed result. The data of IYCF practices in Jharkhand shows an improvement in breastfeeding within one hour of birth and exclusively breastfed (10.9% to 32.7% to 33.2%) respectively. Whereas, there is a decline from 65.3% (NFHS 3) to 53.7% (RSoC) in the feeding practices of children (6 to 9 months) getting food to eat along with breast milk, which further shows a decline in NFHS 4 data as 47.2%. It also reported a decline in the percent of children receiving food for minimum number of times and diversities. Thus the data highlights a concern about the child feeding practices. Jharkhand as a state shows an alarming situation of malnutrition among children for which feeding practices play a major role and develops a concern for researchers.

Hence based on the literature reviewed the major problem within the context is; a) nutritional deficiency in children is due to inadequacy, inadequate and inappropriate feeding practices among the children, b) complementary feeding has attracted less attention in

feeding practices c) marginal decline in the number of stunted children and an increase in wasted children d) improvement in children exclusive (exclusively) breastfed e) decline of children receiving both breastmilk and complementary food e) less emphasis on complementary feeding as compared to breastfeeding in the training of Frontline Health Workers and also in National policies f) less attention by the Frontline Health Workers on awareness generation regarding feeding practices and g) limited studies have been carried out on the evaluation of VHND and further, the number of articles reduces which focuses on the child health and nutrition.

3.2. Conceptualization

The review of literature has revealed the need for IYCF in the complete development of children less than 2 years. From the data analysed and surveys on IYCF shows an alarming situational instance of decline in complementary child feeding practices impacting the overall nutritional status of children at both levels; state and national. It also reveals the gap in the nutritional program and policies towards complementary feeding. Data from the National Family Health Survey 4 (NFHS-4) reveals an alarming decline in supplementary feeding rates in a time frame, from 52.6% (2005-2006) to 42.7% (2015- 2016), with an increase in breastfeeding indicators. The NFHS 4 (2016) reported that only 9.6% of 6-23 months old children receive an adequate diet. It is reported that urban feeding indicators are showing better in most cases by few more percentages. State indicators in NFHS 4 points out poor proportions of feeding practices in some states have experienced both the largest declines and level of improvements, except for Tamil Nadu and Kerala which show an overall decline. In dozens of states i.e. Haryana, Sikkim, Meghalaya, Assam, Mizoram, Arunachal Pradesh, Bihar, Jharkhand, Odisha, Karnataka, Tamil Nadu and Kerala shows the decline, below the national average. Significantly, the largest declines have been reported in the southern states.

The infant and child feeding practices are directly proportional to the nutritional status of children and dependent on domains at different levels impacting the overall development of children. There are three different domains at each level influencing the child feeding practices are at individual (caregivers) level, community level and frontline health worker's level.

At an individual level, mothers as caregivers play an important role in the infant and child feeding practices and the family in which they are born and nurtured. The further discussion on the factors that influence at the individual level is mothers work pattern, socio-

economic condition of the child's family, food security in the village and at home, convenience food availability within the village and market strategy, knowledge and counseling skills of community health workers and food habits developed in the child at his initial phase of life.

At the community level, poor child feeding practices under 2 years of age lead to infectious diseases among children such as diarrhoea, Acute Respiratory Infection (ARI), etc., poor nutritional status and low cognitive level including overall development. The feeding practices of children are dependent on the social and cultural condition of mother and the environment they are reared and reside. The social norms and cultural beliefs shape the feeding habits and develops feeding practices within the family and community. At community level, VHND is a as part of the NRHM where community-based health service package designed and delivered on a committed day approach. It was identified and conceptualized as an important instrument to provide an effective platform at the community and village level to bring about the convergence of health, nutrition, and sanitation services at the doorstep and to promote community engagement for improved health and well-being. It also allows the villagers to interact with the Frontline Health Workers and to avail of basic health services and information.

Apart from all this, knowledge, attitude and counseling skills of the Frontline Health Workers attribute to the feeding practices of children less than 2 years and the maternal knowledge of IYCF practices. Frontline Health Workers are the primary health promotion agents positively influencing the community health practices. As a result, Frontline Health Workers have been engaged in the provision of basic health services, including the promotion of IYCF best practices at the community level. In the curriculum and training module of the community health workers includes promotion of IYCF and counsel the care givers but its focus is disproportionately on breastfeeding than complementary feeding of children. This disproportionate reporting in the curriculum and training was partly due to the fact that how IYCF policies and program came into existence, strategized and implemented.

Hence, based on the literature review, facts and analysis; the study tries to comprehend the factors responsible for the decline in IYCF parameters, how the various domains impacts the feeding practices at multi levels and to understand the knowledge and perception of different actors associated with the feeding practices, and influencing it. Thus,

universe for the study revolves around the child feeding practices is discussed focusing at each domain.

3.2.1. Conceptual Framework for the Research

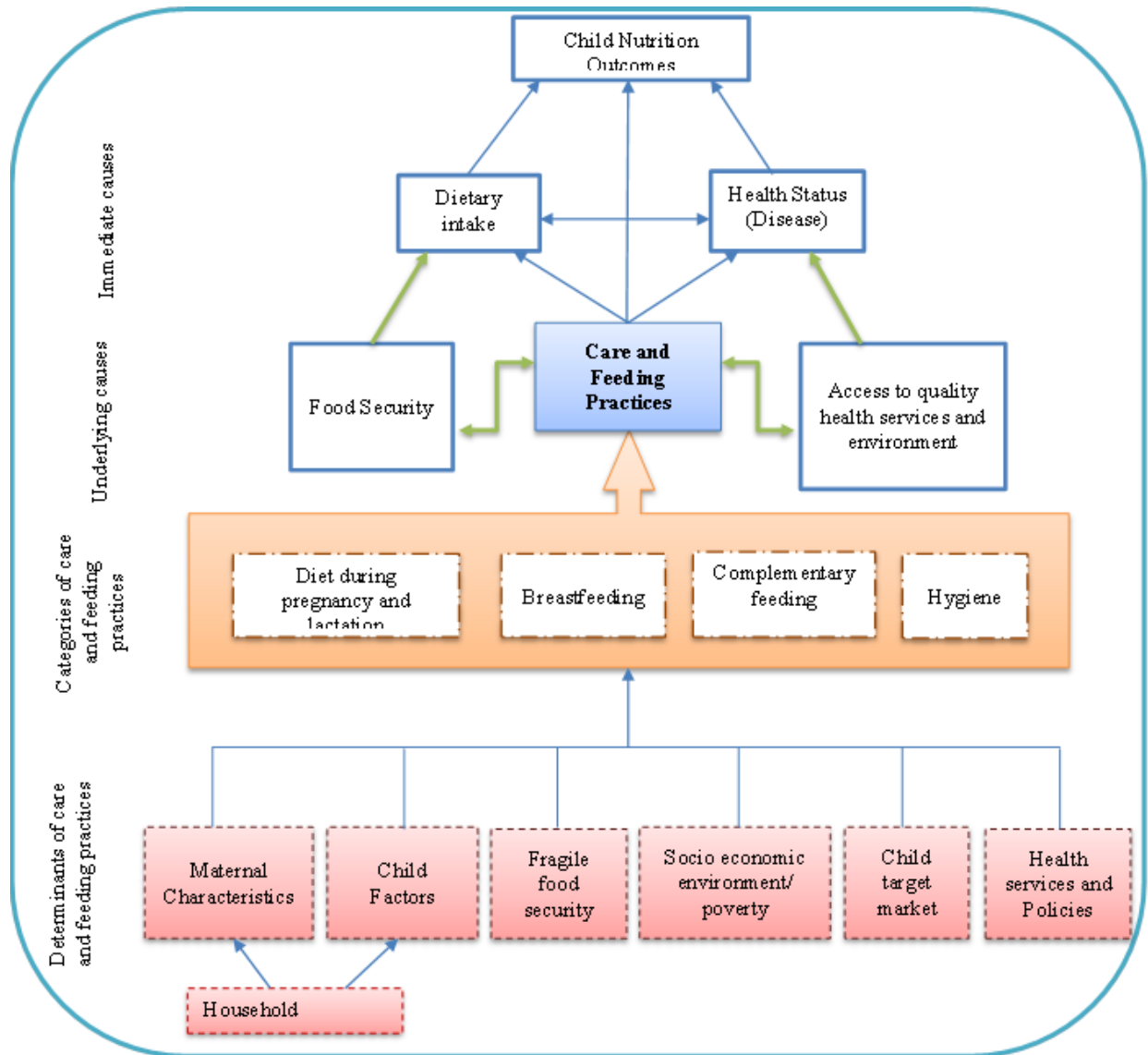
The conceptual framework for this study is basically focused on two frameworks to examine what are the different determinants of child feeding practices, causal pathway for child nutrition and the role of various stakeholders in this path. The first section of the conceptual framework is adopted from the framework used by UNICEF and Cornell for conceptual model for care and nutrition. It talks about the causal pathway of child health and nutrition and the influence of child care and feeding practices on nutritional status of children. The second section of the framework is adopted from Labbok and Taylor, which further elaborates the multilevel factors influencing child feeding practices. (Labbok M. and Taylor E., 2008)

First section (Framework 1) - The first framework presents different processes for developing an understanding of the dynamics of caregiving in different contexts, which is needed to identify a strategy to promote better child health. The framework illustrated below was adopted from the framework used by UNICEF (1990) and Cornell conceptual model for care and nutrition, 1993 which described the different factors influencing the quality of care and the pathways in which care affected the nutritional status of young children of less than three years. Direct care and feeding behaviours included breastfeeding, supplementation, and diet during illness, health-related behaviours, and psychosocial care. Several underlying factors at the household, community and national level and the interactive process of care were also considered.

The UNICEF Nutrition Strategy recognizes care and feeding practices as an important determinant of nutritional status as part of its conceptual framework. This conceptual framework is describing the various factors that influence the quality of care and feeding practices and how it influences nutritional status of children. Since care and feeding practices of children seems to be a broad field, this framework focuses specifically on caring for children under three years of age and their involvement in improving nutritional status. It was borne out of UNICEF's nutrition strategy, which defines household food security, care for women and children, and access to health services, with a healthy environment as ingredients necessary to promote good nutrition. Adequate food intake and health status are the

immediate determinants of good nutrition, but ultimately the provision of care determines the provision of adequate food and health to the child.

Figure 3.1: Conceptual Framework of Infant and Child feeding (IYCF) Practices (Framework 1)



Source: Adapted from UNICEF Conceptual framework of Young Child Nutrition, 1990

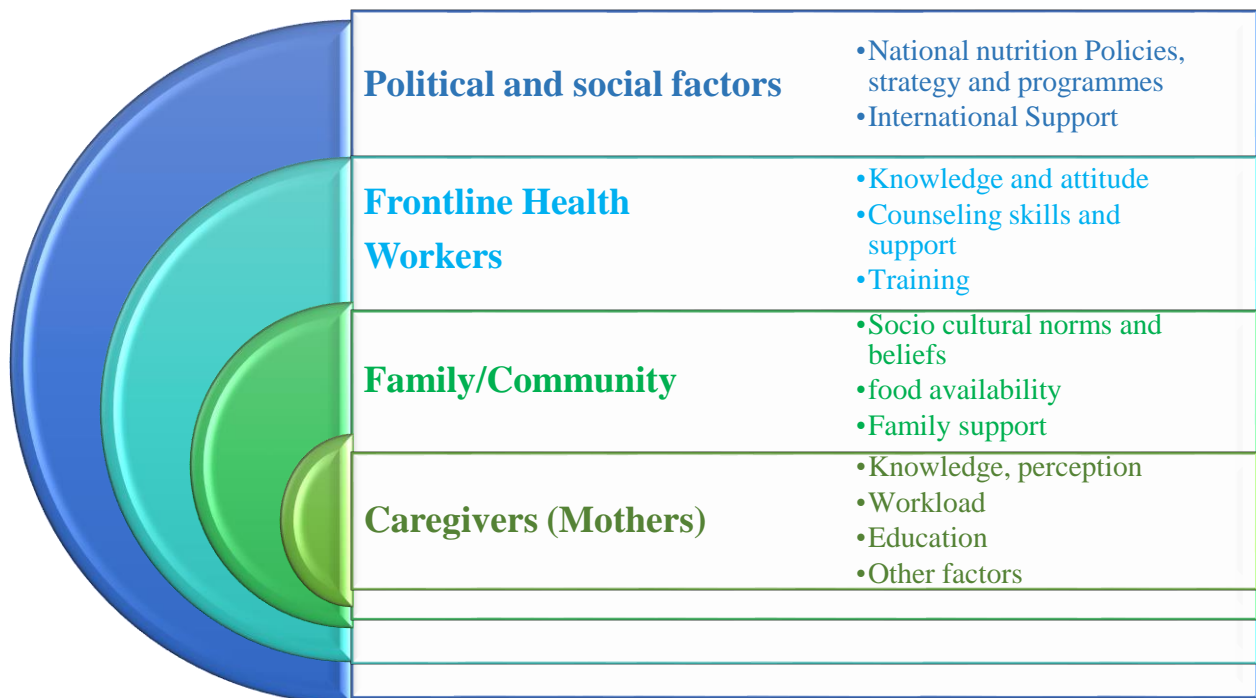
Second section (Framework 2) - The second framework depicts multi-level factors that may affect IYCF practices at each level from an individual level up to national and international level with various variables influencing the child feeding and care giving practices. Interaction between these factors are bi-directional and influence may be exercised at various levels.

Based on the framework there are four main domains; caregivers (mothers), community (family), Frontline Health Workers, and political and social factors.

The following domains and variables impacting the feeding practices are listed below;

- Caregivers (mothers)
 - Knowledge and perception of the mothers, mother-in-law's and other caregivers about the child feeding and care
 - Feeding habit practiced by the care givers in the existing scenario
 - Work pattern and workload of mothers
 - Other factors as socio economic condition, health status, purchasing power.
- Community (family)
 - Socio cultural norms and beliefs within the community which may influence the feeding habits and practices
 - Availability of food throughout the year in a family and community
 - Support within the family for rearing and feeding of a child
- Frontline Health Workers
 - Knowledge and attitude of the Frontline Health Workers for optimal IYCF practices
 - Counseling skills and support towards the feeding practices of children
 - Training curriculum and module for Frontline Health Workers on IYCF practices.
- Political and social factors
 - National nutrition Policies, strategy and programmes (ICDS)
 - International Support to develop improved and optimal IYCF practices

Figure 3.2: Variables impacting the feeding practices at different domains (Framework 2)



Source: Developed on the basis of literature reviewed for the study

As evident from the framework, the four domains and its variables in isolation or in correlation with each other are influencing child feeding practices and ultimately health of the children. At this point it is suggested to examine the perception, attitude and skills of Frontline Health Workers in child feeding practices who plays crucial role in shaping the perception, feeding habits and practices of caregivers, family and society.

3.3. Research Questions

1. What are the trends marked in breastfeeding and IYCF indicators at national and state level?
 - How the different terminology used in IYCF have been defined in various national surveys on IYCF?
 - What are the methodology, tools and parameters are used in the IYCF surveys?
 - What are the trends in IYCF is recoded in surveys during the successive years?
2. What are the social determinants of feeding practices in children?
 - What are the causal pathways of malnutrition in children?

- What is the role and significance of feeding practices in the causal pathway of malnutrition in children?
 - What is the mother's and health workers role in determining the most feasible and efficacious way to improve feeding practices and to ensure improved nutrient intake?
 - How does a mother's/care provider work pattern and work load influence the feeding practices of children?
 - What is the impact of women's workload on the preparation of food and consumption by the infant and young children within the family?
3. What are the national policies and programmes focusing on the infant and child feeding practices?
- What are the national nutrition Policies, strategy and programmes focusing on the infant and child feeding practices?
 - How and what are the international support received to develop improved and optimal IYCF practices?
4. What is the role of FHWs in VHND and the impact of this day in the nutritional feeding practices of children?
- What are the opportunities available in government services (ICDS and health) for ensuring the nutritional dietary intake of children in Jharkhand?
 - What is the role of this day (VHND) in nutritional development of children and child feeding practices?
 - How best it is utilized for the child feeding practices by the Frontline Health Workers and caregivers?
5. What is the knowledge and perception of mothers coming to the Anganwadi Centres regarding the role of health workers on feeding practices of children?
- What are the different local practices and feeding habits with regard to feeding practices of children within the community?
 - What support caregivers receive from the frontline workers in taking care and feeding practices of the children?
 - What is the malnourished children's family health seeking behaviour and the level of counseling given by health workers?
 - What are the facilities they access from the Anganwadi Centres?

- Do they think it has brought any changes in their feeding practices attitude and what?
 - Do health workers understand mother's social demographic and cultural situation and counsel accordingly?
 - What support and guidance given by the health worker when children are sick?
6. What is the knowledge and perception of the Frontline Health Workers (ASHA, AWWs, and ANM) regarding the child feeding practices and what strategies they adopt for the promotion of child feeding practices?
- What is the role of the government frontline workers (ASHA / AWWs) in feeding practices of children less than 2 years?
 - What is the knowledge and perception of AWWs on complementary feeding?
 - What strategies adopted by the health workers to inform and to meet the needs of caregivers on feeding practices?
 - How training curriculum and module impacts the workers in knowledge and skill development?

3.4. Objectives of the Study

To answer the above research questions, the specific research objectives focused in the study are;

- [1] To review the trends in Breastfeeding and IYCF indicators at national and state level.
- [2] To comprehend the quality of health services at Village Health and Nutrition Day (VHND) and the role of Frontline Health Workers for ensuring the nutritional dietary practices for children
- [3] To understand the awareness level and perception of mothers regarding IYCF practices and counseling skills of Frontline Health Workers (FHWs).
- [4] To assess the knowledge, support and problems faced by the Frontline Health Workers (ASHA, AWWs, and ANM) in child feeding practices and how they address their challenges.

3.5. Study Design

The research is a qualitative study, carried out to meet the objectives of the study. The proposed study is a descriptive cross-sectional study to comprehend the knowledge and counseling skill of the Frontline Health Workers for IYCF practices. It is planned as an

explanatory research design, to obtain a process and action or interaction about the young child feeding practices, role of the Frontline Health Workers and nutritional status in child feeding practices. The data collected to understand the health workers perception about the present child feeding practices in their working area (village) and how the social cultural environment affects their counseling skills. It will also assess the quality of interaction between the health workers and the mothers of children less than 2 years regarding IYCF practices.

3.5.1. Selection of study area

Namkum block in Ranchi district of Jharkhand was selected as research area to meet the main aim and objective of the study. The regions with poor nutritional status of children and poor IYCF indicators is treated as an initial and important criterion for the selection process of study area. Along with these two, other reasons for selection are discussed in detail in the following section.

❖ *Selection of State - Jharkhand*

In Jharkhand, nine out of ten children aged 6 to 23 months are not getting adequate diet. The nutritional and health status of children in this state was considered extremely low in comparison to the national standard. According to NFHS 4 data, only 7.2% of Jharkhand children in this age group receive an adequate diet. Data on child feeding practices and nutritional status further suggest that almost two-thirds (67%) of children under three years of age in Jharkhand State are not breastfed within the first hour of birth. The analysis also revealed that in Jharkhand nearly 69.9% i.e. two-thirds of the children (6 to 59 months) suffer from acute anaemia. On the positive side, Jharkhand has performed well in several indicators in children nutrition and health indicators, such as institutional delivery, immunization, and treatment of critical childhood diseases. But the rate of progress of critical indicators such as infant and child nutrition, which has a direct link with the growth and overall development of the child, remains well below expectations.

In a review of studies conducted on knowledge, attitudes, perception, counseling skills and practice of community health workers it is revealed that from the year 1995 to 2016 total thirty-two articles were published. Among these thirty-two articles, twenty four studies were conducted in India. States in which these studies were conducted are Himachal Pradesh, Uttar Pradesh, Gujarat, Maharashtra, Punjab, Orissa, Andhra Pradesh, Madhya Pradesh,

Karnataka, Delhi, Haryana, Uttarakhand, and Telangana (Kohli S, 2017). Based on the literature review it is found that in last two decades no study is conducted in Jharkhand which records poor status of child nutrition and child feeding practices.

❖ *Selection of District – Ranchi*

In NFHS 4 data, the percentage of stunted (40.7%), wasted (27.2%) and underweight (43.8%) children in Ranchi district was reported higher as compared to national standard i.e. 38.4% as stunted children, 21.0% of wasted children and underweight children are 35.7% under 5 years of age (NFHS 4, 2016). Being the capital of Jharkhand, children less than 5 years in Ranchi shows a poor nutritional status, especially in rural areas.

Table 3.1: Jharkhand District wise data of Feeding Practices in children

Districts	Children less than 3 years breastfed within one hour of birth (%)	Children under age 6 months exclusively breastfed (%)	Children age 6-8 months receiving solid or semi-solid food and breastmilk (%)	Breastfeeding children age 6-23 months receiving an adequate diet (%)	Total children age 6-23 months receiving an adequate diet (%)
Bokaro	0	74.2	62.5	8.3	7.7
Chatra	27.2	42.2	63.9	10.1	10
Deoghar	33.6	70.5	NA	7.9	7.9
Dhanbad	20.1	63.8	NA	8.6	7.6
Dumka	31.4	71.8	NA	17.1	17.2
Garhwa	32.1	51.8	48.1	7.6	6.9
Giridih	39.5	68.2	NA	2.2	2
Godda	40.6	79.6	NA	6.6	6.3
Gumla	31.7	53.1	NA	9.6	9.1
Hazaribagh	41.5	74.7	NA	1.5	1.5
Jamtara	32.9	67.8	42.4	9.1	9.1
Khunti	30.1	70	29.3	13.4	13.1

Koderma	19.2	61.9	NA	4.4	7.2
Latehar	31.6	48.2	NA	6	7.7
Lohardaga	55.5	49.9	NA	8.6	7.8
Pakur	40.6	76	NA	6.5	6.2
Palamu	34.6	48.5	NA	3.5	4.4
Pashchimi Singhbhum	31.5	66	NA	2.5	2.4
Purbi Singhbhum	25.1	55.9	43.1	15	14.1
Ramgarh	36.1	71.2	46	6.6	6.4
Ranchi	38.4	71.3	60.5	5.2	7.1
Sahibganj	29.5	68.1	NA	5.4	5.3
Saraikela Kharsawan	44.1	65.3	NA	5.5	5.1
Simdega	34.1	64.9	NA	17.8	18.3

Source: Extracted from (NFHS 4, 2016)

Note: NA – Not Available

Among the 24 districts of Jharkhand, there are 16 districts which does not show the percentage of children (aged 6-8 months) receiving solid or semi-solid food and breastmilk in NFHS 4 report of Jharkhand state. The percentage data on children (6-8 months) getting breastmilk and semi-solid are available for only 8 districts. Khunti district (29.3%) reports the lowest percentage, and Chatra district has the highest (63.9%) which is still less than the state average percentage of Jharkhand as per NFHS 3 (65.3%). Amongst these 8 districts, despite Ranchi being the capital of Jharkhand, ranks 3rd with 60.5% of 6-8 months children are receiving breastmilk and semi-solid food.

Similarly, Ranchi reports the lowest percentage amongst the 8 districts in the following two categories; firstly, only 5.2% of the children (6 to 23 months) who are breastfeeding receive an adequate diet and in second case total 7.1 % of children who are 6 to 23 months getting an adequate diet (NFHS 4, 2016). In continuation, the total children in Ranchi district age 6 to 23 years receiving adequate diet (7.1%, and in rural 4.3%) and breastfed children receiving adequate diet reports (5.2%, in rural 3.7%) reports extremely low compared to national standard (9.6% and 8.7% respectively). Hence, Ranchi being the capital

district for 19 years it is still a way behind in the child's nutritional status parameters, especially the infant and child feeding practices as compared to other districts in Jharkhand state. Based on these facts and data Ranchi district has been selected for the survey to understand the factors responsible for poor food intake among the children below 3 years of age.

❖ ***Selection of Block - Namkum***

There are total 18 blocks in Ranchi district out of which Namkum block is selected randomly for the purpose of study and to fulfil the requirement of study objectives.

According to the 2011 census, the total population of Namkum block in Ranchi district is about 145,841 (one lakh, forty five thousand eight hundred forty one). Of these, around seventy four thousand are men, while approximately seventy two thousand are women. Similarly, in Namkum block the average sex ratio recorded is 967 (CensusIndia, 2011). According to the 2011 census (total population), around 19.1% (27839) of people live in urban areas with a sex ratio of 879 and approximately 80.9% (118002) lives in rural areas with 989 sex ratio in Namkum. Out of total population, 5.1 % are Schedule Caste (SCs) and 60% are Schedule Tribe (STs) in the Namkum block. In Urban areas the average literacy rate is 87.8%, and in case of rural it is 70.3%. The total literacy rate in Namkum Block is 73.72%, includes men 71.15% and women is 54.97%. The population of children aged 0 to 6 in the Namkum Block is 14% (20814) of the total population. There are 10493 boys and 10321 girls (0 to 6 years). In Namkum block total number of inhabited villages are 92 and uninhabited villages are 5. Among inhabited villages in only 51 (55.43%) of them have medical amenities available (District Census Handbook Ranchi, 2011).

❖ ***Selection of Anganwadi Centres***

Based on the study objective and research area Anganwadi Centres within the community are chosen as the entry point for the study. The selection of these Anganwadi centre is on the basis of their distance from the CDPO block office and study area (rural urban and semi urban). These criteria is adopted in the selection process to comprehend the effect of the place and its impact on the Frontline Health Workers knowledge and counseling skills.

At Namkum block there are total 204 Anganwadi Centres and four supervisors looking after these centres located in three directions. One set of Anganwadi Centres are

comprised of those centres which are at close vicinity of block office (child development program office) whereas the rest three are on the two different directions. Among these some Anganwadi Centres are located and functioning in the industrial areas having majority of migrated population. Similarly, another set of sample includes those Anganwadi Centres functioning and established in the rural areas and at the border of the Khunti and Namkum block.

Namkum CDPO office is considered to be the central area as Namkum and two rest in different directions. For this reason, villages and panchayats were selected for this research study depending on the knowledge of the area and the location of the Anganwadi Centre. These three zones are Tupudana, Tatisilwae, and Namkum, which are overseen by three overseers.

The total panchayat covered during the study is nineteen (19) in the three different zones. The total panchayats in each zone, seven (7) panchayats in the Tupudana zone, five (5) in Tatisilwae, and seven (7) in the Namkum zone (Refer Table 3.2).

Table 3.2: Name of the Zone and Panchayat covered during the field study

Name of the Zone	Name of the Panchayat
Tupudana	<ul style="list-style-type: none"> • Bandwa • Hardaag • Sodag • Sitiho • Huruwa • Dungri • Lalkhatanga
Tatisilwae	<ul style="list-style-type: none"> • Mahilong • Aara • Tati Purvi • Tati Paschmi • Silwae
Namkum	<ul style="list-style-type: none"> • Khijri • Hahap • Huwanghatu • Bargawan • Rampur • Chandaghasi • Kutiyatu

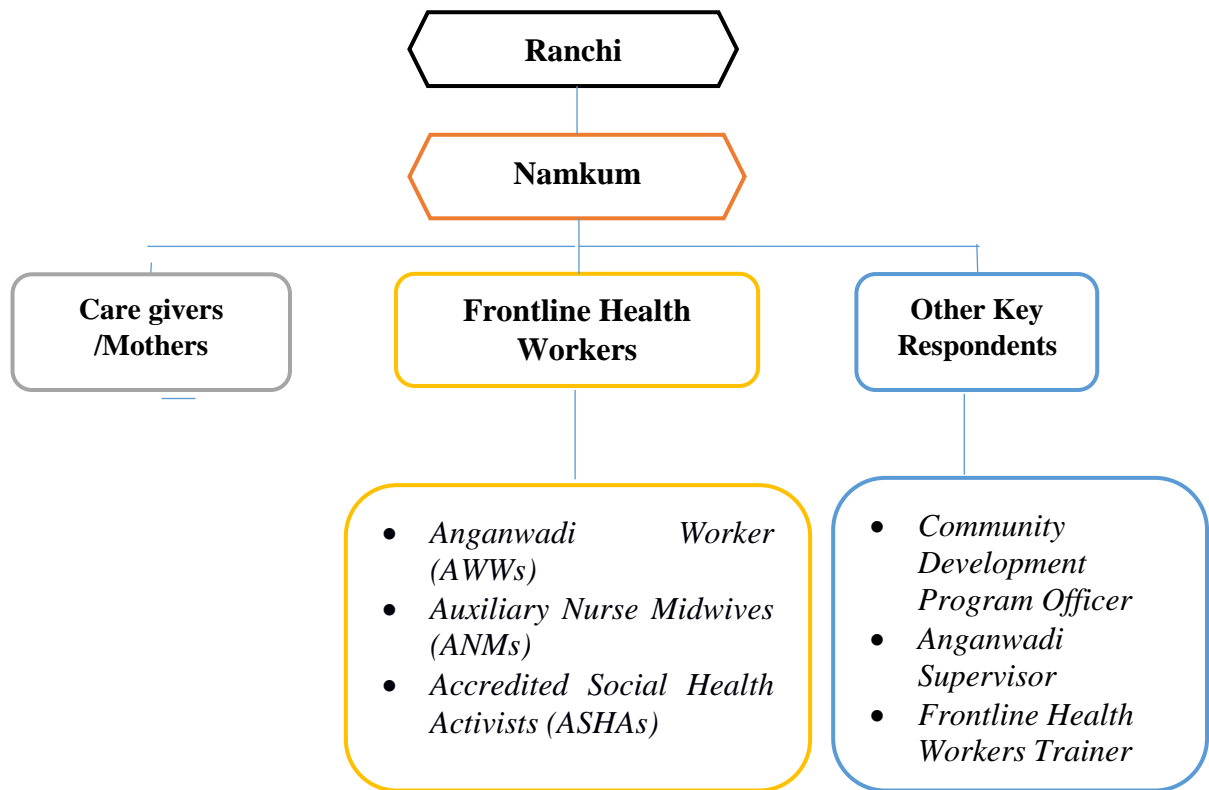
Sources: Data collected from the field

3.5.2. Selection of Sample (Respondents)

The purposive sampling was used for the selection of respondents for the study. Based on the objective Frontline Health Workers were contacted at the convenient and comfortable places for the interviews.

- **Frontline Health Workers (FHWs):** The Frontline Health Workers includes Anganwadi Workers, ASHA and ANM as respondents to understand their role in the feeding practices, their knowledge and perception regarding the issue, problems and challenges faced by them, support received, and the modification adopted by them for sharing the information with the mothers on IYCF. For this they are selected and contacted in those Anganwadi Centres based on the above criteria. Apart from these, the study also tries to include the workers as respondents with different years of work experience as Frontline Health Workers. They are contacted and interviews are recorded after taking the Frontline Health Workers consent.
- **Mother of children less than 2 years** -The sample includes mothers of children less than 2 years, coming to anganwadi centre or visited and accessed the services of the centre once in their lifetime. They are contacted to get an understanding about the knowledge and counseling skill of the AWWs, ASHA and ANM working in their area and the facilities available at the Anganwadi centre for child feeding practices. The mothers in this category are further divided into two; mother of children below two years of age at home accessing the Anganwadi services and the mothers whose children are admitted in the Malnutrition Treatment Centre (MTC).
- **Other key respondents**– For further understanding the role of Frontline Health Workers regarding the training, knowledge, communication and counseling skill on child feeding practices the study will include other participants in the research study. Under the other key respondent umbrella, the researcher collects data from relevant officials i.e. Community Development Project Officer, Anganwadi supervisors, and frontline health worker trainers.

Figure 3.3: Flow Chart depicting the strategy adopted for the proposed study



3.5.3. Sample Size

The sample size for this study is around 157 at the various domains as discussed in the conceptual framework, influencing the child feeding practices and ultimately the health condition of children in isolation or in correlation with each other. The respondents were selected based on their connection and contribution in the child feeding practices, directly or indirectly within the individual, family, community, and national level.

The number of respondents interviewed for the primary data collection in each category is:-

Table 3.3: Total number of respondents interviewed for the primary data collection

Respondents	Total Population	Samples collected
Anganwadi Workers (AWWs) (Sevika)	206	45
Accredited Social Health Activists (ASHAs) (Sahiya)	220	45
Auxiliary Nurse Midwives (ANMs)	61	15
AWWs Supervisor	4	2
ASHAs Supervisor	2	1
Mother / caregiver	Nil	45
Trainers	Nil	4

Sources: Data recorded from the field study

Apart from the above total sample interviewed face to face, researcher conducted ten (10) focus group discussions (FGD) with the mother of children less than two years to get an overall perception of the mother regarding the quality of knowledge and counseling skills of FHWs and functioning of VHND at village level. To meet one of the study objective, total eleven (11) Village Health and Nutrition Day (VHND) was attended and observed during the data collection. Name of the centres observed are Tonko (Chandaghasi), Uppartoli (Aara), Neechetoli (Aara), Buteo (Bandwa), Purana Hulundu, Neechetoli (Chandaghasi), Obariya Nayatoli, Kalyan Mohalla (Sitiho), Nayaktoli Obariya, Nayatoli (Sodag), Sodag.

3.5.4. Data Collection

The study was based on a qualitative method of data collection. The different nature of data was collected during a field study conducted in Anganwadi centre and villages in Namkum block, Ranchi district, Jharkhand. During the field study, some of the relevant secondary data for cross-referencing could be collected from the official records and document section of the concerned departments. The study was supported by interviews with

Frontline Health Workers, mothers or caregivers, relevant officials, and other respondents. In-depth interviews and discussions were conducted with the mothers having children less than 2 years, Frontline Health Workers and other respondents from the study area to obtain information on the knowledge, perception, and counseling skills on child feeding practices, its impact on mother's behavior and feeding practices, and overall changes in children nutritional status.

Informed consent was taken before the start of data collection for primary and secondary data. Participants were informed at the starting about the purpose of the study and the use of the data, followed by their signature on the consent form. Respondents (Frontline Health Workers and mothers) those who all agreed to participate in the study were included. Oral consent was taken from key respondents and to conduct participatory observation after a briefing on the purpose of the study and the required data. All participants in the study are promised anonymity.

Interviews conducted with the key respondents and questions asked from them are pre-designed questionnaire. Respondents' responses were recorded in the printed questionnaire during the interview. Interviews with Frontline Health Workers, caregivers, and other respondents are conducted and the responses to a set of predefined issues to be recorded. Before starting the study, a notification was sent to the relevant official and authorities of the Anganwadi centre to inform them of the purpose of the study, the duration of the study, the cooperation required, and the primary data collection authorization provided by the Child Development Program Officer.

The feeding parameters discussed in the finding chapter are assessed based on the WHO's core indicators for assessing the Infant and Young Child Feeding (IYCF) practices. Each of the IYCF indicators is defined by the World Health Organization (Table 3.4).

Table 3.4: Definitions of the IYCF indicators

Indicators	Definition
Early initiation of breastfeeding	The proportion of children (0 – 23 months) of age who were put to the breast milk within one hour of birth
Exclusive breastfeeding to 6 months	The proportion of infants 0 – 5 months of age who received only breastmilk on the previous day
Breastfed ever	The proportion of children 0 – 23 months of age who were ever breastfed on the previous day
Continued breastfeeding for one year	The proportion of children 12 – 15 months of age who received breastmilk on the previous day
Initiation of complementary foods	The proportion of infants 6 – 8 months of age who received solid, semi-solid or soft foods on the previous day
Minimum dietary diversity	The proportion of children 6 – 23 months of age who received foods from > 4 food groups on the previous day Food groups: grains, roots, and tubers; legumes and nuts; dairy products; flesh food, eggs, fruits, and vegetables
frequency of minimum meal	The proportion of children 6 – 23 months of age who received complementary foods (along with breastfed) at least the minimum

	number of times on the previous day Minimum: As suggested for Breastfed children - 2 times for 6 to 8 months 3 times for 9 to 23 months Similarly for Non breastfed children are 4 times for 6 to 23 months
Continued breastfeeding at 2 years	The proportion of children 20 -23 months of age who received breast milk on the previous day.

Source: Flax et.al. (2017)

3.5.5. Tools for Data Collection

A qualitative method was adopted for data collection. Appropriate tools were administered for the collection of qualitative data for the study. It was conducted in the natural settings with the target groups and individuals, to build the knowledge and view the insider's opinions, their perspectives about the nutrition, feeding practices within the family and nutritional health services provided to the children below 2 years. The following are the tools adopted for data collections to answer the research questions and to attain the objectives of the study are interview schedule and guide, focus group discussion, and observations. The tools were made in the local language (Hindi) and interviews were conducted in Hindi and tape-recorded.

Interview Guide: Once the data was obtained in the first phase of the study conducted as a pilot, the second visit was for the qualitative data collection. Qualitative information was sought from the key respondents through personal interviews. The selected key respondents were interviewed using a semi-set of issues on the knowledge, behaviour, attitudes, and strategies adopted by the health workers for the caregivers and community on childcare and feeding practices. An in-depth informal interview was conducted with Frontline Health Workers and mothers. During the data collection whenever possible information/interviews were tape-recorded and noted in the field diary. Various interview guides were used for other respondent's data collection. An interview guide was used for an in-depth interview with some pre-defined questioned to be administered.

Observation: The observations was recorded in the field notebook. The diary was regularly reviewed to link with the missing data.

Focus group discussion (FGD): The group discussion was carried out with mothers having children less than 2 years in the surveyed village. This method for data collection was chosen because the group context builds on common experiences and social understandings which often results in collection of wide range of information. Respondents for the discussion were randomly selected based on the selection criteria. The researcher conducted the FGD at a commonplace away from the Anganwadi centre, in the absence of health workers to reduce the biases in data collection.

3.5.6. Statistical Methods and Data Analysis

The analysis of the study is qualitative to bring out the facts and findings of the research. As it suggests, qualitative analysis is a development concept that helps the researcher to understand the social phenomena in natural surroundings giving due importance to the respondents experiences and views rather than experimental outcomes. This is used to gather an in-depth understanding of the health workers underlying knowledge, motivations, experiences on child feeding practices. Field notes was transmitted and updated during field visits. The data collected through the interview schedule are entered into an excel sheet and analyzed manually using the appropriate technique.

3.6. Minimizing Study Bias

To minimize bias in this study, some important issues need to be addressed. Foremost, data must be verified through informal discussions and regular field observations. Also, it is important to provide an equal and balanced representation of participants at multiple levels in their abilities. It was useful to provide different perspectives on issues related to IYCF practices. The researcher examines the systematic data at the ground through various sources to eliminate any bias. Finally, the researcher manages and backs up the data correctly and daily to avoid any data loss.

3.7. Inclusion and Exclusion Criteria

This study tries to put forward the inclusion and exclusion of different levels. First, this study includes all the respondents, who are willing to participate and approve their consent. Another, criterion for exclusion is broadly based on the Anganwadi centre distance

from the CDPO block office, study area (rural-urban and semi-urban), and community workforce composition whom it is catering to the services. Similarly, ANMs and ASHA (Sahiya) were randomly selected on basis of their work experience and working area in the sample Anganwadi Centres. Mothers having children below 2 years of age, coming to Anganwadi centre were contacted for the study. Hence, the respondents in the study were selected based on these inclusion and exclusion criteria.

3.8. Limitations of the Study

The researcher has experienced few limitations during data collection which is as follows,

- Limitations in seeking permission for conducting field study in the research area. Needed continuous effort for convincing the official at CDPO level.
- CDPO was hesitant for the field study hence she provided least support for the field study after the permission – Non availability of CDPO for her interview.
- Rapport with Supervisors and Anganwadi Workers took longer time because they are least interested in participating in interviews. Despite of sharing the purpose of the study they carry burden of suspiciousness.
- Limitation in accessing the official data on child nutritional status.
- During most of the group discussions Frontline Health Workers have tried to influence the data and responses. To avoid biasness, the discussions were conducted in the absence of FHWs.
- In some villages (interior border villages) researcher faced language and dialect problems - it was taken care by local people.
- Time constraints – Availability of women in a group was difficult hence, researcher ensured to keep women's working and free time schedule in mind before planning field visits for interviews and group discussions.

3.9. Thesis Outline (Chapterization)

This section will give an overview and outline of the thesis chapters. It helps to understand the contents of each chapter. The thesis has five major chapters:

- Chapter 1: Introduction
- Chapter 2: Review of Literature
- Chapter 3: Methodology and Research Plan

- Chapter 4: Critical analysis of Infant and Young Child Feeding (IYCF) Health Surveys and Policies
- Chapter 5: Village Health and Nutrition Day (VHND) and Role of Frontline Health Workers on VHND
- Chapter 6: Mother's feeding practices and Counseling given by Frontline Health Workers
- Chapter 7: Knowledge and Counseling Skills of Frontline Health Workers about Infant and Young Child Feeding Practices

- Chapter 8: Conclusion and Recommendation

Chapter 1: The first chapter introduces the thesis, giving an overall understanding of the topic. It talks about the purpose of the study and the need for the study in the present scenario.

Chapter 2: The second chapter is the review of literature on the topic of IYCF practices and the factors related to it. In this chapter researcher reviewed the literature to understand the concepts used and related to child feeding practices, feeding practices status in the Indian context, and the determining factors of child feeding practices. Further, it also investigates the role of Frontline Health Workers in child feeding practices.

Chapter 3: The methodology chapter helps the researcher to understand what methods are to be applied in the field study for systematic and theoretical analysis. The chapter talks about the problems related to the topic, conceptualization about the issue, and based on this a conceptual framework is drawn for the study. Later, research questions were framed around the issues and the objectives were finalized in this chapter. Based on the objectives research study design is framed and methodology was decided, includes a study area, sample size, data collection, tools for data collection, and type of data analysis.

Chapter 4: The fourth chapter aims to attain the first objective of the study by reviewing the trend of breastfeeding and IYCF indicators at national and state level. For the further analysis the national surveys for IYCF and the related policies on feeding practices are reviewed in detail.

Chapter 5: The fifth chapter focuses on the Village Health and Nutrition Day and role of Frontline line health workers. VHND and role of Frontline line health workers discuss about the VHND and its purpose, schedule and Activities of VHND, status of infrastructure for VHND, presence and activities of Frontline Health Workers (FHW) on VHND, knowledge of FHWs regarding VHND objectives and purposes, status and quality of service delivery at VHND, and beneficiaries on Village Health and Nutrition day.

Chapter 6: This chapter is on the mother's feeding practices and their perceptions regarding knowledge and counseling skills of the Frontline Health Workers about IYCF practices. In this chapter, 'Mother's feeding practices and role of the FHWs' discuss on the socio demographic characteristics of the mothers (women with children below two years), impact of women daily work on feeding habits and practices, IYCF practices of women with children below 2 years and advice on IYCF practices to mothers.

Chapter 7: This chapter is on the knowledge and skills about IYCF practices amongst Frontline Health Workers. It discusses about the socio-demographic profile FHWs, their knowledge and skills on IYCF practices. It also tries to understand the challenges and barriers faced by the Frontline Health Workers impacting the IYCF practices.

Chapter 8: Finally, the last chapter is the conclusion and recommendation section. It summarises the key findings, outcomes, or information, and to what extent the objectives of the study has been achieved. This chapter acknowledges the limitations and makes recommendations for future application of knowledge derived from this study.

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CHAPTER 4

CRITICAL ANALYSIS OF INFANT AND YOUNG CHILD FEEDING (IYCF) HEALTH SURVEYS AND POLICIES

Chapters Content:

- 4. Overview**
- 4.1. Review of Infant and Young Child Feeding (IYCF) Health Survey**
 - 4.1.1. About the IYCF Health Survey
 - 4.1.2. A comparative analysis between the surveys
- 4.2. Review of Policies on Infant And Child Feeding Practices**
 - 4.2.1. National and International policies and programs
 - 4.2.2. Similarities and Dissimilarities in Policies/ Programme
- 4.3. Discussion**
- References**

CHAPTER 4

CRITICAL ANALYSIS OF INFANT AND YOUNG CHILD FEEDING (IYCF) HEALTH SURVEYS AND POLICIES

4. Overview

This chapter tries to review the development of child feeding practices and the shift observed in the surveys. It also focuses on the different policies and programs addressing Infant and Child Feeding (IYCF) practices. It focuses on the first objective of the study to review the trends in Breastfeeding and IYCF indicators at national and state levels. The purpose of the chapter is to analyse the trends marked in breastfeeding and IYCF indicators at national and state levels and to review the national policies and programs focusing on child feeding practices. This chapter tries to answer the research questions from the secondary data analysis under different following sections;

- Detail review of the health surveys on IYCF practices and a comparative analysis is done between these surveys (Section 4.1)
- In-depth understanding and analysis of the policies and programs focusing on child feeding practices. (Section 4.2)
- Discussion and summary of the chapter (Section 4.3)

The first section of the chapter tries to define the different terminology used in IYCF in national surveys on IYCF, methodology, tools and parameters used in the IYCF surveys and the trends recorded in surveys during the successive years. The second section critically analyses the national nutrition Policies, strategy and programs focusing on the infant and child feeding practices and the similarities and dissimilarities among them. The last section gives an overall summary of the review and discussion of the chapter.

4.1. Review of Infant and Young Child Feeding (IYCF) Health Survey

Since 1990, various national health surveys were conducted with similar or dissimilar components. Among all the components Infant and Young Child Feeding practices are one of the components in which the survey is conducted. Hence, this paper aims to assess such national health surveys that were designed to provide information on IYCF at national and sub-national levels. It describes and compares the information covered by these surveys over time and the trends of IYCF practices shown in these surveys. For this purpose, a large-scale national population-based household survey in India from 1990 to 2017 has been selected.

These surveys are National Family Health Survey (NFHS), the District Level Household Survey (DLHS), and Rapid Survey on Children (RSOC). These surveys are reviewed to assess them under the broad themes: survey characteristics, IYCF components, and trends of IYCF components.

4.1.1. About the IYCF Health Survey

A. National Family Health Survey (NFHS)

The National Family Health Survey (NFHS) is a multi-part, large-scale survey conducted with a sample of households across the country. It has always played a vital role in searching for a more recent set of evidence of the realities of the field to have an effective set of policies and translate that into new programs and initiatives. NFHS surveys were launched in the early 1990s by the Ministry of Health and Family Welfare (MoHFW), the Government of India (GOI) has emerged as an important source for high-quality data on population, health, and nutrition data for India. The International Institute for Population Sciences (IIPS), Mumbai, has been designated by MoHFW, as the nodal organization for each NFHS series. An important objective of NFHS surveys has been to provide national and state information for India on fertility, family planning, infant and child mortality, reproductive health and childhood, women's and children's nutrition, quality of health, and socio-economic conditions.

Since 1990, MoHFW has conducted four rounds of survey starting from NFHS 1 in the year 1992-93 followed by NFHS 2 in 1998-99, than NFHS 3 in 2005-06 and the latest NFHS 4 in the year 2014-15. The National Family Health Survey 1 was country's first survey of its kind conducted in the year 1992-93. "To strengthen the investigative research capabilities of the 18 Popular Research Centres (PRCs) in the country" was an important objective of the first National Family Health Survey (NFHS, 1993). NFHS 2 and NFHS 3 were to strengthen the database for the implementation of the reproductive and child health approach (RCH) adopted by India after the International Conference on Population and Development (ICPD) in 1994 in Cairo (NFHS 3, 2007). The fourth cycle of the NFHS was conducted in 2014-15. It provides information on population, health, and nutrition for India and each territory of the State and the Union. For the first time, NFHS 4 has provided the district-level estimates for many significant indicators. Department has decided to conduct an integrated survey in place of different surveys to provide district-level data. It is observed that the NFHS and DLHS despite different sample sizes, different reference periods and

definitions for some of the indicators, people tend to compare the outcome of NFHS and DLHS and come up with different conclusions. To avoid such problems and to facilitate the regular availability of data to evaluate and monitor performance at a narrower interval, the fourth round of the NFHS 4 was conducted.

B. District Level Household Survey (DLHS)

The Government of India has felt the need to monitor the ongoing health and family welfare programs, the need for a database at the district level. The Target-free approach of the program was implemented across the country in 1996. The essence of this approach was to modify the program's tracking system and turn it into a demand-driven system in which a worker would assess the community's needs at the beginning of each year. The program has been gradually reoriented towards the holistic approach of the Reproductive and Child Health (RCH) program. Under decentralized planning, it has become increasingly necessary to have relevant information at the micro-level, not only to prepare the action plan but also to monitor and evaluate the program. In this regard, the Ministry of Family Welfare, the Ministry of Health and Family Welfare, the Government of India launched the household survey at the district level in 1998. To conduct the survey, the International Institute for Population Sciences (IIPS) was designated as the nodal agency for this task.

DLHS 1 also represented as Round I of the RCH survey was conducted in the year 1998 – 1999 in two phases for the evaluation of the Reproductive and Child Health Program. To achieve this objective, GOI decided to undertake the Rapid Household Survey (RHS) in all districts of the country so that the progress of the RCH program could be monitored. In addition, DLHS third survey as a part of the National Rural Health Mission program provides its information on program. Three rounds of Household Survey and District Level Facilities (DLHS) have been conducted by the Health and Family Welfare, Government of India in the past (Round-I in 1998-99, Round-II in 2002-04, and Round-III in 2007-08) with the primary objective of providing databases on reproductive and child health in districts in India. Given the six-year completion of the National Board of Mission (2005-12), there was a felt need to focus on achievements and improvements so far. The process was initiated in 2012 – 2013 and as the nodal agency designated the International Institute of Population Sciences (IIPS) to conduct DLHS-4 by the Ministry of Health and Family Welfare, Government of India.

C. Rapid Survey on Children (RSoC)

Rapid Survey on Children (RSOC) in 2013-14 was conducted to get reliable information based on the surveys that would let the validation of information on the implementation of the Integrated Child Development System (ICDS) (Rapid survey on Children, 2014). This is a national household survey cum facility survey. The objectives of the survey is to evaluate the situation of the well-being of children and women according to the selected list of indicators provided by the Women and Child Development Ministry and the support given by the UNICEF (Rapid survey on Children, 2014).

4.1.2. A comparative analysis between the surveys

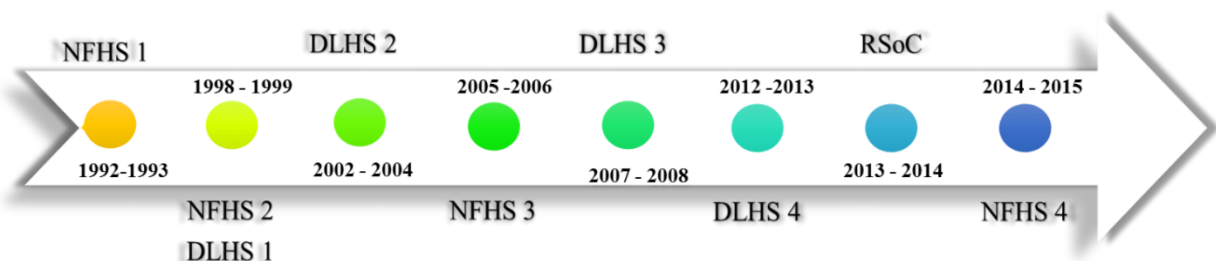
This section analyses and reviews the nine national health surveys under the broad themes; Survey characteristics, IYCF components, and IYCF shifts in the survey. The analysis helps to develop an understanding of the survey and the interrelationship between the surveys which further helps in analysing the shifts in the IYCF components and changes in IYCF practices.

4.1.2.1. Survey Characteristics

Under this theme (survey characteristics) five sub-themes namely survey period, the population covered, Methodology adopted, types of the questionnaire used in the survey and the health issues covered are discussed in detail. The summary of a comparative analysis of these subthemes is discussed in Annexure 1.

a) Survey time period

Figure 4.1: Surveys in different time periods



The above figure shows that all the surveys do not have any fixed duration or time interval when the surveys were conducted. (NFHS 2 and DLHS 1) whose actual year of the survey are overlapping is a clear example in this regard. The first NFHS was conducted in the year 1992 - 1993 followed by three more successive surveys with an interval of 6 – 9 years. Similarly, DLHS surveys were conducted at an interval of 4 – 5 years. It is found that the time interval between the NFHS surveys is more than the DLHS survey. The year of conducting NFHS, DLHS, and RSoC survey is almost either in the same year or conducted in the year with proximity. The second survey of NFHS and the first survey of DLHS is of the same year 1998 – 1999. The time interval between the three different surveys DLHS 4 (2012-2013), RSoC (2013 – 2014), and NFHS 4 (2015 – 2016) is one year.

b) Population covered

There are some changes observed in the population covered and the population targeted across surveys over a period of time. Initially, the NFHS was conducted at the national level health sample survey up to state level, which further included district in the recent survey (NFHS 4) conducted in the year 2015-16. The first survey was conducted in 24 states and Delhi. Further, the number of states increased in the following successive surveys i.e. 26 states (NFHS 2), 29 states (NFHS 3), and 29 states including districts (NFHS 4). All DLHS surveys covered a sample population of districts. In the first survey, 504 districts were surveyed whereas, in DLHS 4, 20 states and 6 Union Territories were surveyed. RSoC has covered a population of 28 states and the NCT of Delhi.

The target population also changes in each survey. All the reference surveys NFHS, DLHS, and RSoC have a common target population i.e. 15 to 49 years of ever-married women. In the first NFHS, the age group of ever-married women (target population) is 13 – 49 years, and in DLHS 1 and DLHS 2, the age group of currently married women is considered as 15 – 44 years. However, unlike previous surveys, NFHS 3 and NFHS 4 interviewed men aged 15 to 54 years and never-married women aged 15 to 49 years, as well as married women, and included questions on several emerging issues such as mortality. DLHS third and fourth surveys have considered 15 to 24 years as the age group to collect the data about the women who had never married.

c) Methodology

All the four surveys of NFHS (NFHS 1, 2, 3, and 4) follow the same methodology with the same sample design and sampling. Sampling size does vary in all four surveys. The survey follows the systematic multi-stage stratified sampling design which is conducted in two or three phases. All the nine surveys which includes NFHS four surveys, RSoC and three DLHS follow the same survey design i.e. systematic, multi-stage, stratified sampling design.

d) Type of questionnaire

Household and women questionnaires are the two questionnaires used in all four surveys. In addition, the first two surveys (NFHS 1 and NFHS 2) include the village questionnaire, NFHS 3 includes Men's questionnaire and the recent survey (NFHS 4) includes both Men's and Biomarker questionnaires. Men's questionnaire is to understand the participation of men in maternal health, adolescent reproductive health, high-risk sexual behavior, family life education, safe injections, and knowledge about tuberculosis.

Household and women questionnaires are the two questionnaires used in all nine surveys (NFHS 1 to 4, DLHS 1 to 4, and RSoC). Where men questionnaires were used in both NFHS 1 and NFHS 2, only DLHS 2 designed questionnaire for men and named it husband questionnaire. Except for DLHS 3 and DLHS 4, no other survey have a village and facility questionnaire. RSoC have an exceptional questionnaire i.e. AWC questionnaire.

e) Health issues covered in a survey

Fertility, infant and child mortality, Practice of family planning, nutrition, Maternal, and Child Health are the health issues covered in the first NFHS. Further, more health issues are added in the three successive surveys (NFHS 2, NFHS 3, and NFHS 4) which includes reproductive health problems, domestic violence, violence during pregnancy, on the status of women, Hb estimation, lead contents, iodine, and anthropometric measurement, high-risk sexual behaviour, family life education, blood testing for HIV, knowledge about TB, abortion, blood sugar, hypertension and tobacco usage.

DLHS 1 and DLHS 2 have covered the same women and child health issues of NFHS 2 such as maternal health care, child health care, Family planning, RTI/STI and HIV/AIDs and anemia in children and women. Whereas, DLHS 3 and DLHS 4 have covered the issues on the quality of the health facility at the local level, the efficiency of ASHA and JSY, and

adolescent health problems. Similarly, in the year 2013 -2014, the RSoC survey has covered issues on both mother and child's health, nutritional status of children and adolescent girls, and utilization of ICDS services.

4.1.2.2. Infant and Young Child Feeding (IYCF) components

During the NFHS, DLHS, and RSoC survey different terminology used in IYCF were defined and various recommendations were given by different organizations at the national and international levels. In this section, a comparative analysis is done on the definition and recommendation on IYCF suggested at the global and national levels in the survey. This section also discusses the issues covered on IYCF practices, questions covered related to IYCF, and the number of questions asked on breastfeeding and complementary feeding. The subthemes are broadly summarised in Annexure 2.

a) Global and National Recommendations on IYCF

At the global level WHO and UNICEF are the two nodal agencies that have defined the breastfeeding and complementary feeding practices and recommended IYCF practices guidelines for all the countries, in which one of them is India. At the national level, the Ministry of Women and Child Development and the Government of India have defined the terms and recommended IYCF practices.

The first NFHS data on child feeding practices were based on the several recommendations made on the promotion and support of breastfeeding by the Innocenti Declaration in the year 1990 and on feeding practices by the WHO Working Group in the year 1991 (UNICEF, 1990). This international recommendation suggests that infants should be fed only breast milk up to 4 to 6 months, adequate and appropriate semi-solid food should be introduced to child of the age 4 to 6 months to provide sufficient nutrients for the optimal growth of a child. Breast milk along with complimentary food should continue up through the second year of life or beyond. It also suggests the early initiation of breastfeeding, i.e. immediately after childbirth. In NFHS 2, World Health Organization and UNICEF came up with international recommendations with addition/changes in the previous recommendations suggested at the time of NFHS 1. It suggests that children must be given only breast milk up to 6 months of age, no other liquids or solid food are needed during this period. At the national level, the Reproductive and Child Health Programme (GoI) recommends - exclusively breastfeeding from birth to the age of four months and complementary feeding

from 6 months onwards. Whereas, Ministry of Women and Child Development, 2006, (GoI) recommended an exclusively breastfeeding to infants up to 6 months and complimentary at 6 months onward (UNICEF, 2006). In NFHS 3 and NFHS 4, it is suggested that exclusive breastfeeding up to 6 months of age and introduction of solids food from 6 months onward along with breast milk up to an age of 2 years.

Whereas, the IYCF recommendation and definition adopted in different DLHS is based on the recommendations suggested by the World Health Organization (WHO). DLHS 1 report does not give any such information on the IYCF definition and recommendations. The questionnaire has questions on early initiation of breastfeeding, advice received on breastfeeding, and duration of breastfeeding. During DLHS 2, it was suggested that immediately after birth breastfeeding should be initiated and to be continued exclusively up to minimum age of six months. It also talks about colostrum milk and semi-solid and solid food should be given at the right interval. Whereas, in DLHS 3 WHO suggests yellowish milk, known as colostrum milk which is the first milk of the mother highly nutritious for children and protects them from diseases along with breastfeeding and complementary. RCH program under GoI suggests that children up to 4 months should be given exclusive breastfeeding for healthy childhood. Definition and recommendations for IYCF practices are not available in DLHS 4. On the basis of WHO and UNICEF definition and recommendations in the year 2013, a Rapid Survey of Children (RSoC) was conducted.

b) Breastfeeding defined in the survey

In NFHS 1 and NFHS 2, the age of exclusive breastfeeding is considered children from birth up to 3 months, which later increased up to 6 months of life in third and fourth NFHS. Similarly, DLHS first and second survey have measured exclusive breastfeeding from birth up to 4 months of the child's age. In the first two surveys (DLHS 1 and DLHS 2), the early initiation time for breastfeeding was observed within 2 hours of childbirth which reduce within 1 hour of birth in DLHS 3. According the RSoC survey defined breastfeeding as the correct or good breastfeeding practices that include initiation of breastfeeding within the first hour of life, first six months only breastmilk, and continued breastfeeding along with solid food for at least two years.

c) Complementary feeding defined in the survey

NFHS 1 and NFHS 2 explained the term complementary feeding as the essential need of the children when mother's milk is not sufficient for the child's proper growth and development. The first two surveys suggest 4 – 6 months as the age to introduce complementary feeding with breast milk and the last two surveys (NFHS 3 and NFHS 4) suggest introducing an 'appropriate and adequate complementary feeding' in addition to continued breast milk after 6 months. DLHS report didn't explain and define the term complementary feeding. In RSoC, complementary feeding is explained such that after the completion of six months, children need to be fed the right foods both in quantity and quality along with mother's milk.

d) IYCF issues covered in Questionnaire

Questions related to IYCF such as breastfeeding, complementary feeding, and supplementary feeding are included as one section in the woman's questionnaire. The number of questions asked on complementary feeding during the survey has increased from NFHS 1 to NFHS 4. In NFHS 1 only one question apart from breastfeeding and prelacteal was asked on solid/ mushy food ("How many months old was the kid when you started giving the following regularly? Plain water, formula milk, other liquids, any solid or mushy food) and two questions in NFHS 2 for supplementary feeding. Almost all questions on IYCF practices asked during an interview are focusing on breastfeeding and prelacteal feeding. NFHS 3 questionnaire has included a maximum (seven) number of questions on complimentary food, supplementary food (Vitamin A and Iron), and prelacteal liquid, whereas NFHS 4 questionnaire has four questions on adequate dietary intake in addition to the questions asked in previous NFHS surveys. Complementary feeding practices questions were included in the DLHS 3 survey. DLHS 2 also has questions addressing the issue of complementary feeding but there were no specific questions for it. A total of 15 questions were asked during the RSoC survey on IYCF practices in which 12 questions are on breastfeeding and 3 questions are on complementary feeding.

4.1.2.3. Infant and Young Child Feeding shift in the relevant survey

This segment of the paper analyzes the trends of IYCF in the nine surveys conducted from 1990 to 2017. Firstly, it examines the IYCF practices shift in a decade; 2005 to 2015 (Table 4.1), and secondly, it studies the shift of IYCF indicators from NFHS 1 to three successive surveys; 2nd, 3rd and 4th National Family and Health Survey (Table 4.2).

a) IYCF practices shift in a decade (2005 to 2015)

Inappropriate and inadequate child feeding practices have reasons as delayed initiation and inadequate breastfeeding practices, dilution of milk, delayed introduction of complementary foods and intake of fluids other than breast milk, special preparation and feeding of low energy and nutrient-dense food, and reduced food during sickness. To understand the IYCF practices, five indicators are analyzed and comparisons are done between the surveys conducted within a decade. The five indicators talk about breastfeeding and complementary feeding; a Child should be breastfed within one hour of birth, exclusive breastfeeding and receiving breast milk with food, the number of times a child must be fed and the minimum number of food diversity with children are fed.

The NFHS 4 data of children aged between 0 – 5 months exclusively breastfed shows interesting findings (Table 4.1). There is a decline recorded from RSoC to NFHS 4 i.e. 64.9% to 54.9% where there is an improvement from NFHS 3 to NFHS 4, 46% to 54.9%. There is also an improvement recorded of 8.1% from DLHS 3 to NFHS 4 (46.8% to 54.9%). However, the result on children age 6 – 9 months receiving solid and semi-solid food and breast milk shows a decline from NFHS 3 (53%) to RSoC (50.5%) to further in the year 2015-16 NFHS 4 to 42.7 percentage. The data from DLHS 3 to NFHS 4 also shows a decline in the children age 6 – 9 months receiving solid and semi-solid food and breast milk by 14.4 percentage (57.1% to 42.7 %).

Depending on the myths and misconceptions about initiating breastfeeding, the delay can range from a few hours to several days. The misconception and belief is that the first breast milk (colostrum) is harmful to the health of the child. The mother's initial actions and preference for infant feeding often depend on the feeding practices followed by close family members (elders) and within the community. As a result, due to the early initiation of fluids and foods, babies were deprived of colostrum milk and also exposed to infectious diseases.

The dominant beliefs and fears show a negative impact on the working capacity of mothers. It is believed that the health of the mother weakens during breastfeeding. The compulsory labor of mothers outside the home has helped to trivialize breastfeeding practices. In the majority of families, exclusive breastfeeding is practiced in children under six months of age. The most common foods given to young children are animal milk, water, bottled water, honey, rice, dalia, halwa, and cookies. Children are deprived of essential nutrients due to such practices exposing them to contagious diseases. Socio-cultural beliefs and current economic realities are deeply rooted and difficult to change in children receiving adequate breastfeeding. .

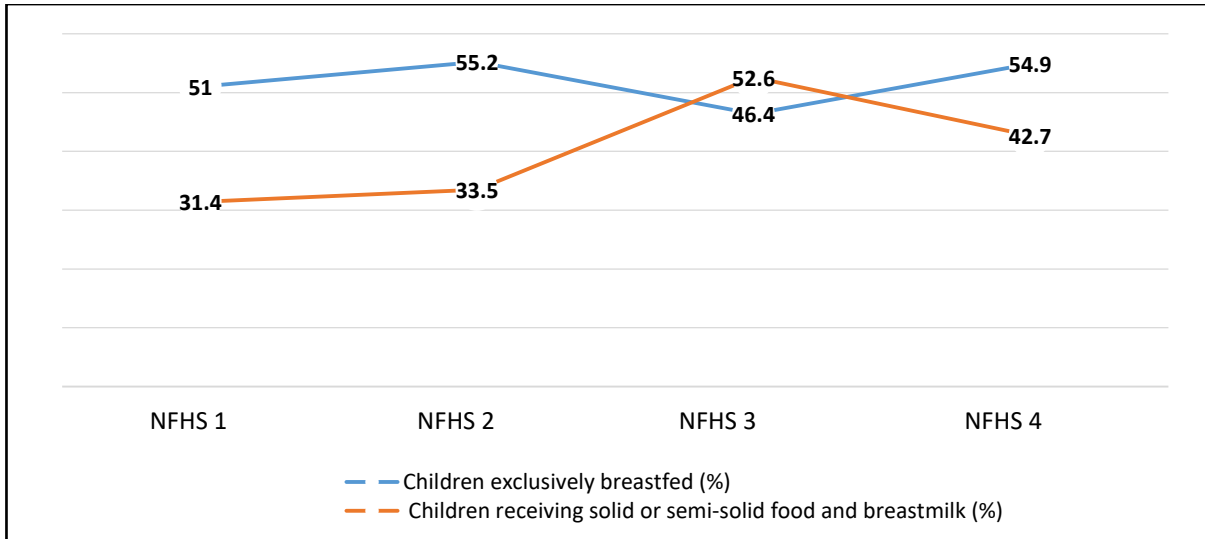
One of the most important reasons in the maximum number of households for the delay in initiating complementary feeding to children is the culture and rituals practiced within the community. Other researchers have also justified the reason for the late initiation of solid foods in children with the perception of the elder that semi-solid foods have an adverse effect on their health. Likewise, children's food during illness has been altered for reasons such as cultural and social beliefs and mothers' knowledge of feeding practices.

b) IYCF indicators shift from NFHS 1 to NFHS 4

Graph 4.1 shows a clear picture of breastfeeding and complementary feeding shifts taking place within the community. Every five to six years shift is observed in the percentage of breastfeeding children and also among the complementary feeding children. The data of breastfeeding and complementary feeding has shown huge variation within each successive survey. Whereas, the percentage of children who are fed within one hour of birth (Table 4.1) has shown an improvement in each successive year of NFHS surveys (from NFHS 1 to NFHS 4).

The percentage of children exclusively breastfed and children receiving solid and semi-solid food with breast milk from NFHS 1 to NFHS 2 has remained stagnant or showed the same pace of upward movement. The percentage of children exclusively breastfed has shown a slight decline from NFHS 2 to NFHS 3 where the percentage of children receiving solid and semi-solid food with breast milk has shown an improvement.

Graph 4.1: Comparative analysis of exclusive breastfeeding and complementary feeding from NFHS 1 to NFHS 4 and its interrelation



Source: Extracted and analysed the National Family Health Survey

Once again there is a shift in the data of exclusive breastfeeding and complementary feeding from NFHS 3 to NFHS 4. The data shows an increase of 8.5 percentage in the children exclusively breastfeeding up to 6 months of age. Whereas there is a sharp decline of 9.9 percentage in the children receiving food with breast milk. This improvement and decline could be due to various factors depending on the policy addressing these issues, social determinants of IYCF, Frontline Health Workers' attitudes, and awareness generation, mothers' understanding, and perceptions towards the IYCF practices and community level practices.

Table 4.1: Comparative analysis of IYCF practices in India

Infant and Young Child Feeding (IYCF) Practices	NFHS 3 (2005-06)	DLHS 3 (2007-08)	RSoC (2013-14)	NFHS 4 (2015-16)
Children breastfed within one hour of birth (%)	25	40.5	44.6	41.6
Children age 0-5 months exclusively breastfed (%)	46	46.8	64.9	54.9
Children age 6 – 9 months receiving solid or semi-solid food and breast milk (%)	53	57.1	50.5	42.7
Fed a minimum number of times	21	NA	36.3	NA
Had a minimum number of diversity	Included in 21 (minimum number of times)	NA	19.9	NA

Source: (NFHS 3 2006), (RSoC 2014) and NFHS 4 (2016)

Table 4.2: Trend in IYCF practices in NFHS successive years

	Children breastfed within one hour of birth (%)	Children exclusively breastfed (%)	Children receiving solid or semi-solid food and breastmilk (%)	Total children receiving an adequate diet (%)
NFHS 1 (1992 -1993)	9.5	51	31.4	NA
NFHS 2 (1998 - 1999)	15.8	55.2	33.5	NA
NFHS 3 (2005 - 2006)	25	46.4	52.6	NA
NFHS 4 (2015 - 2016)	41.6	54.9	42.7	11.6

Source: National Family Health Survey (NFHS, 1, 2, 3, 4)

4.2. Review of Policies on IYCF Practices

According to the Australian Concise Oxford Dictionary, Policy is a course or principle of action, adopted or proposed by a government, party, business or individual. A good policy states the matter of principles, focused on action (what to be done and by whom) and it should be an authoritative statement. Whereas, the term government policy is used to describe any course of action which intends to change a certain situation or real life. The government uses various policies to handle a wide range of issues. One of such issues is the nutritional status and feeding practices of the children. To address these issues on nutrition and feeding practices of children different international and national agencies, organizations and governments came up with strong and focused policies over the years with time to time modifications. Similarly, the various program under the policies on these issues at the national level has played a major role in overall child survival and development.

4.2.1. National and International policies and programs

Some of the national and international policies and programs focusing on the feeding practices of children and nutrition with feeding practices as a component (Refer Table 4.3 and Table 4.4) are discussed in detail below:

Table 4.3: List of International Policies / Programme on IYCF

Year	Organization	Policies / Programme
1982	USAID and UNICEF	Child Survival and Development Revolution (CSDR)
1990	World Health Organization and UNICEF	Innocenti Declaration on the Protection, Promotion, and Support of Breastfeeding
1990		Convention on the Rights of the Child
1991	GOI, UNICEF, WHO, and several voluntary organizations – BPNI, TNAI, ACASH, VHAI	Baby-Friendly Hospital Initiative (BFHI)
2002		World Fit for Children
2003	World Health Assembly (WHA) and UNICEF	Global Strategy for Infant and Young Child Feeding (GSIYCF)

Table 4.4: List of National Policies / Programme on IYCF

Year	Organization	Policies / Programme
1975	Ministry of Health and Family Welfare and Ministry of Social Welfare	Integrated Child Development Services (ICDS)
1983	Government of India	National Health Policy (NHP)
1992		Child Survival and Safe Motherhood (CSSM)
1992	Department of Women and Child Development	Infant Milk Substitute, Feeding bottles, and Infant Foods (Regulation of Production, Supply and Distribution) Act – IMS Act
1993	GOI, UNICEF, WHO and several voluntary organizations – BPNI, TNAI, ACASH, VHAI	Baby-Friendly Hospital Initiative (BFHI)
1993	Ministry of Women and Child Development	National Nutrition Policy (NNP)
1994	Food and Nutrition Board, Department Women and Child Development, Ministry of Human Resource Development and Government of India	National Guidelines on Infant Feeding

2004		Integrated Management of Neonatal and Childhood Illness (IMNCI)
2006	Ministry of Health and Family Welfare (GoI)	National Infant and Young Child Feeding (NIYCF)
2009	Ministry of Health and Family Welfare	Navajat Sishu Suraksha Karykram (NSSK)
2011		Home Based Newborn Care (HBNC)
2013	Ministry of Health and Family Welfare	Reproductive Maternal Newborn Child and Adolescent Health Strategy (RMNCH+A)
2013	Department of Social Welfare	National Policy for Children
2017		Maternity Benefit (Amendment) Act
2017	Ministry of Health and Family Welfare	Mother's Absolute Affection (MAA)
2018	Ministry of Women and Child Development	National Nutrition Mission (POSHAN ABHIYAN)

1) Child Survival and Development Revolution (CSDR)

In the year 1980, James P. Grant was appointed as head of UNICEF. He was convinced that along with economic success, real human development also needed to concentrate on improving health, education, and individual well-being. In December 1982, in his annual report on *The State of the World's Children*, Grant launched an initiative known as the Child Survival Revolution. It focused to reduce childhood mortality. It was based on the acronym “GOBI” which represent the four program components, ‘G’ stands for growth monitoring to identify early signs of child malnutrition, ‘O’ for Oral rehydration to prevent death due to dehydration as a consequence of diarrhoea, ‘B’ Breastfeeding to stop unhealthy infant formula in poor communities, and ‘I’ for Immunization against vaccine-preventable diseases. Later on, three F’s were added, food security, female education, and family planning termed as GOBI-FFF. Later, it was observed that the child survival approach shifted to the child development agenda. Hence, the Child Survival Revolution was termed and called as “Child Survival and Development Revolution”. (WHO, 1985)

2) Integrated Child Development Services (ICDS) Scheme

Integrated Child Development Services (ICDS) was launched in 1975 as the first program of the Government of India on child malnutrition, morbidity, and mortality. It focused to improve the nutritional and health status of children aged 0-6 years and also enhancing the capabilities of mothers to look after their children's health and nutrition. Later in 2009, the Government of India stated an urgent need to adopt a comprehensive approach including promoting optimal IYCF, supplementation, dietary diversification, and public health measures (Ministry of Women and Child Development, 2009). The objective of the scheme is;

- To improve the nutritional and health status of children aged 0 to 6;
- To lay the foundations for good psychological, physical and social development of the child;
- To reduce the occurrence of morbidity, mortality, malnutrition and school dropout;
- To achieve effective coordination of policies and their implementation between different departments to promote child development; and

- To strengthen the mother's ability to meet the normal health and nutritional needs of the child through appropriate nutrition and health education.

The services provided under the scheme are; Supplementary Nutrition, Pre-school non-formal education, Nutrition and health education, Immunization, Health check-up and Referral services.

3) *National Health Policy (NHP)*

The first National Health Policy was approved by the Parliament of India in 1983 (Kishore J., 2005). Since the formulation of the first NHP, “there have been marked changes that were observed in the determinant factors relating to the health sector”. The public health investment in the country over the year was comparatively low and declining and also there was a percentage decline in GDP. Under these given circumstances NHP was revised in 2002 with a renewed focus. Its objective was to achieve an acceptable standard of good health, to ensure more equitable access to health services amongst the general population of the country, to increase the aggregated public health investment, and to strengthen the capacity of public health administration. The revised NHP in 2002 had the opportunity to review existing policies and documents such as World Development Report 1993, National Family Health Survey 1993-94 and 1998 -99 and Census 2001 to update and draft NHP 2002. The first National Family Health Survey included exclusive breastfeeding as one of the indicators in 1993. In the year 2000, Millennium Development Goals were decided in which two goals MDGs 4 and MDGs 5 focus on to reduce poverty and to reduce maternal and child mortality. In the year 2002, World Fit for Children program was launched to protect, promote and support exclusive breastfeeding for six months and continued breastfeeding with safe, appropriate and adequate complementary feeding up to two years of age and beyond. Despite all the initiatives, child and maternal health did not receive much attention as a major issue that should be addressed in NHP 2002. Thereafter, in 2017 the National Health Policy is further updated and approved by the Union cabinet after two years of the bill circulated among stakeholders (Ministry of Health and Family Welfare, 2017). This policy will aim to provide health care “safely” to all, it will address current and emerging challenges that arise from constantly changing socio-economic, technological and epidemiological scenarios.

4) Baby-Friendly Hospital Initiative (BFHI)

“Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding” was adopted by the World Health Organization and UNICEF in 1990. The Innocenti Declaration reflected both the spirit of the support that was being mobilized for breastfeeding and the recognition of the right of the infant to nutritious food enshrined in the Convention on the Rights of the Child¹². (UNICEF and WHO, 2018).

The Convention on the Rights of the Child, 1990 states that governments must combat disease and malnutrition, including the advantages of breastfeeding. In the year 1991, Baby-Friendly Hospital Initiative (BFHI), also termed as Baby-Friendly Initiative (BFI) following the Innocenti Declaration was launched as a worldwide program. This initiative was adopted as a solution to the problem of decline in breastfeeding due to lack of health care support system. This major program was launched by the National Task Force including the Government of India, UNICEF, WHO, and several voluntary organizations (BPNI, TNAI, ACASH, VHAI, etc.), for a global launch in 12 countries and slowly progressing to other countries. The initiative aimed to improve the care of pregnant women, mothers and newborns in health facilities through the provision of maternity services to promote and support breastfeeding. In 1993, the initiative was started in India, under which hospitals were required to follow the Ten Steps” for successful breastfeeding. If a hospital adopts and follows these ten steps then, it was assessed and certified as Baby-Friendly (BF) Hospitals.

After seven years of BFHI, an evaluation study was conducted by BPNI in 2000. The report highlights an improvement in breastfeeding initiation, significantly reduce in prelacteal feeds and supplements during the hospital stay. The report also states that the health worker's capacity to help mothers with breastfeeding problems has shown no significant changes after the BFHI implementation (UNICEF and WHO, 2018). Similarly, a comparative research study was conducted between Baby-Friendly Hospital and Non-Baby Friendly Hospital in 2016. The study reported that the scene between baby-friendly hospitals and non-baby-friendly hospitals is similar in terms of nurses' knowledge, but it is the uncertified hospitals where the feeding practices are better implemented (Begum et al., 2016).

¹² World Health Organization. Baby-friendly Hospital Initiative. (<http://www.who.int/nutrition/topics/bfhi/en/>)

5) *Child Survival and Safe Motherhood (CSSM)*

The Safe Maternal and Child Survival Program (CSSM) was launched in 1991 in 100 districts of the country covering Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh. It was the first public health initiative in India that covered the health of newborns. India's Eighth Five Year Plan adopted the program to reduce the infant mortality rate in 1992. The promotion of exclusive breastfeeding is one of the strategies adopted in this program. Services provided to children and mothers through this program include newborn care at home, clean delivery at home, primary immunization, and correct management of illness. The year 1998 was celebrated as the year of "Safe Motherhood" by WHO and the slogan raised was pregnancy is special-- let's make it safe. In 1997, the Government of India decided to launch the Reproductive and Child Health (RCH) program. Later CSSM (Child Survival and Safe Motherhood) was integrated with Reproductive and Child Health (RCH) (Chakraborty, 2005).

6) *Infant Milk Substitute, Feeding bottles, and Infant Foods (Regulation of Production, Supply, and Distribution) Act – IMS Act*

The Indian National Code for the Protection and Promotion of Breastfeeding, was adopted in December 1983 and was drafted based on the International Code of Marketing of Breastmilk Substitutes, but has a more categorical preamble and some relatively more stringent provisions. However, the Code is not legislated yet. The purpose of the Indian National Code for the Protection and Promotion of Breastfeeding is to contribute to the healthy and adequate nutrition of infants through the protection and promotion of breastfeeding and by ensuring proper use of milk substitutes when there is adequate information and appropriate marketing and distribution is present.

In the year 1986, Governments at the World Health Assembly urged for the ban on donated supplies of baby milk in hospitals and other places. These activities by the feeding bottle and infant food manufacturing companies were seen as a threat for Baby-Friendly Hospital Initiative. This was so because this free distribution of baby milk/foods will not allow a single hospital to be certified as baby-friendly. The ending of free supplies of these baby milk in the countries became the prime target for WHO and UNICEF.

The Infant Milk Substitute, Feeding bottles, and Infant Foods (Regulation of Production, Supply and Distribution) Act, was enacted in 1992 and came into force in 1993

(Ministry of Women and Child Development, 1992). This act provides regulation against the commercial influence of the baby food industry on people to protect and promote breastfeeding. According to this regulation, health providers are not required to use health systems for the promotion of baby foods or companies. There is also the prohibition of any kind of benefits, direct or indirect to the manufacturers of baby food companies under this act. Later, many loopholes were observed in the Act and as a result of which the Department of Women and Child Development formed a national task force and presented an amendment Bill to Parliament in 2002. As a consequence of the persistent efforts of the Department of Women and Child Development, the amendment of the IMS Act was enacted in 2004. The important amendment in the Act was to extend the age of exclusive breastfeeding from 4-6 months to 6 months.

7) *National Nutrition Policy (NNP)*

In 1993, the Government of India adopted National Nutrition Policy (NNP) to tackle the nutrition problems through direct and indirect nutrition interventions for vulnerable groups and development policies to improve their nutrition status. In the direct intervention, the strategy was the extension of the ICDS scheme to cover the children who are nutritionally at risk. In this policy mothers were no longer passive observers in the growth monitoring of their children. Mothers were empowered by adequate nutrition and health education with growth monitoring to manage the nutrition needs of their children effectively.

Further, the National Plan of Action on Nutrition (NPAN) was laid down in 1995 focusing on reducing malnutrition which involves a multi-sectoral approach for enhanced action on determinants of undernutrition (Ministry of Human Resources Development, 1995).

Later, the National Nutrition Strategy in 2017 approved to focus on preventing and reducing undernutrition through the whole life cycle, especially in the first three years of life. The longer perspective of the strategy was to prevent and reduce all forms of undernutrition by 2030 to reduce undernutrition by 3 percent in children aged between 0-3 years and to reduce the prevalence of anemia among young children by 2022. To do this, it included the components such as infant and young child care and nutrition, infant and young child health and Maternal Care, Health and Nutrition focusing on the various features of the mother and child feeding practices. It also included the reforming of THR under the ICDS Scheme.

8) *Infant and Young Child Feeding (IYCF) Practices*

At the 2001 World Health Assembly, a landmark decision was made to promote exclusive breastfeeding for the first six months, introduce complementary feeding thereafter, and continue breastmilk for up to 2 years and beyond. Further, new resolutions were made towards Infant and Young Children's nutrition as the Global Strategy on Infant and Young Child Feeding was adopted in the 55th World Health Assembly (2002). The approach was to improve the nutritional status, growth and development for the existence of young children and infants through optimal feeding. Giving support to mothers, this strategy ensured to protect, promote and support exclusive breastfeeding for six months and continued breastfeeding up to two years and beyond. It also sought to promote timely, adequate, appropriate and safe complementary feeding with continuous breastfeeding by guiding mothers in difficult circumstances on feeding infants and young children.

The planning commission for the first time included breastfeeding and complementary feeding as a goal for the Tenth Five Year Plan (2002 – 2007). Later, it was included in the national nutrition goals. Based on this context, the first guidelines on Infant and Young Child Feeding practices were written in 2003 and the revised edition was published in 2006.

In 2002, the Optimal Infant and Young Child Feeding (IYCF) was presented in WHO/UNICEF Global Strategy on Infant and Young Child Feeding as:

“... a global public health recommendation, children should be exclusively breastfed for the first six months of life for optimal growth, development and health. Thereafter, to meet their changing nutritional needs, children must have access to healthy and nutritionally adequate complementary foods by continuing to breastfeed until they are two years of age or older. Exclusive breastfeeding from birth is possible, with the exception of some rare medical conditions, as defined by the World Health Organization and UNICEF, and almost all mothers can breastfeed.” (WHO, 2002).

The document describes the benefit of breastfeeding from early initiation to exclusive breastfeeding for six months to continue breastfeeding for up to two years. On the other side, it explains the importance of complementary feeding, the frequency of feeding and the

quality and quantity of complementary food. The guideline even focuses on growth monitoring and feeding practices for particular cases, such as during and after illness, malnourished children, premature and low birth weight children, and feeding practices during pregnancy, natural and man-made emergencies.

“World Breastfeeding Trends Initiative” (WBTi) tool was an adaptation of the tool Infant and Young Child Feeding: A tool for assessing national practices, policy and programs published by WHO in the year 2003. It was developed to enhance the optimal IYCF practices through national actions. Later, in 2008 the tool was further updated and included global developments on maternity protection and mother support.

9) Integrated Management of Neonatal and Childhood Illness (IMNCI)

India in the year 2000, adapted the “Integrated Management of Childhood Illness (IMCI) strategy, to focus on neonatal care and to reduce infant mortality”. IMCI strategy was modified and renamed as Integrated Management of Neonatal and Childhood Illness (IMNCI) to promote neonatal health and survival (Ministry of Health and Family Welfare, 2010). In India, Integrated Management of Neonatal and Childhood Illness (IMNCI) was implemented in 2003. Later, IMNCI was integrated as a part of the government’s program under Reproductive and Child Health II, to provide continuum care to children. At the community and health facility level, the health personnel under IMNCI were trained to manage new-born children and childhood illnesses. As a component of IMNCI, the health workers are required to visit the home of young children to promote exclusive breastfeeding.¹³

10) Navajat Shishu Suraksha Karykram (NSSK)

Navjaat Shishu Suraksha Karykram (NSSK) was a program launched by the Ministry of Health and Family Welfare in 2009 to reduce the Infant Mortality Rate (IMR) from 55 to 30 by the year 2012. The focused objective of the program was to provide care at birth, prevention from hypothermia and infection, and Basic New-born Resuscitation. Among all the components to achieve the above objective, one component was to ensure early initiation of Breastfeeding.

¹³ Integrated Management of Neonatal and Childhood Illnesses in India. (n.d.). Retrieved from https://www.unicef.org/sowc08/docs/sowc08_panel_2_4.pdf.

11) Home Based Newborn Care (HBNC)

Home Based New-born care was adopted in 2011 to provide post-partum and neonatal care at home. This strategy targets all the mothers and the neonates who are either delivered at the institution or home. Under this strategy, ASHAs are trained to improve neonatal survival. One of the performance ASHA should perform following activities to improve the breastfeeding practices through teaching mothers proper initiation and maintaining breastfeeding, diagnosing problems mothers are facing with breastfeeding, awareness generation on exclusive breastfeeding, and unhealthy practices such as early bottle feeding.

To go further in the fight against undernutrition and poor feeding practices, the HBNC got an extension in a new initiative in the form of Home-Based Care for Young Child (HBYC) in the year 2018. The goal of HBYC is to reduce infant mortality and morbidity and improve the nutritional status, growth, and early childhood development of young children through home visits. Additionally, our community health worker, ASHA, and the Anganwadi worker will provide prevention services at the doorstep of the beneficiary up to 15 months of the child. Under this initiative, their home visit after 42 days of the new-born baby is extended up to 15 months during which they have to make a total of 5 visits on the 3rd, 6th, 9th, 12th, and 15th months of the baby to give age-specific counseling.

12) Reproductive Maternal Newborn Child and Adolescent Health Strategy (RMNCH+A)

In 2013, National Health Mission was formed merging the two major national health sub-mission, National Rural Health Mission (2005) and National Urban Health Mission (2013). One major focus of the mission was to expand the emphasis from child survival to child development of children below 18 years of age through the combined effort of the community, Anganwadi and school-based health services. Reproductive Maternal New-born Child and Adolescent Health Strategy (RMNCH+A) was one of the core strategies adopted under the National Health Mission (NHM). This strategy was launched in 2013 to address the causes of maternal and child mortality and to access the reasons for the delay in health care and services. Along with these issues, it also develops a strategic approach to progress an understanding of continuum care.

13) National Policy for Children

In 1974, the National Policy for Children realized that children's programs have a prominent place in national plans and strategy for the development of human resources so that children become robust, physically fit, mentally and morally alert and healthy citizens. The policy emphasizes equal opportunities for the development of all children during the growing season and affirms the government's commitment to a rights-based approach. To address the persistent and emerging challenges of children and their circumstances, the Government of India hereby adopts the National Policy Resolution on Children 2013.

According to the policy, every child has the right to adequate nutrition and must be protected from hunger, deprivation and malnutrition. The State is committed to guarantee this right to all children by giving them access to the services and supports necessary for the holistic well-being of all children, taking into account their individual needs at different stages of life. To address the main causes and determinants of child mortality through continuum-of-care interventions, the focus should be on nutrition, sanitation and infant health education.

14) Maternity Benefit Act

Maternity Benefit Act 1961, was a prime law in India having positive implications for breastfeeding. It was implemented to protect the dignity of motherhood, by providing complete health care to women and her child when she is unable to perform their job due to health condition. Under these provisions, a woman can avail of paid maternity leave for twelve weeks enabling her to breastfeed her child during the first three months. This assures her that her job rights will be looked after while she stays at home to take care of her child.

Later, in 2017 the Maternity Benefit Act was amended as Maternity Benefit (Amendment) Act, 2017 with a provision of crèche facility in different establishments and an increase in paid maternity leave benefits up to 26 weeks (Ministry of Law and Justice, 2017)

15) Mother's Absolute Affection (MAA)

Mother's Absolute Affection (MAA) was launched in 2017 as a national program by the Ministry of Health and Family Welfare to promote breastfeeding and to provide the provision of counseling services to support breastfeeding in health systems (MAA, 2016). The program was named as "MAA" (Mother's Absolute Affection) to extend support to

lactating mother by family members and at health Centres to breastfeed successfully. The focus of the program was to achieve higher rates of breastfeeding by revitalizing efforts to promote, protect, and support breastfeeding practices across health systems. According to this program, breastfeeding should be positioned at the centre and as an important component for the child's survival and development.

16) National Nutrition Mission (POSHAN ABHIYAN)

POSHAN (Prime Minister's Overarching Scheme for Holistic Nutrition) Abhiyan also known as National Nutrition Mission was launched on 8th March 2018 by Prime Minister on the occasion of the International Women's Day from Jhunjhunu in Rajasthan (NITI Aayog, 2018). It directs the country's attention to the problem of malnutrition and addresses it as a mission. It is a flagship program to improve nutritional outcomes for children, pregnant women, and nursing mothers. It encompasses monitoring and reviewing the implementation of all such schemes and utilizes existing structural arrangements of line ministries. It is supported by a National Nutrition Strategy prepared by NITI Aayog to achieve malnutrition-free India by 2022. It is implemented in three phases from 2017-18 to 2019-20 (NITI Aayog, 2018).

It includes robust convergence mechanism, ICT based Real-Time Monitoring System, incentivizing states/UTs for meeting the targets and Anganwadi Workers (AWWs) for using IT-based tools, Eliminating registers used by AWWs, introducing measurement of the height of children at the Anganwadi Centres (AWCs), Social Audits, setting up Nutrition Resource Centres.

Hence, keeping these features in mind eight pillars of the mission are identified. Those are ICDS-CAS (Common Application Software), convergence, behavioural change, IEC advocacy, training and capacity building, innovations, incentives and grievance redressal.

As an objective, it targets to reduce stunting, undernutrition, anaemia (among young children, women, and adolescent girls) and reduce low birth weight by 2%, 2%, 3%, and 2% per annum respectively. Although the target to reduce stunting is at least 2% per annum, the mission would strive to achieve a reduction in stunting among children in the age group 0-6 years from 38.4 % (NFHS 4) to 25% by 2022.

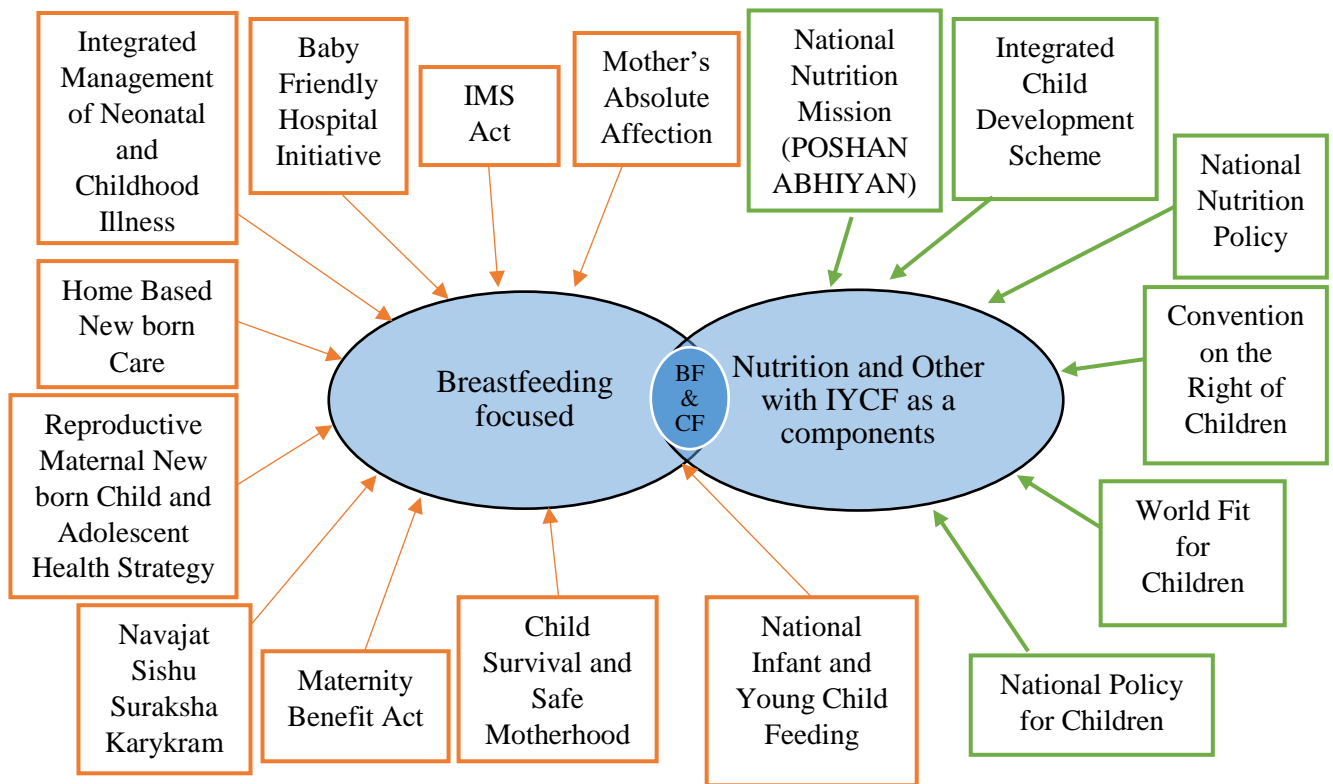
4.2.2. Similarities and Dissimilarities in Policies/ Programs

The above policies/programs on breastfeeding and child feeding practices can be segregated into two major sections based on the focus and objectives of the policy/program. These sections are (Figure 4.2):

4.2.2.1. Policy/program focusing nutrition with IYCF as a component

4.2.2.2. Policy/program focusing on breastfeeding

Figure 4.2: National Policies / Programme contrast between breastfeeding and nutrition with IYCF as a component



4.2.2.1. Policy/ program focusing nutrition with IYCF as a component

The second section includes all the policies/programs on nutrition and health with IYCF as components. There are six such policies/programs discussed above which are not designed for IYCF practices but they do have an impact on the nutrition health of children and their feeding practices (Table 4.5). These are those policies/programs which are indirectly related and cover IYCF and bring the changes. These are the policies that are designed to improve the nutrition status of children impacting the feeding practices. At the national level, the policies/programs in this section are ICDS, NNP, Convention on Right of

the Children, World Fit for Children, National Policy for Children, and National Nutrition Mission.

Table 4.5: Related objectives of the policy and programs primarily focusing on nutrition and IYCF

Policies / Programme	Related focus / Objective
National Policy for Children	To address the main causes and determinants of child mortality through continuum-of-care interventions and child feeding practices.
National Nutrition Policy (NNP)	To tackle the nutrition problems through direct and indirect nutrition interventions for vulnerable groups and development policies to improve their nutrition status
Convention on the Rights of the Child	Governments must combat disease and malnutrition, including the advantages of breastfeeding
Integrated Child Development Services (ICDS) Scheme	To improve nutritional and health status of children age 0-6 years and also to enhance the capabilities of mothers to look after their children health and nutrition
World Fit for Children	To protect, promote and support exclusive breastfeeding for six months and continued breastfeeding with safe, appropriate and adequate complementary feeding up to two years of age and beyond
National Nutrition Mission (POSHAN ABHIYAN)	To reduce stunting, undernutrition, anaemia (among young children, women, and adolescent girls) and reduce low birth weight by 2%, 2%, 3%, and 2% per annum respectively

Source: Developed on the basis of literature reviewed for the study on

4.2.2.2. Policy/ program focusing on breastfeeding

The first section has a total of ten policies/programs with the objective and focuses to improve the status of breastfeeding practices in children.

Table 4.6: Related objectives of the policy and programs primarily focusing on breastfeeding

Policies / Programme	Related focus / Objective
Mother's Absolute Affection (MAA)	To promote breastfeeding and to provide provision of counseling services to support breastfeeding in health systems
Maternity Benefit Act	To protect the dignity of motherhood by providing complete health care to women and her child when she is unable to perform her job due to health condition
Reproductive Maternal Newborn Child and Adolescent Health Strategy (RMNCH+A)	To address the causes of maternal and child mortality and to access the reasons for the delay in health care and services, to progress an understanding of continuum care.
Home Based Newborn Care (HBNC)	To provide post-partum and neonatal care at home, activities to improve the breastfeeding practices
Navajati Sishu Suraksha Karykram (NSSK)	To provide care at birth, prevention from hypothermia and infection, and Basic Newborn Resuscitation, one component was to ensure early initiation of Breastfeeding
Integrated Management of Neonatal and Childhood Illness (IMNCI)	To promote neonatal health and survival, to promote exclusive breastfeeding.
Infant and Young Child Feeding (IYCF) Practices	To generate awareness and action to improve infant feeding practices as a means to reduce infant mortality and prevent child malnutrition.
Infant Milk Substitute, Feeding bottles, and Infant Foods (Regulation of Production, Supply and Distribution) Act – IMS Act	Provides regulation against the commercial influence of the baby food industry on people to protect and promote breastfeeding

Child Survival and Safe Motherhood (CSSM)	Promotion of exclusive breastfeeding
Baby-Friendly Hospital Initiative (BFHI)	To improve the care of pregnant women, mothers and new-borns at health facilities through providing maternity services for protecting, promoting and supporting breastfeeding

Source: Developed on the basis of literature reviewed on various policies/programmes for the study

These policies and programs are either specifically formulated for breastfeeding or designed for the maternal and child overall development with breastfeeding as one of its components (Table 4.6). Among these ten policies/programs, National IYCF had a holistic objective on infant and child feeding but due to narrow focus and implementation strategy, it is observed that it got restricted and dedicated to breastfeeding. Rest nine policies/programs, MAA, IMS Act, BFHI, IMNCI, HBNC, RMNCH, NSSK, CSSM, and Maternity Benefit Act directly focusing on breastfeeding.

4.3. Discussion

As a summary, the chapter concludes that not all the surveys have a fixed duration or time interval when the surveys were conducted. Between NFHS 2 and DLHS 1 the actual survey year overlaps is a clear example in this regard. It can be seen that the time interval between the NFHS surveys is greater than that of the DLHS survey. The year in which the NFHS, DLHS and RSoC survey was carried out is almost either the same year or the year of proximity. Some changes were observed in the population covered and the target population across the surveys over a period of time. Initially, the National Family Health Survey was conducted nationally to the state level, which further included the district in the recent survey (NFHS 4) conducted in 2015-16.

The target population changes in every survey. The nine surveys (NFHS 1, 2, 3 and 4, DLHS 1, 2, 3 and 4 and RSoC) follow the same survey design, i.e. a systematic stratified sampling plan, in several stages. The household and women's questionnaires are the two questionnaires used in the nine surveys (NFHS 1 to 4, DLHS 1 to 4 and RSoC). Fertility, infant and child mortality, the practice of family planning, nutrition, maternal and child health

are the health issues covered in the first NFHS. In addition, other health problems are added in the three successive surveys (NFHS 2, NFHS 3 and NFHS 4). DLHS 1 and DLHS 2 covered the same women's and children's health issues of NFHS 2 such as maternal health care, child health care, family planning, RTI / STI and HIV / AIDS and anaemia in children and women. Whereas, DLHS 3 and DLHS 4 covered issues on the quality of the health facility at the community level, the effectiveness of ASHA and JSY, and adolescent health issues. Likewise, during the year 2013-2014, the RSoC survey covered questions on maternal and child health, child and adolescent nutrition and the use of ICDS services. IYCF-related issues such as breastfeeding, complementary feeding and complementary feeding are included in a section in the woman's questionnaire. The number of questions asked about complementary feeding during the survey increased from NFHS 1 to NFHS 4. Questions about complementary feeding practices were included in the DLHS 3 survey. DLHS 2 also has questions addressing the issue of complementary feeding, but there were no specific questions for this. A total of 15 questions were asked during the RSoC survey on IYCF practices in which 12 questions related to breastfeeding and 3 questions to complementary feeding.

The change in trend, in a decade from NFHS 3 (2005 - 06) to NFHS 4 (2015 - 16) at the national level, shows a clear drop of 9.9 percent in children receiving solid or semi-solid foods and breast milk. Likewise, most states show a similar decline with varying percentages. Out of 29 states, only four states (Manipur (1.4%), Nagaland (1.7%), Chhattisgarh (4.8%) and West Bengal (4.9%)) showed an improvement in the percentage of children receiving solid or semi-solid foods. food and breast milk. But in the rest of the 22 states (except for the 3 states where their percentage is not shown, based on less than 25 unweighted cases), the consumption of complementary foods among children has declined. Among these 22 states, 12 states show a decline above the national average (9.9%).

Hence, the trends of National surveys on IYCF reports show a marginal decline in the number of stunted children and an increase in wasted children in national surveys. It also revealed an improvement in children exclusive (exclusively) breastfeeding and a decline in the number of children receiving both solid or semi-solid food and breastmilk. Complementary feeding has attracted less attention in feeding practices and less emphasis on complementary feeding as compared to breastfeeding in the National policies.

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CHAPTER 5

VILLAGE HEALTH AND NUTRITION DAY (VHND) AND ROLE OF FRONTLINE HEALTH WORKERS ON VHND

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CHAPTER 5

VILLAGE HEALTH AND NUTRITION DAY (VHND) AND ROLE OF FRONTLINE HEALTH WORKERS ON VHND

5. Overview

This chapter of the study tries to comprehend the quality of services provided at the VHND and its overall impact on the child's nutritional status. The chapter objective is to identify the gap in the quality of services provided at Village Health and Nutrition day. Based on the literature reviewed, very limited studies have been carried out on the evaluation of VHND and further, the number of articles reduces which focuses on child health and nutrition. Therefore, this chapter aims at the assessment of functioning and quality of services available at the Village Health and Nutrition Day. Total eleven VHND are visited to observe and assess the process and functioning of VHND and to comprehend the gaps of service provision in VHND. During the process, 38 Frontline Health Workers and 45 women are interviewed in the field study. To meet the objective, five group discussions are conducted with lactating mothers having child less than 2 years and pregnant women. Based on the objective to assess the VHND, the purpose of this chapter is to evaluate the child health and nutritional services available at Village Health and Nutrition Day and its functioning. To meet this purpose of assessing VHND functioning, the study answers the research questions in the following sections;

- Detailed analysis is made to understand the infrastructure of the place where VHND is conducted and the activities followed during this day (Section 5.1)
- Evaluate the role and responsibilities of the Frontline Health Workers on this VHND (Section 5.2)
- Comprehend the knowledge of Frontline Health Workers regarding VHND objectives and its purposes (Section 5.3)
- Evaluate the obtainability of quality health and nutritional services available at the VHND (Section 5.4)
- Understand the beneficiaries experiences on Village Health and Nutrition Day and their perception about Frontline Health Workers counseling (Section 5.5)
- Discuss and summarize the result regarding VHND (Section 5.6)

The first section of the chapter on the schedule, activities, and status of an infrastructure for Village Health and Nutrition Day (VHND) is to understand the facilities available at VHND and identify the gaps. In this section, a detailed analysis is made to understand the infrastructure of the place where VHND is conducted and the activities followed during the day. In the next section, a detailed assessment was reported on the role and responsibilities of the Frontline Health Workers on this VHND. To comprehend the quality of counseling and awareness generation available at the VHND, the knowledge of Frontline Health Workers is discussed in the next section. Further, to evaluate the quality of health and nutritional services availability at the VHND, the perception of beneficiaries and their experiences are analysed and reported in the last section.

5. 1. Infrastructure, Schedule and Activities of Village Health and Nutrition Day (VHND)

Village Health and Nutrition Day (VHND) can be used successfully as the first place and time of primary contact for health care in the state, as it was evident that “community-based interventions” are effective tool for decreasing the neonatal deaths and maternal mortality and improve health through changes in nutrition behaviour. Thus, the study tries to observe and assess the process and functioning of Village Health and Nutrition Day (VHND) and understand the gaps of service provision in VHND, if any. For the study, a total of 11 VHND are observed in Namkum block, Ranchi district, Jharkhand. The purpose is to observe the functioning of this nutrition day in the village, the role of Frontline Health Workers on VHND, and its correlation with the Infant and Young Child Feeding (IYCF) practices. The five Anganwadi Centres visited on this Nutrition Day are located within a 5-15 km range from the Namkum block. The rest of the six VHND Centres are situated nearer to the border of Namkum – Khunti which is approximately 30 – 35 km around the area. Following are the Anganwadi centre observed for Village Health and Nutrition Day (VHND).

- Tonko (Chandaghasi)
- Uppartoli (Aara)
- Neechetoli (Aara)
- Buteo (Bandwa)
- Purana Hulundu
- Neechetoli Chandaghasi
- Obariya Nayatoli

- Kalyan Mohalla (Sitihyo)
- Nayaktoli Obariya
- Nayatoli (Sodag)
- Sodag

All the ‘Nutrition Day’ (VHND) are conducted in the Anganwadi centre on the same schedule and similar pattern. The time duration for how long it is held depends on the activities and attendees present to avail the primary health services. On most of the days, it took almost four to five hours to conduct the entire process and functioning. As per the government guidelines, the VHND should be organized preferably on Wednesday, once in a month on a fixed day, whereas in Namkum block it is conducted on Thursdays and Saturdays once every month in the Anganwadi centre. During the summer season the Centre opens from 7 am to 11 am and in the winter season it starts from 9 am to 1 pm.

Box 5.1: The activities and process observed and assessed at VHND

- Registration of new Pregnant women
- Weighing of all the pregnant women and filling of MCP card
- ANC check-up of registered pregnant women - TT injection, Weighing and MCP card, measuring BP, Anaemia test, abdominal check-up and counseling
- Distribution of IFFA tablets and calcium tablets
- Godh Bharai (Baby Shower)
- Weighing all children below 5 years and counseling
- Monitor weight on growth chart (Register)
- Arm circumference measurement of children below 5 years
- Filling of growth monitoring chart for children
- Refer children with severe acute malnutrition (Grades 3 and 4) to MTC
- Full immunisation for children under one year
- Distribution of Vitamin A supplements
- Annprashan (Mooh Joothi)
- Matri Mahila Baithak (Women meeting)
- Distribution of THR supplements
- Provide family planning services to eligible couples
- Records and register maintenance
- Filling and preparing due list

Sources: Data recorded from the field study

Both Anganwadi Worker and ASHA with the help of a dulest,¹⁴ inform the pregnant women and lactating mothers one day before about the VHND.

In some centres on VHND, ASHA and AWWs continuously call the beneficiaries from their houses for health check-ups and vaccination. The activities and processes observed and assessed in the above Village Health and Nutrition Day (VHND) are listed below (Box 5.1). The functioning, process, and service quality of this Nutrition Day (VHND) are further discussed in detail.

In the Namkum block, this 'Nutrition Day' (VHND) was conducted in the building of Anganwadi Centres. Among the VHND observed, four were organized within the Anganwadi Centre's building, and seven in the rented rooms. These rented Anganwadi Centres are mostly run in a small room of a house which becomes congested and crowded on the VHND causing inconvenience to the community and Frontline Health Workers. Out of these seven rented Anganwadi centre, five were run in Anganwadi worker's own house. In these centres, no informative posters or pictures are on the walls for discussion and awareness generation. Almost all the rented centres doesn't have informative posters with Anganwadi Centres name. None of the centres have a schedule and information regarding the VHND. More than 40% of the Centre either don't have an adult weighing machine or have a faulty one. Almost all the centres have the MUAC tape to measure the arm circumference. It is observed that it is only used during two VHND by the AWWs.

5.2. Roles and Responsibilities of Frontline Health Workers (FHW) on VHND

The presence of the three Frontline Health Workers (AWWs, ASHA and ANM) are essential for the provision of the service package provided in the VHNDs. Frontline Health Workers have an important role to play in making VHND a successful tool for health service and information at the village level. The rapport they have with the community and regular home visits to women's houses help them to encourage the villagers to attend the VHNDs and avail the services. The presence of these Frontline Health Workers in the same place each month has the potential to be developed as a platform to ensure the provision of services and the dissemination of high-quality and effective information.

¹⁴ Due list : list of beneficiaries (i.e. pregnant women and children below 5 years) to be vaccinated in the next Village Health and Nutrition Day (VHND) is prepared on the day by the ANM, ASHA and AWWs

Table 5.1: Presence / Attendance of Frontline Health Workers in VHND

Frontline Health Workers in VHND		
Indicators	Numbers (N=11)	Percent %
AWWs (Sevika) present	11	100
ASHA (Sahiya) Present	11	100
ANM Present	16	100
Supervisor Present	1	9
CDPO	0	0

Sources: Data recorded from the field study

Auxiliary Nurses Midwives (ANMs) - In every VHND, the presence of Auxiliary Nurses Midwives (ANM) are compulsory and who have an important role to play. It is true that without them a significant objective of VHND i.e. antenatal care and full immunization of children cannot be fulfilled. Out of 11, in 5 VHND two Auxiliary Nurses Midwives (ANMs) are present to provide Maternal, Neonatal, and Child Health services at their assigned centres. Auxiliary Nurses Midwives (ANMs) provide maternal, newborn, and child health services such as antenatal care (ANC) and routine immunizations. For them, the day starts with the collection of vaccination (as per their duelist) from their respective health Centre. At the end of the day, they have to deposit back the unused vaccines. After that, they reached their respective Anganwadi centre for VHND, where they review pregnant women, register new pregnancy cases, issue new MCP cards for them, measure their weight, blood pressure, take a blood sample for haemoglobin test, and gives TT injection according to duelist. They do vaccination for children below 5 years of age and keep a complete record of the immunization of every child. They inform ASHA and AWWs, on finding out any dropout cases in the follow-up of pregnant women and immunization of children for further action. They do an entry in the children immunization card after giving vaccination and prepare

duelist for next month. In two VHNDs, ANM informs the mother about the vaccine and what precautions to be taken for few days. They also give medicine to the mother as preventive medicine towards fever for the children. In some centres, they also shared about the new family planning methods and encouraged the women for contraceptive use.

Accredited Social Health Activists (ASHAs) and Anganwadi Workers (AWWs) – AWWs and ASHA are showing 100 percent attendance in all the eleven VHND. Both of them are responsible for mobilizing the community including pregnant women and the lactating mothers in the vaccination duelist for VHND in the working area. As per the guideline Anganwadi Workers are required to conduct awareness sessions and counseling of women, which are missing in the observed VHNDs. AWWs provide weighing and referral services for children with severe acute malnutrition. Anganwadi Workers have to conduct two social activities for pregnant women as Godh Bharai and Mooh Jothi for the 7-month-old child. The role of the ASHA is to identify all the pregnant women for vaccination and health check-up, children for vaccination, drop out cases, ensuring the presence of pregnant women and children based on the list, and to assist ANM and AWWs on VHND.

Anganwadi Supervisor – Only in one Centre out of eleven VHND is attended by the supervisor to monitor the entire functioning and process of VHND. According to the supervisor, the reason for not attending all the VHNDs is due to an increase in workload, high ratio of centres per supervisor, the launch of new schemes, and its deadlines. The role and responsibility of the supervisor in the VHND are to guide the Frontline Health Workers (focus on AWWs), if needed hand-holding to AWWs in some cases, identifying the gaps and solution to problems, arranging the requirements, evaluating the records and its maintenance, counseling the mothers of malnourished children for MTC and other issues.

5.3. Knowledge of Frontline Health Workers regarding VHND objectives and purposes

The Frontline Health Workers (Anganwadi Workers, ASHA and ANM) are assessed on the knowledge they have about the purpose/objective of the Village Health and nutrition day. To evaluate the knowledge, a total of 38 Frontline Health Workers, 11 Anganwadi Workers, 11 ASHA workers, and 16 ANM present in the 11 Village Health And Nutrition Day (VHND) are interviewed. To analyze the knowledge of the Frontline Health Workers regarding the purpose of VHND, five primary and major objectives are focused on during the data collection.

Table 5.2: Knowledge of Frontline Health Workers regarding the objective of VHND

Objectives	AWWs (N = 11)		ASHA (N=11)		ANM (N=16)	
	No.	Percent	No.	Percent	No.	Percent
Ensure early registration, identification, and referral of high-risk children and pregnant women	11	100 %	11	100 %	16	100 %
Provision of essential and comprehensive health and nutrition services to beneficiaries	11	100%	11	100%	12	75%
Provide an effective platform for interaction of service providers and the community	8	72.7 %	5	45.5 %	10	62.5 %
Provide information to families on the care of mothers and children at the household and community level through discussion of various health topics	10	90.9 %	8	72.7 %	10	62.5 %
Ensure the establishment of linkage between health and ICDS to promote maternal and child survival program	0	0%	0	0%	5	31.2 %

Sources: Data recorded from the field study

It is observed, each one of the Frontline Health Workers associate their services and duties as objective and purpose of VHND. For example, Anganwadi Workers are stating registration of pregnant women and providing services to them and their children as the major and only objective of VHND. ASHA identifies interaction with the community and calling them for VHND as an objective. Similarly, ANM identifies VHND's purpose as an immunization day. More than 75 % of the Frontline Health Workers are aware of the primary

objective and purpose of VHND. Almost all AWWs and ASHAs know the first and second objective was to make certain early registration of pregnant women, their identification and referral system for them and also for providing essential and complete health and nutrition services to beneficiaries. Approximately, 75% of ANM are aware of the objective of providing vital and comprehensive health and nutrition services to beneficiaries. Only 45.5 % of ASHA workers have recorded VHND objective to be an effective platform where service provider and the community gets the opportunity to interact. This is so because ASHA workers assume the day and place belong to AWWs and hence they have to interact with the community.

“I have always ensured that all the pregnant women and children to be vaccinated and for this they should be informed and called for the meeting.” [ASHA 27, Hulundu]

“I support AWWs and ANM in smooth functioning and conducting of VHND. I also support AWWs in weighing children. At the end of the meeting, we (AWWs, ANM, and ASHA) prepare duelist and VHND report for submission.”
[ASHA 18, Aara Tatisilwae]

They consider the home visit as a prime responsibility and proper place of interaction with the community. ASHA states that during the day (VHND) they have only a specific role in assisting the ANM and AWWs in immunization activities. Hence, some of them (ASHAs) do not consider interaction with the community as the purpose and objective of the village health and nutrition day (VHND). Whereas, 90.9 % of the AWWs consider providing information to families on the care of mothers and children at the household and community level through discussion of various health topics during the VHND as one of the purposes.

“I always tries to ensure the presence of all the lactating mothers, children, pregnant women, and adolescent girls. Children for the vaccinations. The day starts with the opening of the Centre and also to ensure all the arrangements needed.”
[AWWs 33, Nayatoli]

“To maintain all the register, weigh and measure arm circumference of children, distribute THR (not available at the time of field study) and counsel women on different issues.”

[AWWs 24, Sodag]

More than 72.7 % of ASHA workers are aware of the VHND purpose on providing information at the household and community level to the families on child and mothers health through various discussion on health topics. They also shared that during the day if anyone asks for the suggestion they do give and even they give Vitamin A doses to children on VHND. 31.2% of the ANM have stated linkages between health and ICDS to promote maternal and child survival programs. None of the Anganwadi Workers and ASHA know this linkage between health and ICDS as an objective of VHND.

5.4. Status and Quality of Service delivery at VHND

Total eleven Anganwadi Centres are visited and observed to comprehend the availability of various health, nutrition, and sanitation services provided on this nutrition day (VHND). The parameters observed during the study to understand the quality of service distribution on this nutrition day (VHND) are availability of health check-up equipment, availability of medicines and food supplements for children below 5 years, lactating mothers and pregnant women, and also the quality of counseling services for them. The indicators to assess its service quality in the table 5.3, is grounded in the purpose, functioning and activities carried out on VHND.

Table 5.3: Quality Status of Village Health and Nutrition Day (VHND)

Status of Village Health and Nutrition Day		
Indicators	Numbers (N=11)	Percent (%)
<i>Maternal Health</i>		
Registration of newly pregnant women	6	54.5 %
Tracking drop out cases of pregnant women	11	100%
Provision of testing Urine for confirmation	0	0%
Measurement of blood pressure	8	72.7 %
Measurement of weight	4	36.4 %
Tetanus toxoid immunization	8	72.7 %
Abdominal examination	0	0%
Estimation of haemoglobin	4	36.4 %
Counseling of pregnant women on health, hygiene, and nutrition	4	36.4 %
Distribution of IFA and Calcium tablets	0	0%
Information to pregnant women for a follow-up visit and institutional delivery	11	100%
Godh Bhabraie (Baby Shower)	1	9.1 %
<i>Child Health</i>		
Vaccination of all eligible children against six vaccine-preventable diseases	10	90.9 %
Immunization for dropout cases of children	4	36.4 %
Administration of vitamin A in oil solution of all eligible children	2	18.1 %
Information to parents about adverse / side effects of vaccination	5	45.4 %
Information to parents about next visit of subsequent vaccination	5	45.4 %
Weighing of children and entering the weight in the register	11	100%
Plotting of weight on growth monitoring card	0	0%
Arm circumference measurement of children below 5 years	5	45.4 %
Counseling on weighing and growth monitoring chart	2	18.1 %

Counseling of parents for appropriate management of children on how to combat under-nutrition	1	9.1 %
Refer children with severe acute malnutrition (Grades 3 and 4)	2	18.1 %
Provision of supplementary nutrition to underweight children	0	0%
Case management of those suffering from diarrhoea	2	18.1 %
Annprashan (Mooh Joothi)	2	18.1 %
Distribution of THR	0	0%
Adolescent Health		
Health Education / Monthly meeting	0	0%
Tetanus toxoid immunization	0	0%
Family Planning		
Information on use of contraceptives	1	9.1 %
Distribution of contraceptives	1	9.1 %
Sanitation		
Identification of household for the construction of sanitary latrines	0	0%
Mobilization of community action for safe disposal of household refuse and garbage	0	0%
Communicable diseases		
Collection of blood film for malaria parasite	2	18.1 %
Provision of anti-tuberculosis drugs to patients	0	0%

Sources: Data recorded from the field study

5.4.1. Maternal Health

Out of 11 VHND, two of the centres reported no registration of pregnant women. These centres are located in the Namkum – Khunti border and the population is indigenous. As shared by the women in the first Centre, they have observed and some of them have also experienced that if they get registered during pregnancy then they are recommended for institutional delivery, where doctors perform cesarean leading to complications and problems in the future. There are still cases of home delivery in the village. Hence, to avoid a cesarean delivery, pregnant women don't get themselves registered.

Whereas in one of the centre, only two mothers attended the VHND for general health check-ups. The centre is located close to Namkum town with a leading population of Muslim communities. Due to their religious belief regarding vaccination, women and family members are reluctant to send their children, adolescent, and women to VHND. Frontline workers shared that with their efforts and continuous counseling of people, they could bring some changes and the number in VHND has increased in the last few years. Mothers and Frontline Health Workers shared that some of the women do come for immunization. But this month VHND has shown poor attendance because it is being conducted just a day before their festival Bakri- Eid. Mothers don't want their children to fall sick because of vaccination.

Late registration of pregnancy (i.e. fifth or sixth month of pregnancy) is a common trend noted in all eleven VHNDs. In six (54.5 %) centres, pregnant women got themselves registered on Village, Health, and Nutrition Day (VHND). However, it is observed that each registration of the first pregnancy is done after the first trimester i.e. in the 5th or 6th month of the pregnancy.

“During pregnancy, we don't go to the centre for registration. We are scared of being forced to visit the hospital for delivery and cesarean delivery.” [Mother 31, Bandwa village]

One of the reasons for late registration is that the girls who are pregnant for the first time feel shy and nervous from sharing about their pregnancy. Another reason or myth is the instruction and suggestions given by their close village elderly women or mothers-in-laws not to share about their pregnancy with outsiders before completion of their first trimester otherwise, it could bring complication and mishap in their pregnancy. Hence, they keep their pregnancy as a secret within themselves and their family and later disclose it with ASHA or

Anganwadi Workers. Even there are cases where Frontline Health Workers get to know about their pregnancy when their baby bumps are visible. In some cases, these Frontline Health Workers get to know about their pregnancy either from their relatives or neighbourhoods in their first trimester. In such cases, they visit their houses and counsel them for registration and vaccination. A detailed record of each pregnant woman is maintained and every month dropout cases are updated. On the other hand Frontline Health Workers shared that they try to counsel all the dropout cases individually. Same findings about the counseling by the ASHA has been shared and confirmed by the women during the focus group discussions

“In most cases I came to know about the newlywed girl’s pregnancy from her neighbours. I understand her nervousness and fear. To confirm I approach her directly. Visit her house and discussed about her pregnancy”. [ASHA 44, Mahilong]

“Initially I felt shy to share with Sevika Didi about my pregnancy. But after discussing with Didi, I was confident enough and asked her lots of suggestion on pregnancy problems”. [Pregnant women, 6 months pregnancy]

In eight VHNDs (72.7 %), measurement of blood pressure and Tetanus toxoid injection are given to pregnant women. In only 4 (36.4 %) VHNDs, measurement of weight was taken of pregnant women. In 63.6 % of centres, either AWWs do not weigh the pregnant women on the village, health, and nutrition day (VHND) or lack regular entry of weight data in the register. One of the reasons for not weighing in some of the centres is the non-availability of weighing machines and another is the lack of interest in record maintenance. In some (36.4 %) VHNDs, blood samples are collected for the haemoglobin test of new registered pregnant women and also of other women to examine their anemic status.

In none of the VHNDs, abdominal check-up examinations of pregnant women are done. One of the reasons is the lack of basic infrastructure, facilities, and privacy needed for pregnant women. Similarly, in all the VHNDs there are no distribution of iron tablets and calcium tablets. This is due to the non-availability of the tablets at the community centre. They are advised to visit the community health centre and collect the tablets from there.

In 36.4 % cases, frontline health worker gives counseling on health, hygiene, and nutrition to pregnant women during Poshan Saaptha (Nutrition Week). In one centre, AWWs prepared a

plate with all the raw items as suggested items to be eaten by the pregnant women as a whole nutritious food intake during pregnancy. On the other side, it is also observed that there is no counseling or information session given to women regarding the importance of this plate preparation.

Under the POSHAN Abhiyaan, VHNDs included one more activity as Godh Bhabraie (Baby shower), which is an important custom and practice within the society conducted for pregnant women in their 7th or 8th month of pregnancy. Within the society, it is conducted for the good health of the pregnant woman and the children inside her. In Godh Bhabraie, Anganwadi Centre gives a dupatta and a plate filled with all the raw nutritious food as a ritual. Whereas, Godh Bhabraie in VHND is seen as an important platform to bring awareness to pregnant women and other women regarding nutritious food intake and habits during pregnancy, precaution to be taken during the last trimester, and guide them in preparation for institutional delivery. It is observed, that the prime objective of awareness generation and counseling is lacking during the process of Godh Bhabraie. In 18 % of Village Health and Nutrition day collection of blood films for malaria parasites are collected.

5.4.2. Child Health and Nutrition

Another focus group activity on the nutrition day (VHND) are children's nutrition, vaccination and complete health development. VHND is popularly known as the immunization (tikakaran din) day by the villagers. Hence, vaccination is the prime focus agenda of the Frontline Health Workers on this day. One of the focused groups on this day are children below 5 years for the vaccination. In 90.9 % of VHND, all the eligible children are vaccinated against early six preventable diseases according to the immunization card. As per their data, the children vaccinated with all the vaccine-preventable diseases up to 9 months are called fully immunized. Similarly, children are completely immunized when they are vaccinated with all the vaccines for up to one year. It is observed that in 45.4 % VHNDs, parents are informed about the adverse/side effects of vaccination, advised to take precautions, and given medicine for the same. The parents are also informed about the next visit of subsequent vaccination. As per the data, about 36.4 % of VHND has reported in drop out of immunization cases in children.

Another important activity is monitoring growth of the children. Anganwadi Workers with the help of Anganwadi helper and ASHA measure the weight and arm circumference of children (below 5 years). In all (100%) the VHND, measurement of weight of children is

measured on this day and the details are entered in the register. In some of the Anganwadi Centres (observation during the research field visit), weights are recorded in the register based on the previous months readings. As a malpractice conducted by the AWWs they either ignore to measure the weight or doesn't bother to maintain a proper record. These cases are mostly found in those centre where weighing machines are either faulty or not calibrated. In at least 45.4 % of the VHND, AWWs have measured the arm circumference of the children with the help of ASHA workers. This is the common practice seen in all the VHNDs and Anganwadi Centres. They maintain a month-wise table for each child. Whereas, none of the VHNDs have updated the Growth Monitoring Cards, not even for a single child. Anganwadi Workers do not update the weight and arm circumference of the child in their Growth Monitoring Card. Instead, they prefer to refer to the register for reference and to analyze the children's growth development every month. This is done to trace severe malnourished children for referral purposes or to quote, if asked by any well aware and active mother of the child.

Out of 11 VHND, in only 2 (18.1 %) mothers are counselled and informed about their children's weight and growth status. In 9.1 % of cases, parents are counseled on how to combat the under-nutrition in children with appropriate management.

“During last tikakaran day, Didi advised me to take extra care of my child's health and food intake after measuring her weight because she is continuously losing weight.” [Mother 17, Chandaghasi]

If the children are in the yellow line then the Anganwadi worker suggests mothers take extra care of the children and feed them properly. However, if the child is in danger (in the red line) then they advise mothers to go to Malnutrition Treatment Centre (MTC). Since last year, there is no supply of Take Home Ration (THR) as supplementary food for pregnant women and children (6 months to 3 years).

A new practice is adopted in the VHND for the first-time i.e. introduction of food to 6 months old child. Within the society, it is known as Mooh Joothi and in VHND it is termed as “Annprashan”. For this activity, the Frontline Health Workers inform parents of the children turning 6 months to be brought on VHND. On this day Anganwadi worker and her helper prepare a kheer / sweet dish to feed the child for the first time. The bowl and spoon with which the child is fed are given to their family as a gift. Despite this, some of the mothers and

family members are not supportive and don't send their children for this ritual of Mooh Joothi. It is also shared that most of the family members prefer to do this ritual at home first to keep all the evils away from the child.

“Mothers whose child completes six months are informed for the Mooh Joothi ritual and guided by the Frontline Health Workers. Despite all this most of the mother doesn't share the exact date of birth and their age. [AWWs 29, Sodag]

This practice is observed in two village health and nutrition days. The gaps seen in the process i.e. children had already reached their 7th and 8th months and they had started eating one to two months back. During this interaction, no counseling or information is given about the feeding practices and nutritious food. It seems that the “Annprashan” activity has lost its objective during its process.

5.4.3. Sanitation

According to the guidelines AWWs are not conducting any group meeting for counseling on important issues such as sanitary latrines, safe drinking water, and hand hygiene. None of the VHNDs discussed these issues and about Swachhta Abhiyaan objective or Nirmal Gram Puraskar taken into consideration. No discussion was held in any of the eleven VHNDs regarding the identification of a household for construction of sanitary latrines and on the safe disposal of household garbage (Refer table 5.3).

5.4.4. Adolescent Health

The health of adolescents is the least concerned and discussed issue in VHND. No session on health education is conducted and no monthly meetings held in VHND. In some VHND adolescents do visit the centre but along with their relative kids for vaccination. No girl visited in any of the centre for any health check-ups, sharing their problems or suggestions. As shared by the Frontline Health Workers, girls mostly share their problems when they meet personally and guide them as per their knowledge and recommend appropriate treatment, if needed. About 100% drop-out cases of Tetanus toxoid immunization in adolescents (Refer table 5.3). One of the reasons stated for this is the years of gap between the last vaccines given in childhood and the TT injection in the adolescent. So, in most cases, either parents or children are least bothered for vaccination or reluctant at this age.

5.4.5. Counseling and awareness generation

On this day (VHND), both the Frontline Health Workers (FHW) need to organize sessions on health, nutrition, and sanitation (mainly related to hygiene) for community members from their working areas, which is missing or lacking in all the VHND observed. Counseling and awareness during this day (VHND) is the most neglected topic by all the three Frontline Health Workers (ANM, AWWs, and ASHA). In all the 11 VHND, none of the centre conducted proper and planned counseling and awareness generation interaction sessions with women and adolescents. As per the records and register, they conduct counseling sessions on nutrition, Matri Mahila Mandal meeting (women meeting), and adolescent counseling sessions on the same Village health and nutrition day. In all the centres, on VHND Anganwadi Workers ask women to sign the Matri Mahila Mandal register without the entry of the meeting agenda and minutes of the meeting. Which is later filled by them without conducting any such kind of meetings.

“They don't want to come for the meeting. I have to convince them a lot but they are always in a hurry. Women don't have time for Matri Mahila meeting.” [AWWs 36, Buteo village]

In two centres, it was noted that Anganwadi Workers and a few of the mothers discussed their child's weight and overall growth individually. In two centres, where malnourished children are reported and referred to MTC observed, Anganwadi worker, suggesting mother regarding proper nutrition and rearing practices to children. In one of the above two Centre's, Anganwadi Workers grab the opportunity to put up the malnourished child's condition as an example to counsel other mothers on feeding practices of children to avoid such cases.

In almost 100% percent of VHND, frontline workers have given information and counseling to the eligible couple/women on the use of contraceptives. During the meeting, ANM informed the women about the new type of injectable contraceptive available in the government community health Centre and if women want they can ask from them.

5.5. Beneficiaries on Village Health and Nutrition Day

In this study to understand the quality of health services provided to community people from the beneficiary perspective, 45 women are interviewed among the observed

eleven VHNDs. These 45 women include pregnant women, lactating mothers, and young children mothers who visited the Anganwadi centre at least once or more times on VHND.

Table 5.4: Beneficiaries feedback on the functioning of VHND

Indicators / Responses	Yes (N=45)	Percent %
Day and Place information	32	71%
Conducting regular VHND meetings every month	39	87%
Is the session time convenient	18	40%
Satisfied with service providers behaviour	31	69%
Favour of the VHND meeting	45	100%

Sources: Data recorded from the field study

Twenty-eight (i.e. 71%) of beneficiaries confirmed that they are always pre informed by the health worker about the day, place, and timings. The rest of the women complained of not being informed of the day and timing for the VHND to be held in their village. They also shared that place for VHND is fixed but the timing and day keep on changing from time to time. Some of the women also shared that they forget the day and time because of their busy household chores.

“Today in the morning, Sahiya Didi informed me of today’s Tikakaran Din (VHND). I always forget of this day and time”. [Pregnant women, 5 months pregnancy]

“When ASHA Didi came to call me, I was busy in my household work. I left my work in between and came for my child’s vaccination”. [Mother 35, 5 months child]

Whereas, 87% of the women reported regular functioning and opening of the centre on VHND. Mixed reactions are received from the beneficiaries regarding information about the VHND day and time. One section of beneficiaries shared that Frontline Health Workers contact them and inform them about the VHND time and day on the same day of VHND.

Whereas, another group complains that they only contact the beneficiaries of the month such as all the pregnant women to be registered or vaccinated, lactating mothers whose children to be vaccinated on the same day based on the duelist prepared the previous month. Apart from these beneficiaries groups, no other target groups are contacted personally and informed. Hence, they have no prior knowledge about the session date, time, and place. In contrast, beneficiaries have complained regarding the lack of a permanent display of the day and time of VHND. It was also observed during the field study that there is no display of day and time for conveying better information to the beneficiaries. Despite the information and regular functioning of VHNDs most of the beneficiaries feel difficulty in attending it. The reason stated for not attending VHND meetings regularly are domestic preoccupations, a venue distance from houses, feasibility of time, prolonged waiting time, paucity of sitting space, and lack of medicine supply. According to 40 % of beneficiaries, the session time is not convenient for them to attend. During VHND timing (9 am to 2 pm) they are preoccupied with their household work and prolonged waiting time for their turn makes them impatient and reluctant. Even though women are willing, most of them found it embarrassing to get their health check-ups in a place with no privacy.

Approximately 77.5 % of the beneficiaries shared that they are satisfied with the behaviour of the frontline line health workers. Rest complained about poor behaviour such as biasness, negligence, lack of sensitivity, rude and harsh behaviour of Frontline Health Workers. Despite all these issues and concerns all beneficiaries want VHND sessions to be regularly conducted because it is beneficial for them and their children. They emphasized the improvement in the functioning and rectifying all the concerns shared by them during the discussion will raise the quality of VHND.

5.6 Discussion

The Village Health and Nutrition Day program was planned to offer basic health care to pregnant women, nursing mothers, children under five, and adolescent girls with the help of FHWs. Effective operation of VHND is significant to discourse problems related to diet and nutrition, early detection of people at high risk and their health issues. The present study aims to evaluate the functioning and quality of services available during the VHND. The main outcome of the study is the sub-optimal service quality and the role of Frontline Health Workers during VHND. The eminent gaps reported in the study were inadequate infrastructure and logistics availability, limited awareness generation by the Frontline Health

Workers, minimal site supportive monitoring and handholding, and low involvement of community leaders and local authority in the provision of services.

All nutrition day (VHND) conducted in the Anganwadi centre function on the same schedule and according to a similar pattern. Four VHND were organized within the Anganwadi Centre's building, and seven in the rented rooms and five were run in Anganwadi worker's own house. Usually, it took about four to five hours for the entire process and operation to take place either on Thursday or Saturday once a month in the Anganwadi Centre. In this study, 87% of the women reported regular functioning and opening of the centre on VHND. Mixed reactions are noted regarding information dissemination of Frontline Health Workers on the day and time of VHND. One group of beneficiaries shared that Frontline Health Workers contact them with all the details of the VHND. Whereas, another group complains that they only contact the beneficiaries for the month such as all the pregnant women to be registered or vaccinated, lactating mothers whose children to be vaccinated on the same day. In contrast, beneficiaries have complained regarding the lack of a permanent display of the day and time of VHND. Similarly, a study in Odisha found a limited awareness of the location and time of the VHND among the beneficiaries (Pati S., 2016).

Despite the information and regular operation of the VHNDs, most of the beneficiaries find it difficult to serve them. The reason shared by them has expressed the difficulty of attending VHND sessions regularly, due to domestic concerns, distance from place, time and place, lack of sitting space, long wait time and lack supply of medicines. According to 40 % of the beneficiaries, the session time is not convenient for them to attend. During VHND hours (9 AM to 2 PM), they are preoccupied with their housework and the long wait time for their shift makes them impatient and reluctant. Despite being willing, most women found it embarrassing to get medical check-ups in a place with no privacy.

Almost all AWWs and ASHAs know the first and second objective was to ensure early registration of pregnant women, their identification and referral for providing crucial and inclusive health services to beneficiaries. Approximately, 75% of ANM are aware of the objective of giving necessary and complete health and nutrition services to beneficiaries. Only 45.5 % of ASHA workers are aware about the VHND as an effective platform for service providers and beneficiaries for healthy interaction. This is so because ASHA workers

assume the day and place belong to AWWs and hence they have to interact with the community.

Late registration of pregnancy (i.e., the fifth or sixth month of pregnancy) is a common trend observed among the eleven VHNDs. In six centres (54.5%), pregnant women get registered themselves on this day (VHND). The reasons received from them are that girls who are pregnant for the first time feel shy and nervous about sharing their pregnancy, the false belief among older women and mother-in-law for not talking about their pregnancy with strangers before the end of their first trimester, it could bring complication and mishap in their pregnancy. Out of 11 VHNDs, two of the centres reported there was no registration of pregnant women. Pregnant women are afraid of doing registration in the Anganwadi Centres, thinking that all institutional deliveries are performed by cesarean section leading to complications in the future.

In eight out of 11 VHNDs, blood pressure measurement and tetanus toxoid injection were administered to pregnant women. In a study conducted in Uttarakhand VHND, blood pressure measurements were taken at 45.83 % and at 54.17% sites measured weight in prenatal care. The adult blood pressure monitor and scale unavailability were 45.83% and 41.66%, respectively (Saxena et al. 2015). In 4 VHND, the weight of the pregnant women was measured. Almost all the centres have the MUAC tape to measure the arm circumference. It is observed that it is only used during two VHND by the AWWs. During VHND, 36.4% blood sample is taken for hemoglobin testing from newly registered pregnant women. In none of the VHNDs an abdominal control examination of pregnant women performed. One of the reasons is the lack of basic infrastructure, facilities, and necessary privacy for pregnant women. Likewise, in all VHNDs, there is no distribution of IFA and calcium tablets for pregnant women and nursing mothers. Some ASHA workers do ask about the Vitamin A tablets and asked women to collect from her if needed. She does not carry the tablets with her in the meeting. This is comparable to the finding by Saxena and his team in 2015 that the availability of other services, such as vitamin A distribution is done in the 3 VHND out of 24 studied in Uttarakhand. (Saxena et al. 2015). In 18% of the villages, a daily blood smear collection for malaria parasites is carried out. In 36.4% of the cases, the Frontline Health Workers advise pregnant women on health, hygiene, and nutrition.

Under the POSHAN Abhiyaan, the VHNDs included another activity called Godh Bhaaraie (baby shower), an important custom and practice within society performed for

pregnant women between the 7th and 8th months of pregnancy. In Godh Bhabraie, the Anganwadi centre gives a dupatta and a plate with all raw nutritious foods as a ritual. Godh Bhabraie in VHND is seen as an important platform to educate pregnant women and other women about food intake, and habits during pregnancy to take precautions in the last trimester and to assist them in preparing for delivery. It is observed that the main goal of awareness-raising and counseling was missing during the Godh Bhabraie process. Whereas, in a study at Uttarakhand in 33.3 % VHND the households are identified for building toilets (Saxena et al. 2015). Institutional provision was the only issue discussed in the majority of the VHNDs whereas health education and promotion were particularly weak (Johri, M., Rodgers, L., Chandra, D. et al. 2019).

Another focus group on VHND are children and the services provided to them are vaccination nutrition and health. VHND is popularly referred to as Immunization Day (Tikakaran Din) by the villagers. Hence, vaccination is the focus of health workers on the front lines. In 90.9 % VHND, all the eligible children are vaccinated against early six preventable diseases according to the immunization card. This is slightly less than the study conducted in Uttarakhand, where the child immunization was provided in 91.67 % of the VHND. (Saxena et al. 2015) In the 30 villages of Uttar Pradesh, VHND offered vaccinations and prenatal care in 96.8% and children in 83.9 %. Other standardized services were rarely provided or were completely absent. (Johri, M., Rodgers, L., Chandra, D. et al. 2019) In 45.4% of VHND, parents are informed of the side effects of the vaccination, precautionary measures are recommended and medication is given for them. At the same time, 45.4% of VHND parents will be informed about the next visit for the subsequent vaccination. According to the data, about 36% of VHND reported discontinuation of immunization cases in children.

Anganwadi Workers measure the weight and arm circumference of children under five with the help of the Anganwadi helper and the ASHA. Overall, the VHND measurement of weight and arm circumference of children is measured on this day and the details are entered in the register. The study reveals that all the VHND measurement of weight of children is measured on this day and the details are entered in the register while none of the VHNDs have their growth monitors updated, not even for an individual child. In a study in the year 2015 at Uttarakhand, child growth monitoring is practiced in seven (29.17 %) of the VHND, and complimentary nutrition services are given in five (20.83%) VHND. (Saxena et al. 2015)

Out of 11 VHND, only 2 (18.1%) mothers are advised and informed about the weight and growth status of their children. In 9% of cases, parents are advised to treat children appropriately to combat malnutrition. If the child is in danger (in the red line), Anganwadi staff suggests mothers go to the Malnutrition Treatment Centre (MTC). Since last year there has been no supply of nutritional supplements (Take Home Ration - THR) for pregnant women and children (6 months to 3 years).

A new practice is being initiated in VHND i.e. introducing solid food to children who are 6 months old for the first time. Within society, it is known as Mooh Joothi and in VHND it is called "Annprashan". On this day, the Anganwadi worker and her helper prepare a kheer / sweet dish to feed the child for the first time. Despite this, some of the mothers and family members are not supportive and don't send their children for this ritual of Mooh Joothi. It is also shared that most of the family members prefer to do this ritual at home first to keep all the evils away from the child. No advice or information about feeding practices and nutritious foods is given during this interaction. It appears that the "Annprashan" activity has lost its target during its process.

As per guidelines, they do not hold group meetings to advice on important issues such as latrines, safe drinking water, and hand hygiene. None of the VHNDs discussed these issues and the Swachhta Abhiyaan goal or Nirmal Gram Puraskar. Whereas, in a study at Utrakhnad in 33.3 % VHND the households are identified for building toilets. (Saxena et al. 2015) Health education and health promotion were particularly weak; Institutional provision was the only issue discussed in the majority of the VHNDs. (Johri, M., Rodgers, L., Chandra, D. et al. 2019)

Adolescent health is the least affected and discussed issue in VHND. There is no health education and no monthly meetings on this issue in the VHND. For some VHNDs, young people visited the centre, but together with their relatives to get vaccinated. None of the teenage girls visited the health check-up site and shared their problems or suggestions. As shared by the Frontline Health Workers, girls mostly share their problems when they meet them in person, and they guide them based on their knowledge and recommend them when needed.

On the day, both Frontline Health Workers (FHW) are required to organize health, nutrition, and hygiene (primarily hygiene-related) sessions for community members from their work areas who are absent or absent from all VHND observed. Counseling and

awareness-raising during Village Health and Nutrition Day (VHND) is the most neglected topic of all the three Frontline Health Workers (ANM, AWWs, and ASHA). In all 11 VHNDs, none of the centres conducted appropriate and planned counseling and awareness-raising sessions with women and young people. According to the records and the register, on the same day of Health and Nutrition Day in the village, they hold a nutrition counseling session, a Matri Mahila Mandal (women's meeting), and counseling sessions for youth. At two centres, Anganwadi Workers and some of the mothers were found to discuss their child's weight and general growth in a person. Approximately 69 % of the beneficiaries expressed that they are satisfied with the behavior of the first-line health workers. Rest complained of inappropriate behaviours such as prejudice, neglect, and insensitivity, rude and severe behavior from frontline healthcare workers.

This study confirms “supportive supervision” as a crucial tool for the successful implementation of the services in VHND and improvement in its quality through professional training and on-site supervision. The importance and effectiveness of supportive oversight are well documented in the other health programs. Out of 11 VHND attended, only one was visited by the supervisor and monitored by her. While each VHND meetings held should be ideally monitored by assigned public health officials, which is found to be missing in present scenario.

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CHAPTER 6

MOTHER'S FEEDING PRACTICES AND COUNSELING GIVEN BY FRONTLINE HEALTH WORKERS

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CHAPTER 6

MOTHER'S FEEDING PRACTICES AND COUNSELING GIVEN BY FRONTLINE HEALTH WORKERS

6. Overview

This chapter examines the third research objective i.e. to understand the Infant and Young Child Feeding practices and advice given by the FHWs to the mothers having children below two years of age. To comprehend the objective in detail some of the major questions were answered during the study such as the knowledge and feeding habits mothers. Practice and support and counseling received by mothers from different sources especially from Frontline Health Workers on feeding practices of the children. The changes brought about in the feeding practices, support and guidance provided by the health workers when children are sick.

Hence, this chapter focuses on the three major questions further discussed in below sections.

- Describe the Socio-demographic characteristics of the respondents (women/mothers with children below two years) (Section 6.1)
- Discuss the impact of the mother's work on the feeding of the child. (Section 6.2)
- Assess and analyze the child feeding practices and the belief of mothers with children below 2 years (Section 6.3)
- Comprehend and review the advice and counseling skill of FHW on feeding practices as shared by the mothers (Section 6.4)
- Overall discussion with a summary of this chapter and its findings. (Section 6.5)

To study and analyze these parameters the researcher conducted total 45 in-depth interviews and 10 FGDs with mothers. To avoid the overlapping of the answers and discussions, the mothers interviewed personally are not included in the focus group discussions.

The findings are comprehended from the in-depth interview with mothers of children below 2 years and have at least visited or accessed the services of Anganwadi Centre once during the field visit. During the study, two different categories of mothers are interviewed for data collection. The two categories of samples include;

- i. Mothers of children below 2 years from the study area – 36 mothers
- ii. Mothers whose children are in MTC – 9 mothers

The mothers of children below 2 years of age are interviewed to build up an understanding of the socio-demographic condition of the children, services accessed by them from Anganwadi Centres, mothers and family member's belief and practices regarding child feeding practices, and Frontline Health Workers role in their feeding practices. The mothers of children who are admitted to Malnutrition Treatment Centre (MTC) are interviewed in the centre for the collection of additional data for understanding and analysing the reasons for severe malnutrition, the role of Frontline Health Workers, and the efficacy of these centres.

6.1. Socio-Demographic Characteristics of the Mothers (Women with Children below Two Years)

Socio-demographic characteristics of mothers give an overall social background of mother and their children (below 2 years). Mother and child's age, place of delivery, mother's education, marital status, mothers and fathers occupation are some of the parameters analysed and discussed in this section (Table 6.1). The samples for this section include all the mothers who are interviewed personally and those with whom the researcher had focus group discussions. The number of mothers in the below table represents those who are personally interviewed to analyse the social characteristics. While, for developing the overall understanding and reasoning, both interviews and group discussions with mothers are analysed by the researcher.

Table 6.1: Socio-demographic characteristics of the mothers

Socio-demographic parameters	Frequency (N = 45)	Percentage
Age of mother		
< = 20	14	31.1%
21 to 25	26	57.8%
26 to 30	3	6.7%
31 to 35	2	4.4%
Age of child		
6 to 11	26	57.8%
12 to 24	19	42.2%
Number of children		
One	11	24.4%
Two	23	51.2%
More than two	11	24.4%
Marital status		
Married	44	97.8%
Widow	1	2.2%
Religion		
Christian	13	28.9%
Hindu	10	22.2%
Sarna	22	48.9%
Mothers education		
Illiterate	13	28.9%

Primary	22	48.9%
Secondary and above	10	22.2%
Mothers occupation		
Household chores at home	33	73.3%
Agriculture laborer	8	17.8%
Daily wage	4	8.9%
Fathers occupation		
Agriculture	2	4.4%
Daily wage earner	15	33.3%
Migrant laborer (factory)	16	35.6%
Unemployed	12	26.7%
Place of delivery		
Government hospital	21	46.7%
Private hospital	19	42.2%
Home delivery	5	11.1%
Type of Family		
Joint	16	35.6%
Nuclear	29	64.4%

Source: Data collected from the field study

Out of 45 samples, 29 families are nuclear and 16 families stay with their parents/parent in-laws. Approximately, 64.4 % of the families in the research area are residing as a nuclear family. In some areas, the percent of nuclear and joint families do differ depending upon the occupation and job opportunities in that area. The villages which are close to town and have job opportunities for migrant workers have more nuclear families. For example, Tatisilwae in Namkum block is an industrial area, had a good number of migrants from interior villages or districts and neighbouring states for work and to earn their livelihoods. These migrant workers mostly men migrate with their wife and children to these places for their livelihood. They stay in one-room rented houses having minimal scope to bring their parents. There are also cases of families, whose parents or in-laws are staying in the same village but in separate houses. Husband, wife, and children stay in separate houses and parents in separate houses. Families are staying on the same premises but their meals are cooked separately. There are 35.6 % of the samples who are staying in joint families. Most of these families are in the villages located at the Namkum - Khunti border. These villages do consist of nuclear families but the percentage is very less in number.

It is found that 57.8 % (26) and 31.1 % (14) of mothers are of the age group 21 to 25 years and less than 20 years, respectively. Approximately, 51.2 % of the mothers have two children. Equal percentage i.e. 24.4 % of mothers either have one child or more than two children. Early age pregnancy is the result of the early marriage of girls. The education data of mothers revealed that 28.9 % (13) of mothers are illiterate. Out of 45, 22 (48.9%) of mothers had education up to primary and 22.2 % till secondary level.

In Sarna community culture the girls leave their house before marriage and start living with their husband in in-law's house. Women during a group discussion shared a girl's story who was herself present in the discussion. The girl was 18 years old and now a mother of 6 months old child living with her husband and in-laws for the last two years. The young couple got married after the baby was born for acceptance within the community. Hence, this early marriage plays a major role in child feeding practices. Early marriages lead to early pregnancy, where the girl herself is an adolescent and lacks basic awareness of rearing and caring for the child. The girl's body is weak and anemic, impacting the quality and quantity of breastmilk.

“Look at her, she is an 18-year-old girl. Two years back, she came to this village when she wore a frock (addressing her as a kid). She met her husband in school. One day she enters his house and starts staying with him. Last week, they got married (Sindoor Daan Hua hai). She got entry into the Sarna community. She has a 6-month-old boy.” [Mother sharing another mother’s story present during a focus group discussion]

Since these young mothers are unaware of the child care practices, they sometimes get misguided by their elderly women in the households i.e. mother or mother-in-law. Prelacteal feeding practices are one such example where a child is given few drops of water, Janam ghutti as suggested by the close relatives. All the mothers interviewed (except one who was a widow) are married.

Approximately 57.8 % of mothers interviewed have children 6 to 11 months and 42.2 % of mothers' have children between 12 to 24 months. Most of the mothers with 6 to 11 months old child reported them as their second child. More than half i.e. 51.2 % (23) mothers have two children and 11 (24.4 %) have more than 2 children. Age gap between two children are another major concern found during the study. It is found that the age gap between the two siblings is less than a year or two years which means before the child leaves Breastfeeding, the mother gets pregnant. This condition is neither good for the mother’s health nor the baby's development. It impacts the mother's health because her body did not get the time to regain the strength and energy to deliver another child. Most of the mothers are already anemic due to their socio-economic condition and such a situation further makes them anemic and weak. Since the rearing of the child is taken care of by the mother, her poor condition impacts her Breastfeeding and feeding practices effectiveness. Due to this, the crucial phase in the continuation of Breastfeeding i.e. continuation of breast milk with complementary food gets neglected in children.

The data shows a good percentage of institutional delivery i.e. 88.9% includes both private and government hospital delivery. Among these institutional deliveries, the percentage of delivery in a government hospital (46.7 %) is slightly higher than the (42.2 %) private hospitals. Private hospital delivery is mostly reported in the industrial area of Tatisilwae where the industrial workers are given medical insurance from the company for their families. Approximately, 11.1% of mothers had reported home delivery. These cases are

reported in the interior villages near Bandwaa panchayat. The village is near the border of Namkum and Khunti district. All the home deliveries were conducted under the supervision of trained midwives (Dai). There is no evidence supporting the relation between the impact of delivery on the initiation of breastfeeding and mothers knowledge on child feeding practices.

“I got scared when I heard from my friend in the village that she had an operation for the delivery. Her pregnancy time was good and she didn't have any complications. After the operation, she is not keeping well. Almost all the women who went for hospital delivery, doctors do cesarean delivery for money. I had home delivery and it was normal. Now I am perfectly fine.” [Mother 19, Buteo]

A cesarean method is shared as an important reason for home delivery. It's a fear and belief among some pregnant women and mothers that in-hospital doctors don't conduct normal delivery. As shared by them, women who all went to the hospital for delivery had a minimum of 3 to 4 stitches which is not even required during home delivery done by the midwives (Dai).

6.2. Impact of Women Work on Feeding Habits and Practices

Work in women's life is multidimensional. Married women have to perform various activities in different spheres such as household, agriculture, and workplace. The work pattern and workload depend on the area they are working in. Most of the work they do is unpaid. However, there are jobs they do to earn for their family. Based on the women's work pattern and workload, women within a community may be housewives, working women, and women left behind. Housewives further can be identified as women having land and women as landless. Both their work pattern and work burdens will not be the same.

As it is assumed and analyzed that the economic participation of the mother should have a positive effect on the family income and thus the nutrition of the children. Few cases during the study states positive correlations between the mothers work and the child's nutritional status. The surplus earned by the females is more likely to improve the calorie and nutritional content of the family consumption. Mothers who are independent household decision-makers, considered to improve their young children nutritional status. All these false

perspective and beliefs come to an end when the mother's work affects the feeding habits and practices.

Married women have to perform various activities in different spheres such as household, agriculture, and workplace. The work pattern and workload depend on the kind of work they do. The data shows (Table 6.1) that 73.3 % of mothers are housewives and they are busy for the whole day doing household chores. It is believed and practiced within the community that mothers whose children are less than 2 years are supposed to stay at home and look after the child. One of the reasons for such a decision is that most of the families are nuclear. According to them, household work is a tiring job and it increases with the number of children they have to look after. They are busy from early in the morning until going to bed late in the night. In this situation, mothers staying at home are also not able to manage and take care of the feeding practices of their children. Due to household work round the clock, mothers are not able to focus on the child's feeding.

Most of the time food was served in a bowl or plate for the small children who can eat themselves. In such conditions, the quantity of food intake was not tracked by the mothers. Most of the children were left underfed by their mother. One of the mother at a Malnutrition Treatment Centre (MTC) while staying there for the last one week shared that being a single lady at home has all the burden to look after family members, which include looking after the old mother-in-law, husband, and three children. In between her work, she tries to feed her children with food and breastmilk but most of the time she is not able to maintain the time and number of time the child should be fed. Due to work pressure, she serves the meal in a bowl to eat. In such a situation, most of the time child doesn't feel like eating and also not able to eat hence food gets wasted and its nutrition too. Sometimes she gets so busy in her work that she is not able to sit in a proper and relaxing posture to feed her child with breastmilk. Overall due to household work pressure mother is not able to feed her child on time appropriately. Slowly this leads to severe malnutrition in children.

“At home, I was not able to give ample time to feed my youngest child. From morning till evening I am busy in my household works and looking after my in-laws. I hardly get time to keep a track of my children's feeding time and quantity. Here (MTC) my focus and time is for my child.” [Mother 41, at MTC Ranchi

"I am not able to give time to her. I have five children. I have to send them to school, cook for them, look after them, take care of my husband and send him to work too, and do all the household chores alone. I hardly get time to feed her separately at a fixed time. I am not able to take good care of my child. I breastfeed her when she feels hungry. She eats with me twice a day." [Mother 21, 32 years, 5 children, Nayaktoli]

Among the sample, 17.8 % of the mothers are either working as agriculture laborers or daily wage earners. Among the 73.3 % mothers at home, 24.8 % of women prepare Hadia (local drink/ alcohol) at home and sell for earning. Some of the women don't consider it work or business. It is so because some of the women prepare this drink for their husband and the rest they sell from their home. Whereas, some women run it as a business, prepare it at home and sell it within the community at a particular place outside the home. In both cases they earn money but one considers it as household work because they don't step outside the home and didn't put extra effort into this earning.

Data suggest that 26.7 % of mothers who are working outside for money have a husband who is either unemployed, working as daily wage laborers, and also maybe as an agriculture laborer for certain months of the year. Approximately 26.7 % of men are unemployed and stays at home. Whereas 33.3 % of men work as daily wage laborers whose jobs were not permanent and so is their earning. Even earning from daily wage labor is not sufficient for the family throughout the year. Similarly, men working in agriculture engaged for few months before sowing and after harvesting, and the rest of the time they stay at home without work. In such a scenario, women step out of their home to earn with or without their children to carry the financial burden along with the household work.

As shared by the women in the above situations if mothers of children less than 2 years have to go out of the houses and work then they leave children with their husbands or with in-laws for rearing and caring. Most of the mothers have children for more than 1 year.

"In our village, small children (less than 1 year) mothers don't go outside to work. If there is a need to work then mother either leave their kids at home with their husbands or in-laws. If the child is too small (Breastfeeding child) then women carry their children at the workplace. In such cases,

they are at least able to breastfeed their children.” [Mother 12, during FGD at Sodag]

Seasonal migration and alcoholism increases the burden of rearing children on mothers. There are also cases where husbands have migrated to earn their livelihood. In such a situation, the burden on the women doubles up which further impacts the rearing and feeding of the children. The left-behind women have to take care of household work, children, elders at home, and animals. Despite all the efforts, some part of the responsibility gets neglected in which children feeding habits and practices is the one which is sometimes done unknowingly. Hence, it can be stated that due to the overload of household work, the child feeding practices are neglected and it gets double in the case of left-behind mothers. In a similar situation, there were also cases where left behind women have to step out of their homes for work to earn their basic daily needs. One of the reasons shared by the women was the delay and irregularity in receiving the money from their migrant husbands. When women work outside they either leave their children with their family members or take them along with them at worksite, whichever is more feasible. In both cases, the feeding of children gets impacted. The children left with their family members are not taken care of as the mother can do as stated by the mothers. Here family members are referred to elders at home i.e. mothers-in-law and siblings. Mothers do prepare common food for all the family members early in the morning before leaving for their work. The elders are not careful enough to take care of their children feeding practices. Even siblings are too young to take care of these young ones' especially their feeding and food intake. As discussed in an earlier section the age gap between the two children are very less, so siblings are also not mature enough to manage all the feeding practices of the child. In such conditions, it becomes difficult for the family to practice the proper feeding practices of the infants and young children.

6.3. Feeding Practices and Belief of Mothers with children below 2 years

Most of the mothers (64%) fed their children with colostrum milk. Among 36% of the mothers, 45% do not remember about the Colostrum milk (locally known as ‘Khirsha Doodh’) whether they have thrown or given it to their children. Whereas, 55% of the mothers shared that they have discarded the colostrum milk (Yellow milk) in a piece of cloth as suggested by the elder women considering it to be dirty. Among these 55% cases, the majority of the women are interviewed in the panchayat Bandwaa. The village under this panchayat also had high number of home deliveries located at the border of Khunti and

Namkum border. The reason for the high number of home delivery in this area has already been discussed in the above section.

"I didn't give them colostrum milk and threw it in a cloth because it is dirty." [Mother 42, Buteo]

Similarly, 62 % of mothers remembered that they have breastfed their children within one hour of birth. The data analysis revealed that there is a correlation between the initiation of Breastfeeding and place of delivery is developed. All the children born at home were breastfed within one hour.

"Fed the children with breastmilk within one hour after delivery. We feed them because they start crying. Dai ma (midwife) cleaned my nipple and asked me to feed the child immediately after I regained my consciousness." [Mother 5, Bandwaa]

On the other side, children who are born at the hospital through a normal delivery are given immediately within an hour of delivery. It is also found during the course of discussion with mothers that in institutional deliveries, that initiation of breastfeeding were more likely to get delayed in those children who are born by cesarean section. Meanwhile, children were fed with bottled milk till the mother is not able to feed with breastmilk.

Table 6.2: IYCF practices of mothers having children below 2 years

Feeding Parameters	Yes (N=45)	Percentage
Breastfeeding		
Feeding colostrum	29	64.4%
Breastfeeding within one hour of birth	21	46.7%
Pre- lacteal feeds	26	57.8%
Exclusive Breastfeeding for 6 months	26	57.8%
Complementary feeding		
Introduction of complementary feeding (6 – 8 months)	31	68.9%
Minimum number of meals per day	21	46.7%
Feeding during and after illness	25	55.6%
Complementary foods and Breastfeeding continued up to 2 years	29	64.4%
Hygiene		
Bottle feeding	10	22.2%
Safe storage of food	12	26.7%
Separate food preparation (age-appropriate consistency)	5	11.1%
Washing hand before and after food preparation	45	100%

Source: Data collected during the field study

Mothers (57.8%) shared that they have fed their children with prelacteal feed such as water during summer, biscuits from 4 months, cow milk, and bottle milk. One of the common reasons stated for pre-lacteal feed is the summer season and insufficiency of breastmilk. There are some cases that women are aware of exclusive Breastfeeding but they have the misconception that water is not included as prelacteal and can be given to the children.

"My daughter eats biscuits from the age of 3 months. Also given water during summer." [Mother 43, Buteo]

In a group, discussion mothers shared that they have to follow a restricted diet during pregnancy and post-delivery. The mother's health and food intake directly impact Breastfeeding. Another major concern shared by the mothers regarding their food intake

during the first three days after the delivery is also impacting the pre-lacteal intake among the children. Post-delivery mothers are fed twice a day with a limited and restricted diet for at least three days. During these days they are fed such as two chapattis, rice, dal, boiled potato, milk (in some cases) only two times a day. No food or snacks are given in between the meals. No additional food is given believing that these kinds of food will keep her stomach and child's digestive system stress-free.

“My mother in laws gives me meals twice a day and in small quantities. After some time I used to feel hungry but she says that it's not good for me and for my children to eat more. We both will suffer from stomach digestive and gastric problems. I am a mother now, I should learn to sacrifice, think for your child”.

[Mother 16, Chandaghasi]

This could be one of the reasons for those mothers who complain about the insufficient release of breast milk for the child's feeding after delivery. Due to which after delivery, some of the children are fed with bottled milk or cow milk. Bottle milk is another major concern in feeding practices. Among the children, 22.2 % of the children are fed with bottled milk within 6 months and when the child is one year old the percentage increases to 64%, which itself a health concern and suggests precautionary measures.

“Some of us do agree that due to delivery complications we had to give bottled milk to our children after delivery. After delivery, I too faced a similar problem in feeding breast milk to my child. Breast milk was not sufficient for my child. In the hospital, the nurse gave my son bottled milk so, I started giving him the same milk for few days. Later, after one week my son started sucking milk, and afterward, he didn't require bottled milk.” [Mothers 30,

Group discussion at Nayatoli]

“After Mooh Jhooti, my child doesn't like the food. Up to one year, I breastfed her and sometimes she has one or two bites from our plate. Also gave her biscuits and papad (local chips). After reaching one year of age she started having a proper meal.”

[Mother 34, Chandaghasi]

From the data, it is found that 68.9 % of the mothers started the initiation of complementary feeding to the children of 6 to 8 months. Among this 48.9 % of mothers interviewed are from the Sarna community, where the introduction of complementary feeding age for girls is 5 months and for boys is 6 months. Whereas, in other religious group's complimentary food (Upari Aahar) for children started after 6 months of the childbirth with a small family ceremony called "Mooh Jhuthi". The child is fed with kheer (a sweet dish made with rice and milk) for the first time during the ceremony. It should be done after the completion of six months of the child but it is not followed amongst all the families across the community. The ceremony is conducted to fulfil the rituals whereas, the children are already being introduced to biscuits, bottle milk, and cerelac prior to completion of six months. After six months, it is observed that most of the children have started eating more biscuits, chips, packet food items, and cerelac who can afford.

"My son started eating meals after 1 year. From 6 months to 1 year, he drank my breastmilk and had biscuits." [Mother 29, Sodag]

The reason for children being introduced towards ready-to-eat food items are easy accessibility, time constraint and work pressure of the mother. The easy way to keep their cranky children busy mothers gave them convenience food such as biscuits and kurdure (chips), which children like the most and get busy eating these food items. Even in some cases, children are given biscuits before 6 months of age to keep them busy and quiet. Working mothers before leaving for her work give 5 to 10 Rupees to the elder sibling for chips and biscuits. Due to this reason children at a very young age are fond of these junk food items and don't feel like eating home-cooked food. Within the research area, it was observed that villages have small shops filled with these kinds of food items available in small packets of Rs. 2 and 5. This is also a major factor due to which children get attracted towards these junk food items impacting the healthy feeding practices of children. Due to these facts, more than 70% of mothers reported feeding difficulties in children. The common feeding problems described by them are children not accepting other foods, vomit solid foods and not enough breastmilk.

The minimum number of meals per day is closely followed by 46.7 % of mothers of children below 2 years. Mothers are aware about the minimum number of meals to be given to the children but due to the workload they are not able to feed them frequently. In most

families, children eat from their parent's plate. In this situation, children eat proper meals twice a day, and gaps between the meals are filled with breastmilk, biscuits, and chips. In such cases, the quantity of food given to children is not determined and measured. Later on after few months down the line, slowly the mother starts feeding their children with overcooked rice, mashed potato, dal ka paani, and khichdi, which is observed for children who are about 11 months or above. Food is not prepared separately for the children. Children are fed from the same family pot after 11 months.

“We don't cook separately for the child. She eats the same food cooked for the family. It's difficult to cook food separately. We don't have gas and a stove. We cook food on Chullah (wood fire). Cook once in a day for all, but not spicy so that she (the child) can also eat.” [Working Mother 23, Child – 11 months old, Hulundu]

The data shows that 64.4 % of mothers interviewed practiced continued Breastfeeding of the children below two years. The reasons for 35.6% of mothers not able to continue Breastfeeding up to 2 years of the child are early pregnancy, mothers own health issues and weakness, insufficiency of breastmilk, household chores, and employment. In some cases, if the mother gets pregnant still, she continues to feed the child with breast milk until the foetus is five months old or pregnancy is confirmed. In such cases, the mother uses seductive things like Murra (puffed rice), biscuits, and tea to make the child forget about breast milk.

“When I got pregnant for the second time, I was still Breastfeeding my first child. She was 15 months old and I was 2 months pregnant. Later, I was feeling uncomfortable Breastfeeding her. That time she hardly eats food properly. So, I used to give her cow milk as a tea in a bottle.”
[Mother 18, Khijri]

Prevalence of alcohol among males and women leads to domestic violence and fight within the family and spouses. Most of the males whether they are employed or unemployed are indulge in drinking alcohol. During the group discussion, women shared that their male counterparts (husbands) are indulging in alcohol after which they fight and beat their wives at home.

“The day my husband hit me, I don't cook food. I keep crying. When husband hit and thrash, doesn't feel like cooking. I buy something from shop to feed them”. [Mother 4, 36 years, 3 children, Bandwa]

After beaten up by her husband and having a fight, mothers don't feel like cooking food for their family. Where mothers sleep without eating food, they somehow manage to feed their children. This impacts the food preparation and feeding of the children which is prominently taken care of by women of the family because they get physically and mentally disturbed.

6.4. Counseling on Infant and Young Child Feeding practices to mothers

As a health service provider, major responsibilities assigned to Frontline Health Workers within the community is the awareness generation and counseling of the beneficiaries. Since children and mothers are the primary beneficiaries, so it becomes important to comprehend the understanding of the mother on child feeding practices and quality of counseling provided by the Frontline Health Workers.

Table 6.3: Type of counseling given by the Frontline Health Workers on IYCF practices

Advice on feeding practices	Yes (N=45)	Percentage
Advice on Breastfeeding	45	100%
Advice on infant formula milk	45	100%
Support on problem-related to feeding the child	34	75.6%
The advice provided about the feeding problems	29	64.4%
Used various aids for counseling	10	22.2%
Advice on prelacteal (water and other fluids)	35	77.8%
Advice on the initiation of complementary food/feeding	34	75.6%
Advice on the continuation of Breastfeeding	30	66.7%
Advice to increase the thickness of food as the child gets older	5	11.1%
Advice on the composition of food groups given daily	5	11.1%
Advice on the number of times to feed the child	27	60.0%
Advice on feeding the child during and after illness	30	66.7%

Source: Data collected during the field study

The role of all the Frontline Health Workers starts when pregnant women enrol themselves in the Anganwadi Centre till the child is up to the age of 2 years. For seeking advice on child feeding, mothers feel comfortable either with Anganwadi Workers or ASHA depending on the approachability and cordial relationship with them. As shared by mothers, most of the time while crossing each other during commuting they exchange their thoughts and suggestions given by these health workers. In some villages, it is found that Anganwadi Workers are from the same village, where the centre is located and where ASHA reside in the nearby village, or vice versa. In such a situation mothers seek advice from the health worker who is available in the same village.

As shared by the mothers, at 5 to 6 months of pregnancy Sevika or Sahiya advised them about the preparation that needs to be taken care of during delivery and how to breastfeed the child. All the mothers shared that Frontline Health Workers guided them from time to time regarding Breastfeeding. They also suggested that mothers should avoid bottled milk and feed more breastmilk. Even at the time of delivery ASHA accompanied the pregnant women to the hospital and stay there till the delivery. The time is best utilized by ASHA to advice the would-be mothers about introduction of colostrum milk, initiation and exclusive Breastfeeding. In case of weak and malnourished children, ASHA trains both mother and father about kangaroo care and what precautions to be taken for the child.

“Sahiya Didi accompanied me to the hospital and stayed for all the support. Meanwhile, from time to time she is guiding me on Breastfeeding and discouraged me from using bottled milk”.

[Mother 20, Hulundu]

One of the main responsibilities of ASHA is to home visit to understand the condition and other prevailing conditions with the mother and child. It is found that post-delivery, all the ASHA workers make a visit to the house of new mother's post-delivery of the baby for a fixed period of six consecutive days. During these visits, she examines and measures height and weight and temperature of the child and teach mothers on the correct posture for Breastfeeding.

“In initial days Sahiya Didi visited my house to enquire about me and my child's health. She measures the child's temperature and weight, asks about our health, whether we are feeling hot or cold. She advices on how to take care of the child, guides me on

how to carry the child, how to feed, and what are the important things to be taken care of.” [Mother 20, Hulundu]

In some cases, no extra information is shared regarding Breastfeeding and caring for children unless they find any alarming condition of a child. However, there are also ASHA workers who guide mothers on how to hold the child and feed breastmilk. They also suggest to mothers about dietary intake and nutrition to improve breastmilk quantity and quality, importance of the foods which are easily and cheaply available at home. All Frontline Health Workers counselled the pregnant women about colostrum milk, exclusive breastfeeding up to 6 months and its importance. During the interaction with the Frontline Health Workers, 77.8 % of mothers got advice on not feeding the children with any kind of prelacteal (water and any other fluids).

“Doctor and Sahiya Didi both have suggested to feed only breastmilk to the child up to 6 months. Suggested not to give anything else, not even water. Everything is in the breastmilk, water, vitamins, and minerals. That's why up to 6 months I exclusively breastfed my child.” [Mother 33, 4th child, 30 years, Tonko]

As it is found from the data, one of the two sections of women who listen and seek advice from Frontline Health Workers, remember that advice and use it whenever required. Another section of mothers are those who approached their family members for the advice and didn't took advice from the Frontline Health Workers according to the child's monthly growth.

The data shows that 64.4 % of the mothers don't seek advice from the Frontline Health Workers, but whenever they need any sort of support at the time of any emergency, they are able to from the Frontline Health Workers. It reveals that still, 35.6 % of mothers do not approach Frontline Health Workers for problems related to feeding the child. The reason for not seeking advice from Frontline Health Workers was due to poor relationship with them, lack of trust, belief in elders and relative's suggestion which is more accessible than Frontline Health Workers. During the discussion, mothers shared that most of the suggestions they received about breastfeeding and complementary feeding practices were from their elders (mother/mother-in-law) and their relatives /siblings.

“Whenever I need any suggestion regarding the child, I ask my sister, mother, or mother-in-law. Because at home we must listen and follow them as a norm. We have seen them taking care of their own children. They have previous parental experience.” [Mother 28, Khijri]

It is also observed that among the 64.4 % of mothers who have asked for advice and support on the feeding practices of children, they have received it from these Frontline Health Workers.

“I have approached Sahiya Didi for advice on Breastfeeding when my daughter was not able to suck my milk. Didi suggested some measures which helped me. After that my child started sucking and stopped crying. Before asking Didi, I also took suggestions from my sister and mother-in-law.” [Mother 25, Uppartoli Aara]

As shared by the mothers during a group discussion that about 22.2 % of Frontline Health Workers used different aids for counseling such as placard, booklets and also practically showed them how to breastfeed their children. Most of the time it is used during house visits and group meetings conducted by the Sahiya (ASHA). The rest of the mothers were counselled verbally on the child's health during an informal discussion.

After seven home-based visits which ends after 42 days of the delivery, ASHA workers stop visiting houses. After that their point of contact is during the Village Health and Nutrition Day. They are not aware of their role and house visit after six months of the child. The mothers who received advice on the initiation of complimentary food and feeding are about 75.6%. During the group discussions, mothers shared that none of the AWWs visited their home after the delivery for counseling.

“After my delivery sevika, didi didn't visit my house. I met her on vaccination day (tikakaran din) where she asked me about my health and my child's health.” [Mother 35, Neechetoli Aara]

Mothers do remember receiving advice from ASHA on initiation of complementary feeding and on the consistency of food during the home visit after delivery. AWWs suggest the same on initiation of complementary feeding during VHND when mothers visit for child's vaccination. This is taken care of by the Anganwadi worker because the 'Mooh

Jhuthi' activity conducted at the Anganwadi Centre under Poshan Abhiyan. Even in most of the houses, this day is celebrated as a ceremony. Hence, in the study area, there is an overlap between the rituals of Mooh Jhuthi at family and at AWC. But at AWC along with ceremony they are expected to advice mothers on the initiation of semi-solid food.

“Yes, Sevika Didi has conducted a ceremony of Mooh Jhuthi at the AWC for my child. She cooked kheer for him and gifted a small bowl and spoon to him. She said that now he can start eating along with breastmilk. Don't remember what more she advised me on that day.” [Mother 14, Uppartoli Aara]

It is found that only 66.7% mothers remembered the advice received on the continuation of Breastfeeding along with semi-solid food after 6 months of the child at different intervals. Some remembered that they received the advice during ASHA home visits and when they visited Anganwadi Centre for vaccination. Only 11.1% mothers received suggestions by the frontline workers on the consistency and portion of food to be given to the children. The advice includes that the increase in the thickness of food as child grows older and the composition of food groups to be given daily. Mothers also shared that they received the suggestion to feed the children with Cerelac and Horlicks, if available and affordable. These 11.1 % mothers have good information about the food composition. It is also found from the data and field observation that mothers whose children are weak and malnourished have also received advice from the Frontline Health Workers about proper feeding and food diet.

“Sahiya Didi suggested me to feed her after 6 months then you can start feeding your child with kheer. Initially, feed with (rice and dal) khichdi and what you can afford. In small quantities, can feed the child cerelac and Horlicks if my child likes. I can also give her boiled potato and vegetables as an alternative.”[Mother 26, Obariya Nayatoli]

The mothers who have received advice from the FHWs on the number of times to feed the children are about 60 %. It is found that 66.7 % of the mothers have also got advice on feeding the child during and after an illness.

6.5. Discussion

The above findings were discovered from interactions with the mothers which helped in understanding of the questions raised at the beginning of the research on mother feeding practices within the community and the quality of advice received on child feeding practices. Upon review of the data, it was analyzed and found that the influence of socio-demographic conditions has a prominent impact on the child feeding practices. It is apparent that socio-demographic characteristics such as mother's education, marital status, religion, and socio-economic condition doesn't impact the breastfeeding and complementary feeding practices of a child. On contrary, it was the demographic factors such as age of mother, occupation of mother and father, place of delivery, number of children, and the type of family that have a significant effect on the feeding practices. In comparison with the results, CR Banapurmath in 1995 found that socio-demographic factors such as baby's sex, literacy parity, maternal age, and socio-economic condition do not influence breastfeeding practices, while the type of delivery showed a major impact on the initiation of breast milk and its pattern (Banapurmath CR, 1995).

In this study, 64.4 % of families are residing in nuclear set up leading to assumptions that mothers are free and capable enough to decide on child feeding practices. Whereas, in actual situations, despite a smaller number of joint families, it is recorded that mother's child feeding practices regarding Breastfeeding and complementary feeding are highly influenced by the family members and female elders in the family. The pregnant women's mother or mother-in-law accompany them to take care of the children and mother post-delivery, due to which they have a high level of influence in the feeding practices of mother and children. Another factor which influenced the child feeding practices is the age of the mother and the number of children they already have. It is found in the study that 89% of the mother are less than 25 years of age and already had at least two children. This impacted the overall feeding habits and practices performed by the mothers in the constrained situations evolved due to these pertinent factors. This early marriage plays a major role in child feeding practices. Early marriages lead to early pregnancy, where the girl herself is an adolescent and lacks basic awareness of rearing and caring for the child. The girl's body is weak and anemic, impacting the quality and quantity of breastmilk. Since these young mothers are unaware of the child care practices, they sometimes get misguided by their elderly women in the households i.e. mother or mother-in-law. Prelacteal feeding practices are one such example where a child is given few drops of water, Janam ghutti as suggested by the close relatives.

Another major factor impacting the child feeding practices is the age gap between the two siblings. It is found that the gap between the siblings is less than a year or two years which means before the child leaves breastfeeding, the mother gets pregnant. This condition is neither good for the mother's health nor the baby's development. It impacts the mother's health because her body did not get the time to regain the strength and energy to deliver another child. Most of the mothers are already anemic due to their socio-economic condition and such a situation further makes them anemic and weak. Since the rearing of the child is taken care of by the mother, her poor condition impacts her breastfeeding and feeding practices effectiveness. Due to this, the continuation of breastmilk with complementary feeding in the crucial phase of the child feeding gets neglected.

Based on the female work model and workload, women in the community can be housewives, employees, and women left behind. According to the data, 73.3 % of mothers are housewives and busy all day doing housework. It is believed and practiced in the community that mothers with children under 2 years old are expected to stay at home and care for the child. Among the sample, 26.7 % of mothers work either as agricultural workers or as a daily wage labourer. Among the 73.3 % of mothers at home, 24% of women are engaged in preparing Hadia (local drink/alcohol) at home to sell them in the local market for livelihood. The children left with their family members are not taken care of as the mother i.e. mothers-in-law and siblings. Mothers do prepare common food for all the family members early in the morning before leaving for their work. The elders are not careful enough to take care of the children feeding practices. Even siblings are too young to take care of these young ones' especially their feeding and food intake. As discussed in an earlier section the age gap between the two children are very less, so siblings are also not mature enough to manage all the feeding practices of the child. In such conditions, it becomes difficult for the family to practice the proper feeding practices of the infants and young children.

Seasonal migration and alcoholism increases the burden of rearing children on mothers. Data suggests that 26.7 % of husbands of mothers who work outside the home for money are either unemployed, work a daily wage labourer, or migrated from the village for work. In such a situation, the burden on the women doubles up which further impacts the rearing and feeding of the children. The left-behind women have to take care of household work, children, elders at home, and animals. Despite all the efforts, some part of the responsibility gets neglected in which children feeding habits and practices is the one which

is sometimes done unknowingly. The workload in the case of women who are left behind is doubled because they had to take care of housework, children, and elders in the home, animals, and outside responsibilities. Therefore, it can be argued that due to the overload of domestic work, child feeding practices are neglected and it's double in the case of left-behind mothers. Two studies in 1981 and 2005 have similar findings, where it was found that receiving remittances from migrants did not reduce women's working hours; rather resulted in taking on added burden of the family responsibilities for childcare, agriculture, and the elderly (Shaheed, 1981 and Parida, 2005). As the mothers recalled during the group discussion, 22.2 % of the Frontline Health Workers used various counseling aids such as placards, booklets to guide them on correct posture to breastfeed their children. Most mothers (64.4 %) gave their children colostrum milk. Rest (23%) of the mothers do not remember and discarded the guidance from health workers as suggested by their elderly female family members.

The prevalence of alcohol in both men and women leads to domestic violence and strife within the family and spouses. This has an impact on cooking food and feeding of the children, who are prominently taken care of by the women in the family because they are physically and mentally disturbed. The minimum number of meals per day is closely followed by the 46.7 % of mothers of children under 2 years old. Mothers know the minimum number of meals to be given to children, but due to the workload, they are not able to feed their children frequently. The NFHS data reported a drop in the percentage of children fed for a minimum number of times with least food diversity from NFHS 3 to NFHS 4

The data of 46.7% of mothers remembered that they breastfed their children within an hour of birth. In comparison to the study conducted in Delhi (2015) shows that the initiation of Breast feeding was achieved in 1 hour in 49.5% of children and 41% overall for India (Gupta A. et.al, 2015, WBTI Report 2013). This percentage expanded to 86.7% as the time for initiation increased for children to be breastfed within 24 hours. It is not the same situation in comparison to the urban areas of Himachal Pradesh, 18% of mothers start Breastfeeding within 24 hours (Dattal et al., 1984) and 82% of mothers in the slums of Bangalore have done so during the same period (Prabhakara et al., 1987). The NFHS-3 data showed that the prevalence of breastmilk initiation was 34% children born in the health centres against 17% among those born at home (NFHS 3, 2007). Studies of infant feeding practices in rural Himachal Pradesh have shown that 70% to 90% of mothers start

Breastfeeding first. In contrast, 65% of women in rural central Karnataka begin Breastfeeding on the second day (Banapurmath et al., 1996, Shariff and Farsana, 1990).

In the present study, data shows 88.9 % of delivery is done either at the government or private hospital. Mothers revealed that doctors and nurses advised them to feed their children with colostrum milk and do it as early as within an hour of childbirth. During the discussions, mothers also revealed that in institutional delivery if a children born through C-section leads to delay the onset of breastfeeding. During this time, the children were bottle-fed until the mother could not feed them with breast milk. On the same thought cesarean delivery was always considered to be negative towards the early initiation of breastfeeding (Raghavan V. et.al, 2014, Patel A. et.al, 2010). Hence it concludes, the efforts should be to given that even after cesarean the early initiation of breastfeeding should be ensured.

In the study area, 57.8 % of the children are exclusively Breastfeeding which is comparable to India's national average (54.9 %) on infants exclusively Breastfeeding in NFHS 4 report 2015 -2016. (NFHS 4, 2017) Similarly, lower than Jharkhand's data (64.8%) in NFHS 4 for exclusively Breastfeeding. A study in 2015 conducted in Delhi shows a similar finding on prelacteal feeds that is around 47.4 % of mothers. (Gupta A, et.al. 2015). In present study it is reported that mothers feed their children with prelatic feed such as water during the summer, cookies from 4 months old, cow's milk, and bottle-fed milk. One of the reasons for giving water to infants before 6 months, although women are aware of exclusive Breastfeeding, they have the misconception that water is not included as a prelacteal fluid and can be given to children. They have fed their children with prelacteal feed such as water during summer, biscuits from 4 months, cow milk, and bottle milk. One of the common reasons stated for pre-lacteal feed is the summer season and insufficiency of breastmilk. The advice is given by the Frontline Health Workers for no prelacteal feeding before six months and exclusive Breastfeeding was practiced at a different time of children. In this study, it is found that 77.8 % of mothers are given awareness on no prelacteal feeding whereas only 57.8 % can follow it. One of the reasons for it is the elders at home who insists and without the consent of the mother feed children with water and other liquids before 6 months of the child.

Bottle milk is another major concern in feeding practices. In the study area, 22.2 % of children are bottle-fed within 6 months, and when the child is one year old the percentage increases to 64%, which raises the question on the complementary feeding practices. Bottle-feeding has entered the villages quite widely, and even commercial weaning foods have

started to be adopted by a few rural households. Significantly, slightly higher than the study conducted recorded 17% of infants started bottle feeding at 4 months, 24.9% at 6 months, and 49.4% at one year, citing the main reason for bottle-feeding was the insufficiency of breastmilk. (Banapurmath CR et al, 1996). All the mothers shared that the Frontline Health Workers had occasionally guided them on Breastfeeding. They also suggested that mothers should avoid bottle-feeding and feed more breast milk. In case of weak and malnourished children, ASHA workers guide both mother and father about kangaroo care and further precautions in child care.

According to the data, 68.9% of children (6 to 8 months) were introduced to complementary feeding. This is similar to the 54% of children who started complementary feeding in Delhi found in a study conducted in 2014. (Gupta A. et.al, 2015). While in 31.1 % of children, the initiation of complementary feeding is delayed and during these months children depend on breast milk and bottle milk. Among the 68.9 % of children, 48.9 % belong to the community of Sarna where the age of complementary feeding is 5 months for girls and 6 months for boys. In a similar study conducted among the Santhal tribe in northern Orissa, it was found that onset of complementary food is at the age of seven months and is used to give soft rice, porridge, and legumes as a major complementary food (Swain L., 1985). A study conducted on the health care of Oraon children in the village of Barambe in the district of Ranchi found that children are dependent on breast milk until the age of one year, and after one year the baby receives solid foods (Narayan, 1983). Likewise, Bahl reported on infant feeding practices, 92 percent of children receives foods among the tribes of Himachal Pradesh at the age of 13-24 months. The percentage of children (6 to 9 months) receiving foods in the research area (68.8%) recorded higher than the NFHS 4 national average (42.7%) and Jharkhand's average (47.2%). (NFHS 4, 2017) The improvement in the data still needs a long way to go, with other parameters taken care of feeding practices of children after 6 months. The mothers who received advice on initiating complementary feeding are 75 percent. These mothers received advice on complementary feeding and its consistency at the first month of the child, and during their visit to the Anganwadi Centre for vaccination.

Mothers are aware about the minimum number of meals to be given to the children but due to the workload they are not able to feed them frequently. In most families, children eat from their parent's plate. In this situation, children eat proper meals twice a day, and gaps between the meals are filled with breastmilk, biscuits, and chips. In such cases, the quantity

of food given to children is not determined and measured. There are Frontline Health Workers who gives suggestions to 11.1 % mothers on the consistency and quality of food given to children. The advice focuses on increasing the thickness of foods as the child grows and on the composition of the food groups to be administered daily.

For seeking advice on child feeding, mothers feel comfortable either with Anganwadi Workers or ASHA depending on the approachability and cordial relationship with them. As shared by mothers, most of the time while crossing each other during commuting they exchange their thoughts and suggestions given by these health workers. Even at the time of delivery ASHA accompanied the pregnant women to the hospital and stay there till the delivery. The time is best utilized by ASHA to advice the would-be mothers about introduction of colostrum milk, initiation of Breastfeeding and exclusive Breastfeeding. Mothers shared that most of the suggestions they received about breastfeeding and complementary feeding practices were from their elders (mother/mother-in-law) and their relatives /siblings.

It can be seen that 66.7 % of mothers remember that they have received advice on the continuation of breastfeeding along with semi-solid foods after the baby is 6 months old. Data shows that 64.4 % of mothers surveyed can practice continuous breastfeeding for children below two years. The reason states that 35.6 % of mothers are unable to feed their children breast milk for up to 2 years, is the confirmation of pregnancy with another child, health problems, the insufficient release of breast milk, household work pressure, and job workload. In such cases, the mother uses seductive things like Murra (puffed rice), biscuits, and tea to make the child forget about breast milk.

In the purview of the data and analysis, the child feeding practices of breastfeeding and complementary feeding are not influenced by the socio-economic groups, and to which class mothers belong in the community. In contrast, studies are showing a relationship between the socio-economic classes and feeding practices. In one of the studies conducted by Walia B.N.S. et al., it is reported 75% of upper-class mothers wean their babies at nine months and 70.7% of mothers continue to breastfeed until 2 years. In another study, most mothers in the upper socio-economic group began to breastfeed solid foods around 6 months, while mothers in the lower socioeconomic group start it after one year. (Walia B.N.S. et al, 1974, Datta Banik, N.D., 1975)

During the discussion, it was concluded that the correct timing for dissemination of information to the beneficiaries are missing. It was observed that mothers are aware of the time of initiation of the complimentary food, and after that day they continue feeding their child only with breastmilk or bottle milk. There are also cases that they start giving children biscuits and chips before six months. In houses, girl children are introduced with semi-solid foods at five months of age which is still not changed by the advice given by the Frontline Health Workers. One of the reasons could be the timing of advice given to the mothers. The gap created after the 42 days of ASHA home visit, mothers still follow the suggestion by family member's , and the impact of Frontline Health Workers advice gets diminished. The engagement of mothers and their socio-cultural barriers are also not considered by the Frontline Health Workers while counseling them. The prevalence of alcohol in both men and women leads to domestic violence, impacting the preparation of food and the feeding of the children, who are prominently taken care of by the women in the family.

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CHAPTER 7
KNOWLEDGE AND PERCEPTION OF FRONTLINE HEALTH
WORKERS ABOUT INFANT AND YOUNG
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CHAPTER 7
KNOWLEDGE AND PERCEPTION OF FRONTLINE HEALTH
WORKERS ABOUT INFANT AND YOUNG CHILD FEEDING
PRACTICES

7. Overview

The previous chapter 6 (Section 6.4) gives the inferences of mothers and connotations regarding the advice given by the Frontline Health Workers on child feeding practices and the support received by them. Further, a level up on similar findings, this chapter focuses to assess the knowledge, counseling approaches, and challenges faced by the Frontline Health Workers (ASHA, AWWs, and ANM) in the feeding practices of children. To meet the objective, the chapter answers the research questions such as the role of the government frontline workers (ASHA / AWWs) in feeding practices among children below two years of age, knowledge and perception of AWWs on feeding of complementary food, strategies adopted by the local health workers to inform and to meet the needs of caregivers on feeding practices, and the parameters impacting the knowledge and skill development of the workers.

The goals of this chapter are given as below.

- Comprehend the social and demographic characteristics of the Frontline Health Workers for a better understanding of their knowledge and skills (Section 7.1)
- Provide a detailed understanding of the training centres and training curriculum of the Frontline Health Workers on child feeding practices (Section 7.2)
- Assess and analyze the knowledge and awareness of Frontline Health Workers on feeding practices of breast milk and complementary food (Section 7.3)
- Detail the counseling place and strategies practiced by the FHWs for mothers of children below 2 years. (Section 7.4)
- Highlight the challenges and hurdles faced by the Frontline Health Workers in their work and awareness generation (Section 7.5)
- Summary of findings and discussions of this chapter (Section 7.6)

The Anganwadi Centres are covered in the three-zone (directions) of the Namkum block based on the selection criteria discussed in the methodology chapter (Section). One centre was selected at the nearby area of Namkum CDPO office which is considered as the

centre for the research area and the rest two centres in two different directions. Hence, based on the understanding developed about the area and Anganwadi location, villages and panchayats are selected for the study. These three zones are Tupudana, Tatisilwae, and Namkum which are supervised by three supervisors.

The total panchayats covered during the study are nineteen (19) spread over in the three different zones. The total panchayats covered in each zone are seven (7) panchayats in the Tupudana zone, five (5) in Tatisilwae, and seven (7) in Namkum Zone. From these areas, Frontline Health Workers, their supervisors, and their trainers are interviewed and conducted discussions with them in groups for understanding their knowledge and skills in child feeding practices.

7.1. Socio-Demographic Profile of Frontline Health Workers

As the first section of this chapter, it gives a detail profiling of the Frontline Health Workers i.e., age, education/qualification, years of experience as Frontline Health Workers, and marital status. The relationship between the socio-demographic factors and the knowledge and advising skills of FHWs are established and discussed in this section. To understand the profile characteristics of the Frontline Health Workers, 45 Anganwadi Workers, 45 ASHA workers, and 15 ANMs are interviewed in the sample research area.

Table 7.1: Socio-demographic profile of Frontline Health Workers

Socio-demographic parameters	AWWs (N=45)	ASHA (N=45)	ANM (N=15)
Age (in Years)			
25 to 35	17 (37.8 %)	17 (37.8 %)	08 (53.3 %)
36 to 45	19 (42.2 %)	24 (53.3 %)	07 (46.7 %)
46 to 55	06 (13.3 %)	04 (8.9 %)	Nil
Above 55 years	03 (6.7 %)	Nil	Nil
Education/ Qualification			
Illiterate	03 (6.7 %)	01 (2.2 %)	Nil
5 th grade to 9 th grade	09 (20.0 %)	12 (26.7 %)	Nil
Non Matric	07 (15.6 %)	15 (33.3 %)	Nil
Matric	16 (35.5%)	17 (37.8 %)	Nil
Intermediate	05 (11.1 %)	Nil	Nil
Graduation	04 (8.9 %)	Nil	Nil
B. Ed.	01 (2.2 %)	Nil	Nil
ANM course (B.Sc. Nursing)	Nil	Nil	15 (100%)
Work Experience (in Years)			
Less than 1 year	04 (8.9 %)	Nil	Nil
1 to 5	06 (13.3 %)	Nil	05 (33.3 %)
6 to 10	18 (40.0 %)	32 (71.1 %)	09 (60.0 %)
11 to 15	14 (31.1 %)	13 (28.9 %)	01 (6.7 %)
16 to 20	03 (6.7 %)	Nil	Nil
Marital Status			
Unmarried	Nil	Nil	04 (26.7 %)
Married	42 (93.3 %)	45 (100 %)	11 (73.3 %)
Widow	03 (6.7 %)	Nil	Nil

Source: Data collected from the field study

As reported, all the ASHA workers, 93.3 % of AWWs, and 73.3 % of ANM workers are married. The reason for this is their selection criteria, in which women appointed for the position as Frontline Health Workers (ASHA and AWWs) should be married before their deployment in the village. Otherwise, they leave the job as Anganwadi worker after their marriage. This creates a vacuum leading to non-functioning of Anganwadi Centres, re-appointment for the position, and loss of rapport built over years with the community. It is also defined by the villagers as a prerequisite.

“For AWWs and ASHA selection, she should be a daughter-in-law. She should be married to a man from the village to be served (Gaon ki Bahu hone chahiye).” [AWWs Supervisor 1, Tupudana]

However, in the case of ANM, 26.7 % of women are unmarried because they don't have any such standards for appointment. One of the reason for this could be that most of the sample interviewed age range between 26 to 35 years and after completing their B.Sc. nursing they work for 2 to 3 years before getting married.

Further, data reveals that the majority of the Frontline Health Workers belong to under 45 years of age group. From the sample collected 19 out of 45 (42.2 %) of AWWs and 24 out of 45 (53.3 %) of ASHA workers are in the age group 36 to 45 years. In the case of ANM visiting Anganwadi Centres and catering to the needs of the people in the area 53.3 % are from 25-35 years and 46.7 % from 36-45 years of age group. Whereas, amongst the AWWs respondents who are more than 45 years of age are only 13.3 % and 46 to 55 years age group has 6.7 % and rest of the respondents are above 55 years of age group (Refer Table 7.1). Although none of the ASHA workers consists of age group above 55 years and in the case of ANM not more than 45 years of age.

All ANM workers either studied the ANM course or B.Sc. Nursing after completing their intermediate studies. Out of 45 ASHA workers, 15 (33.3 %) are non-matric, 17 (37.8 %) are matric and 12 (26.7 %) have studied 5th to 9th grade, whereas there was one ASHA worker who reported being illiterate. In the case of Anganwadi Workers, they are illiterate as well as also B.Ed. qualified AWWs. The majority of the AWWs are matric passed (35.5 %), 20 % 5th to 9th class passed, and illiterate (6.7 %). There are also AWWs who are graduate (8.9 %) and 2.2 % B.Ed. degree holders. As shared by the trainers and AWWs supervisors this change in the trend of workers qualification was noticed in the last 5 years. Earlier less qualified women were selected for the job whereas nowadays women who are graduate and B.Ed. passed are

also doing these jobs. This is possible because of the changes made in the criteria of selection and the financial need of the FHWs family. These qualified (higher qualification than matric) women opt for this job as a better option compared to the daily wage labourers to meet the financial needs for themselves and their families

“The government added in the criteria that women applying for the post with higher qualification can be selected and women in the villages who are qualified (Graduate or B.Ed.) doesn't want to work as daily wage laborers. Due to financial needs, do they apply for these posts? ” [AWWs Supervisor 1, Tupudana]

“After doing graduation and marriage, this is the best option I had. I didn't want to work as daily wage laborer for my family.”
[AWWs 2, Hulundu]

The work experience of Frontline Health Workers is the number of years they have worked in the profession (as AWWs, ASHA, and ANM). From the data, it is clear that the majority of AWWs have worked for more than 6 years. About 40 % and 31.1 % are working as AWWs for 6 to 10 years and 11 to 15 years respectively. Whereas, in the case of ASHA workers and ANM, 71.1 % and 60 % have worked for 6 to 10 years. Approximately 13.3 % and 33.3 % have stated work experience of 1 to 5 Years. Only 8.9% AWWs have reported less than 1 year experience and 6.7 % between 16 to 20 years of work experience.

7.2. Training of Frontline Health Workers

Training is considered an important step towards the counseling skill and knowledge development of Frontline Health Workers in disseminating the information further to the caregivers. In total, three trainers of AWWs and one ASHA trainer are interviewed. Two Anganwadi Workers' training centres have been visited during the study namely Holy Cross Training Centre, Ranchi, and Mahila Dastkari Vidhalaya, Itki. The AWWs have two types of training courses, one is job course training for beginners and a refresher course to review and update their skills and knowledge Similarly, ASHA workers are trained by neighbouring block ASHA supervisors known as BTT (Block Training Teacher). These BTTs are trained at the centre and later give training to the ASHAs in batches. The training is based on the modules, which are refreshed from time to time (Box 7.1). All the frontline line health workers (AWWs, ASHA, and ANM) have attended workshops during their job period. Hence

to analyze their training and its presence in the ground reality, the data is recorded in table 7.2.

Table 7.2. Training courses attended by the Frontline Health Workers

Frontline Health Workers	AWWs (Anganwadi Workers)		ASHA (Accredited Social Health Activist)		ANM (Auxiliary Nurse Midwives)	
	Frequency (N=45)	%	Frequency (N=45)	%	Frequency (N=15)	%
Job Course Training						
Yes	42	93.3 %	45	100%	15	100 %
No	3	6.7 %	Nil	0 %	Nil	0 %
Refresher Training						
Once	16	35.6 %	29	64.4 %	Nil	0 %
2 to 3 times	12	26.7 %	9	20 %	Nil	0 %
None	11	24.4 %	Nil	0 %	Nil	0 %
Don't remember	6	13.3 %	7	15.6 %	Nil	0 %
Workshops						
Less than 3 times	22	48.9 %	29	64.4 %	7	46.7 %
More than 3 times	Nil	0 %	9	20 %	8	53.3 %
None	9	20 %	Nil	0 %	Nil	0 %
Don't remember	14	31.1 %	7	15.6 %	Nil	0 %

Source: Data collected from the field study

7.2.1. Training of Anganwadi Workers

During the study both Holy Cross Anganwadi Workers Training Centre and Mahila Dastkari Vidhalaya were conducting refreshing courses in batches. Whereas till 2016, the Holy Cross Training Centre had batches for job course training only. At Mahila Dastkari Vidhalaya, Itki both job course and refresher training were functional. Trainers at both these centre shared how the curriculum of the courses have changed in the last decade.

When a woman joins as a AWWs she must do a job course training, as residential trainee at the centres for few days. In the year 2006, the job course was of 3 months, conducted in batches for 35 AWWs and refresher courses of 13 days. Later in 2010, job course training was reduced to 52 days, 32 days in 2015 and now in 2019, it is of 10 days to one week. Nowadays refresher courses are for 2 to 5 days and job courses for ‘Sahika’ (AWWs helper) are for 8 days.

As shared by the officials, government gives module and curriculum according to which training centre conducts the training. As remembered by the trainer, in 2006 the job course was called ‘Sandwich Course’ because it had three parts, pre-school development, community participation, and health and nutrition. Trainers shared that the time for training is very short which restricts them to cover some areas. To date, the curriculum includes the same topics but due to a decrease in the number of training days, trainers had to rush through the chapters and skip some of the topics, which they can experience and learn from the field. After that, if still, they need any support it will be covered during the refreshers course. In such a situation trainer’s feel that the topic on health and nutrition gets highly impacted from an understanding perspective amongst AWWs about their role. The first day of the course starts with a pre-training test in which they analyze the knowledge of the AWWs about their job and the subject. After the training once again they conduct a test, which helps them to do a comparison with the previous test paper to assess their development so far. Training institutes have separate teachers for different subjects, and they conduct the courses covering both theoretical and practical aspects. For community participation and development of counseling skills of the AWWs, the training centre creates a village scenario in which they conduct Nukkad Natak, protests, and awareness generation campaigns for their first-hand experience. The Secretary of the training centre shared that they have topic-wise teachers, but they have observed that women focus more on the pre-school development and maintain the register. She also shared that due to time constraints and lack of emphasis in the training

modules they don't able to cover complementary feeding topics during the training period, as required for the Anganwadi Workers' skill development.

In the above table 7.2 data shows that 93.3 % of the AWWs have taken the job course training before or after joining the job. However, 6.7 % of them have also revealed that due to their personal reasons they are not able to take job course training. These are those women who have joined recently or have experienced less than 2 years.

“I have 10 months child. When I joined when I was 6 months pregnant. I got the call for job course training when my daughter was 2 months old. I had some complications so not able to join the training. Now I am fine but madam told me to wait for the next batch”. [AWWs 22, Khijri]

Only 26.7 % AWWs had taken refresher course 2 to 3 times during their working years for revision of their knowledge, About 35.6 % for did it once and 13.3 % don't even remember whether they received it or not. There are cases supported by data that AWWs with 9 to 12 years of job had attended only one refresher course so far. The data also described that 24.4 % of AWWs have not received any kind of refresher course training. The reasons stated by the Anganwadi Workers is that either supervisor doesn't recommend their names for these courses or even if they do, they are not able to attend due to family responsibilities. The same reasons were stated by the supervisors with an addition that AWWs make excuses to avoid training. This is so because according to the supervisors, the AWWs who avoid refresher training consider it worthless and inapplicable for them.

“During the refresher course time, my mother-in-law was not well. So I asked madam to send somebody else in my place.” [AWWs 16, Oberiya]

“According to them (AWWs), they know everything and managing their roles properly. So, it is not needed for them.” [AWWs Supervisor 2, Namkum]

Every year AWWs supervisors were asked to recommend some names for refresher course batches. At a time 30 to 35 AWWs are recommended for each batch and rest of the names are forwarded for the next batch. The number of refresher courses in a year are not fixed. It depends upon the schedule prepared at block level as shared by the respondents.

Supervisors shared a concern that AWWs attend job course training in their initial phase of the job because as it was compulsory for them to do so. However, similar importance were not given to the mid-job refresher courses by the AWWs. According to the supervisor's, refresher course are important for the AWWs for the upgradation of their knowledge and skills. They had the same feedback regarding the workshops conducted from time to time.

“Even for 2 days refresher course, they don't want to go. We can't force them. We know they need it. Does not show any interest in capacity building. We guide them but they don't listen. They make husband, children, and family excuses.” [AWWs Supervisor 2, In charge of Tatisilwae zone]

For AWWs most of the workshops are based on programs and schemes which need few hours of the session in a day. It was reported that 48.9 % of the AWWs have attended less than 3 workshops, 31.1 % don't remember and 20 % have not attended any of the workshops.

7.2.2. Training of ASHA (Accredited Social Health Activist) workers

To understand the training curriculum of ASHA workers and its prospectus, one ASHA trainer and 45 ASHA workers were interviewed during the study. There were total of 3 ASHA supervisors in the field, out of which one was interviewed. She was also a trainer. One was on personal leave and another on sick leave (she met with an accident).

As per the data in ASHA office, the Namkum block had a total of 15 clusters with a total of 220 active ASHA workers (A total of 234, 14 inactive workers). A cluster is a group of villages and ASHA workers in those villages. In each cluster, one ASHA is voted as 'Sahiya Sathee' who support the other ASHA worker in the cluster by supervising their work and training them for PLA meetings. There were total 15 Sahiya Sathee amongst whom 6 were interviewed. During the study total 45 ASHA workers were interviewed including 6 Sahiya Sathee. The role of the Sahiya Sathee is to support and guide Sahiya's of their respective cluster, handholding of concerned Sahiya's, conducting cluster meetings, filling up forms and helping other Sahiya to do so. They are also responsible to conduct PLA meetings in their catchment area, attend VHND in their village, attend block monthly meeting, check all the entries made by their cluster Sahiya, and attend block meetings.

The trainer was a graduate and has 15 years of experience in this field. For the last 5 years, she was giving training to ASHA workers. A total of 13 module of training have been

conducted so far. All the trainings were conducted according to the pre-designed and predefined modules. All the workers had to cover each module. If in case, someone misses out any of the training modules, then their Sahiya Sathee was responsible to ensure completion of their training. Each module is numbered as 1, 2, 3, 4, 5 A, 5 B, 6 A, 6 B, 7 A, 7 B, 8 A, 8 B, and 9 (Refer box 7.1). Module 2, 5B, 6B, and 7A are on child-rearing and feeding practices. Module 8A is on refresher course inclusive of present relevant topics from last all the modules.

Box 7.1: The list of modules for ASHA training:

- Module 1 – Sahiya- An introduction (*Sahiya Ek Parichaiye*)
- Module 2 – Health Child Bright Future(*Swasthiya Sishu Ujjwal Bhavishya*)
- Module 3 – Food, Water and Cleanliness (*Bhojjan Paani Aiwam Safai*)
- Module 4 – Safe Motherhood (*Surakshit Matritva*)
- Module 5 A – Sahiya Leadership and Development (*Sahiya Naitritva and Vikas*)
- Module 5 B – Diseases and Nutrition (*Bimari Aiwam Poshan*)
- Module 6 A – Dakshtaiye Life Safety and Security (*Dakshtaiye Jo Jeevan Raksha Kar Sake*)
- Module 6 B – Nutrition – Life Protector (*Jeevan Rakshak Poshan*)
- Module 7 A – Mother and Newborn Child Care (*Maa Aiwam Navjaat Sishu Dekhbhaal*)
- Module 7 B – Sahiya Responsibility (*Sahiya Jeemedari*)
- Module 8 A – Refresher (*Includes all previous topics*)
- Module 8 B – Violence against women (*Mahila Aahinsha Ke Khilaf*)
- Module 9 – Non-Communicable Diseases (*Gair Sanchari Rog*)

All the ASHA workers have attended the job course training. From the data, it was reported that 64.4 % of the ASHA workers have taken refresher training at least once and 15.6 % don't remember anything about refresher courses. Among the ASHA workers, 64.4 % have attended less than 3 and 20 % more than 3 training workshops. During the study, 15.6 % of ASHA don't remember whether they have received any kind of workshops or not.

7.2.3. Training of ANM (Auxiliary Nurse Midwife)

All the ANM after completing matric or intermediate studies have done the ANM course or B. Sc. nursing. None of the ANMs were found to have received any kind of refresher course training during the study.

“There is no refresher course as such for us but we do attend workshops and theme based training before implementation of any scheme”. [ANM 6, Hulundu]

From time-to-time number of training/ workshops were conducted on a different topic as per the new project programs.

7.3. Knowledge and Perception of Frontline Health Workers on Infant and Young Child Feeding Practices (IYCF)

This section tries to comprehend the knowledge and perception of the Frontline Health Workers on feeding practices of infant and young children (IYCF). For this, the Frontline Health Workers are assessed on breastfeeding and complementary feeding practices knowledge and their gaps.

The goal of this section are as given below.

- Develop an understanding of the Frontline Health Workers knowledge and perception on breastfeeding feeding practices (Section 7.3.1)
- Comprehend the knowledge skills of Frontline Health Workers on complementary feeding practices (Section 7.3.2)

Total 105 Frontline Health Workers (45 AWWs, 45 ASHA, and 15 ANM) were contacted and interviewed to analyse the objective of the study on assessing the knowledge of the FHWs. Amongst the 15 ANMs, 2 were working at Malnutrition Treatment Centre (MTC).

7.3.1: Knowledge and Perception of Frontline Health Workers on Breastfeeding practices

The factors discussed and analysed in this section are to understand the knowledge of the FHWs on breastfeeding. Factors included in the study are such as time for the initiation of breastfeeding and continuing breastfeeding along with complementary feeding, prelacteal feeding, exclusive breastfeeding, bottle feeding, and Proper posture of breastfeeding (Table 7.3).

Table 7.3: Knowledge and perception of the Frontline Health Workers on breastfeeding practices

Knowledge on Breastfeeding Practices	AWWs (N=45)		ASHA (N=45)		ANM (N=15)	
	Correct Answer (%)	Incorrect / Don't Remember (%)	Correct Answer (%)	Incorrect/ Don't Remember (%)	Correct Answer (%)	Incorrect/ Don't Remember (%)
Early initiation of breastfeeding	39 (86.7%)	6 (13.3%)	45 (100 %)	Nil	15 (100%)	Nil
Introduce Colostrum milk to baby	45 (100%)	Nil	45 (100 %)	Nil	15 (100%)	Nil
Prelacteal feeding should not be given	45 (100 %)	Nil	45 (100 %)	Nil	15 (100%)	Nil
Frequency of Breastfeeding	35 (77.8%)	10 (22.2%)	36 (80%)	9 (20%)	15 (100%)	Nil
Breastfed low birth weight baby more frequently	8 (17.8%)	37 (82.2%)	22 (48.9%)	23 (51.1%)	15 (100%)	Nil
Exclusive breastfeeding	45 (100 %)	Nil	45 (100 %)	Nil	15 (100%)	Nil
Oral medication counted as exclusive breastfeeding	21 (46.7%)	24 (53.3%)	32 (71.1%)	13 (28.9%)	15 (100%)	Nil

Continue breastfeeding while a child is sick	39 (86.7%)	6 (13.3%)	32 (71.1%)	13 (28.9%)	15 (100%)	Nil
Continuing breastfeeding along with complementary feeding	31 (68.9%)	14 (31.1%)	32 (71.1%)	13 (28.9%)	12 (80%)	3 (20%)
Avoid bottle-feeding to baby	33 (73.3%)	12 (26.7%)	37 (82.2%)	8 (17.8%)	12 (80%)	3 (20%)

Source: Data collected from the field study

Initiating early breastfeed and introduction of colostrum milk – The first knowledge on breastfeeding Frontline Health Workers should have is on initiation of breastmilk to a newborn baby after the delivery. The desired answer for the above parameter is as early as possible after the delivery, when the baby shows it is ready. Both UNICEF and WHO recommend breastfeeding should be started within first hour of birth. This practice is also to ensure the baby’s first critical contact with the mother. After the mother's delivery complications, it is expected from the FHWs to counsel and support these mothers for early initiation of breastfeeding within the first hour. Another knowledge to be disseminated is on importance of colostrum milk that should be given to the baby, which helps in boosting baby’s immunity and protection from infectious diseases

The data reports that all of the ASHA workers and ANM know when to initiate breastfeeding for a new-born baby. Whereas only 86.7% of AWWs shared about the early initiation of breastfeeding, and 13.3% either responded incorrectly or were not sure of the answers. About 13.3% of AWWs shared that now the trend has changed and more caesarean deliveries are done where mothers are not able to feed their child within an hour.

“During our job training we are advised to counsel mothers with new born baby about early initiation of breastfeeding but now a days due to C-section delivery mothers are not able to follow”

[AWWs 39, Hahap]

In contrast to the desired response, these AWWs counsels and suggest mothers to feed within 4 to 5 hours or within the same day depending on the delivery situation and complication.

“Before delivery I suggest mothers to breastfeed their child as soon as possible, within 1 hour. Also to give yellow (khirsha) milk and not to throw it.” [ASHA 33, Silwae]

All the FHWs have knowledge and understanding that all the mothers should give their baby colostrum milk (first milk) and its importance.

Prelacteal feeding should not be given to the baby – Prelacteal feed includes water, sugar water, honey, cow milk, and anything apart from breastmilk given within 0 to 6 months to the baby. All the Frontline Health Workers have the knowledge that children should not be given any prelacteal feed before six months. Frontline Health Workers had clear understanding about the exclusive breastfeeding supporting no prelacteal feeding to the baby.

Frequency of Breastfeeding - Frequency of breastfeeding describes the number of times a baby should be breastfed in a day. The desired answer and knowledge FHWs should have regarding the frequency of breastfeeding is that a normal baby should be breastfed on demand and more frequently to a low-birth-weight baby.

All the ANMs have the correct knowledge and perception on the frequency of breastfeeding for both categories of normal and low birth weight babies. Among the AWWs, 77.8 % have the correct knowledge about the frequency of breastfeeding for normal children and 17.8 % for low-birth-weight babies. Approximately 22.2 % of AWWs have either responded incorrectly or have no idea about the frequency of breastfeeding for normal babies. The responses received about frequency of breastfeeding were 4 to 5 times in a day which are also related to the mother's household workload and work pressure. The percentage of incorrect answers for frequency of breastfeeding for low-birth-weight babies was reported high (82.2%) in AWWs.

In the case of ASHA workers, 80 % have the correct understanding of the frequency of breastfeeding for normal and 48.9% for low-birth-weight baby respectively. Only 20 % of ASHA workers have given incorrect answers regarding the normal baby. Whereas, more than half (51.1%) of ASHA workers, either have no idea or responded incorrectly to the frequency of breastfeeding for the low-birth-weight baby.

“In case of low birth weight babies it becomes difficult for babies to suck the milk and mothers are also not able to feed the baby so frequency of breastfeeding doesn't matter in such cases”. [ASHA 41, Bandwa]

The incorrect responses received from the AWWs and ASHA workers for the frequency of breastfeeding for the low-birth-weight baby were similar. Few of them believed that in case of low birth weight, babies are not capable enough to suck the breastmilk, so the frequency of breastfeeding does not matter. Another reason quoted by them was poor intake of the mother herself, which impacts the low birth weight of the baby and not the frequency of breastfeeding. The rest of them have no idea on the relation between the frequency of the breastfeeding and the low-birth-weight of the child.

Exclusive breastfeeding and bottle feeding – The data reveals that all the FHWs (AWWs, ASHA, and ANMs) know that all children below six year of age should be breastfed completely. FHWs shared their experience regarding counseling on exclusive breastfeeding to mothers of a new-born baby. ASHA and AWWs shared about their constant effort on making mothers aware of exclusive breastfeeding during their home visit and during VHND. As a suggestion, mothers were advised to feed their baby only breastmilk without any prelacteal feeds (water, honey, tea, gripe water, and ghutti). In addition, all the ASHA workers and ANMs were aware and convinced that mother's milk was better than cow's milk. Whereas, in the case of AWWs where all of them were aware of exclusive breastfeeding, only 68.9 % believed that mother's milk was better for baby than cow milk. All the ANMs, 71.1 % ASHA, and only 46.7 % AWWs knew that oral medication given to a baby was counted as exclusive breastfeeding.

“I know that child should be exclusively breastfeed and bottle feeding should be avoided. Because it is not good for child, mother's milk has everything”. [ANM 7, Tati Paschmi]

AWWs (73.3 %), ASHA (82.2%), and ANM (80%) believed that bottle-feeding should be avoided in child feeding.

Continuous breastfeeding along with complementary feeding and when a child is sick–

Among the AWWs, 68.9 % believed that mothers should continue feeding their baby with breastmilk with complementary food up to 2 years. Similarly, 71.1% of ASHA and 80% ANMs knew that a child should continue breastfeeding for at least up to 2 years. They believed that mothers should continue breastfeeding their child along with complimentary food depending on the child’s demand.

“Children should be breastfeed continuously along with food even when they are not well.” [ANM 4, Mahilong]

“It depends on the child health and mood. In most cases children stop eating food when they continue breastfeeding. Hence breastfeeding needs to be reduce or can be stopped to increase food intake”. [ASHA 22, Lalkhatanga]

About 71.1% ASHAs and all ANMs believed that sick children should be continued breastfeeding. Although, 86.7 % of AWWs knew to continue breastfeeding even if the child was sick. In some cases, FHW shared that despite their knowledge they are not able to suggest or convince mothers to continue breastfeeding, because children become cranky during illness. Hence, in such situations they suggest mothers to take them to the hospitals.

7.3.2: Knowledge of Frontline Health Workers on Complementary feeding practices

This section comprehends the knowledge and perception of the FHWs (AWWs, ASHA, and ANMs) on complementary feeding. The factors for analysing the knowledge of FHWs was complementary feeding age for the introduction of complementary feeding, consistency, and frequency of complementary feeding, separate preparation of food for babies, the composition of food for babies, and hygiene and cleanliness in preparation of food (Table 7.4).

Table 7.4: Knowledge and perception of the Frontline Health Workers on complementary feeding practices

Knowledge Complementary Feeding Practices	AWWs (Anganwadi Workers)		ASHA (Accredited)		ANM	
	Correct Answer (%)	Incorrect / Don't Remember (%)	Correct Answer (%)	Incorrect / Don't Remember (%)	Correct Answer (%)	Incorrect / Don't Remember (%)
Age of introduction of complementary feeding	45 (100 %)	Nil (0 %)	45 (100 %)	Nil (0 %)	15 (100%)	Nil (0%)
Consistency of complementary feeding	26 (57.8%)	19 (42.2%)	30 (66.7%)	15 (33.3%)	12 (80%)	3 (20%)
Preparation of food for babies (Hygiene and cleanliness)	29 (64.4 %)	16 (35.6 %)	35 (77.8 %)	10 (22.2 %)	15 (100%)	Nil (0%)
Frequency of complementary feeding	16 (35.6%)	29 (64.4%)	21 (46.7%)	24 (53.3%)	15 (100%)	Nil (0%)
Composition of food for babies	26 (57.8%)	19 (42.2%)	30 (66.7%)	15 (33.3%)	15 (100%)	Nil (0%)
Feeding skills development	4 (8.9%)	41 (91.1%)	5 (11.1%)	40 (88.9%)	15 (100%)	Nil (0%)

Source: Data collected from the field study

Age for the introduction of complementary feeding – Complementary feeding is the important second stage of child feeding practice after birth where, the child is already in breastfeeding. Hence, the knowledge of the initiation and right age to introduce the food to the child for the first time plays a crucial role in child feeding practices. The data reveals that all the Frontline Health Workers knew the correct age for the introduction of complementary feeding of the baby as 6 months. During the interview, AWWs and ASHA workers shared about the counseling of mothers regarding initiation of complementary food should be at 6 months and not before that under any circumstances.

Consistency of complementary feeding – This section tries to understand the knowledge of the FHWs on what consistency of the food should be given to 6 months old child and how to increase it gradually. During the interview, the common statement given by the AWWs and ASHA on the consistency of food to be introduced to children was whatever food that available at home should be given to the child. There was no focus given on consistency. Some of them stated that children should start with food in liquid form and a common example quoted by them is dal ka paani. The percentage of AWWs and ASHA who had incorrect knowledge or had no idea on the consistency of the complementary food was 42.2 % and 33.3 % respectively. They mostly focused on liquid diets.

“After Mooh Jhuthi mothers can start giving their child liquid diet, dal ka paani”. [AWWs 20, Bandwa]

Whereas 57.8 % of AWWs and 66.7% of ASHA workers have the correct knowledge on the consistency of food. They knew that children should start with semi-solid foods and quarterly their consistency should be increased. Amongst these AWWs, some of them do share about the counseling of mothers on the consistency of food either during Mooh Jhuthi or on VHND. Whereas rest either blamed the mother for not giving time for a meeting or they don't remember the correct practice. ASHAs who knew about the consistency of food shared that PLA training in recent months had helped them to remember all the points on child feeding practices. This was also observed during the study that training for PLA meetings had improved the knowledge level of ASHA workers. The data reveals that only 20 % of ANMs don't have the correct answer or don't remember present practices on complementary feeding.

Frequency and quantity of complementary feeding -The study reveals that all the ANMs knew the correct frequency of complementary feeding to children who are below 2 years of age. The number of times is the frequency and portion size of food is quantity for the child under complementary feeding. The children should be fed at fixed intervals around 4 to 5 times precisely will be the correct knowledge on the frequency of complementary feeding. The food intake of children should be measured and fed in separate bowls as a practice under complementary feeding. According to the study, 64.4 % of AWWs and 53.3% ASHA workers either don't remember/have no idea or gave incorrect answers on the frequency and quantity of food to be given for the children.

“Mother should feed the child whenever the child asks for food.” [ASHA 19, Bandwa]

“I don't remember, the exact number of times a child should be fed in a day and also the quantity. Exact number cannot be defined. It depends on child's demand. ” [AWWs 35, Sithiyu]

The data states, the AWWs (35.6%) and ASHA (46.7%) knew about the correct frequency and quantity of complementary feeding but most of the time they forget to provide awareness to mothers on this topic.

“The child should be given in separate utensils to feed by mothers/ elders in the family. This helps to keep track of the quantity of food intake of the child and its increase.” [ASHA 12, Sodag]

They make a general statement, whenever mothers get the time they should feed their children, which diminishes the objective of knowing the quantity and frequency of feeding practices.

Preparation of food for babies – FHWs knowledge about preparation of food for baby's meal means that they were aware that separate cooking for children and the precautions (hygiene and cleanliness) to be taken while cooking. All the FHWs (AWWs, ASHA, and ANMs) knew that separate food should be prepared for the children with all precautions i.e. maintaining hygiene and cleanliness while cooking and feeding.

Composition of food for babies – Composition here refers to the ingredients included in food items given to a child after 6 months onwards. This parameter on food compositions for babies above six months plays a crucial role in the nutritional status of the children. Hence, possessing knowledge regarding the compositions of food was important for both FHWs and for mothers of the child below 2 years. As informed, the food should include vegetables, carbohydrates, fruits, lentils, and dry fruits which was missed by them. The study reveals that 66.7 % of ASHA workers and 57.8 % AWWs knew about the correct composition of food that should be given to the child. As shared by them, they are aware and advise mothers to feed their children with semi-solid food. In addition, some of them also suggested preparing khichadi with all locally grown vegetables, because it had all the nutrients which a child's body requires for development.

Whereas the rest 42.2 % AWWs and 33.3 % ASHAs do not have the correct idea about complementary feeding on what should be fed to the child.

“How much we can remember about this composition. We ask them to feed whatever they have at their home in good quantity”. [AWWs 17, Khijri]

Due to the new practice of Mooh Jhuthi on VHND for 6 months old children, 57.8 % of AWWs were aware about including Tri-colour food items in the diet of the child for overall nutrition intake. Despite more than 50% of AWWs knowledge about the composition of food, none of them are reported to be counseling mother's on the same. Instead, they gave a general statement on food composition, as to include and feed the child with whatever food available at home without going deep into their household socio-economic conditions. All the FHWs believe that mothers should avoid giving biscuits and chips (papad) to children below 2 years.

“Mother give their small children biscuits and papad to buy some time for work. We suggest to them that they should give these biscuits to them but they don't listen”. [ASHA 15, Sodag]

Feeding skills development – The knowledge of feeding skill means different complementary feeding methods a mother should adopt for their children feeding. It includes feeding methods in which the mother should feed the child playfully, slowly, patiently and giving time to children to chew the food properly and complete the full meal. It is observed

that very few FHWs address it as knowledge of complementary and do not consider even counseling. The data states that 88.9 % ASHA and 91.1% AWWs do not know about the feeding skills or methods mother should adopt and practice while feeding their children.

“I have no idea how women can feed their child. All mothers have different conditions and children. I only know that mother should feed the child timely and I suggest the same to them”. [AWWs 22, Khijri]

In the case of 11.1% of ASHA workers, who knew about the food feeding methods to be adopted are Sahiya Sathee’s who had recently received PLA training.

7.4 Counseling strategies practiced by the Frontline Health Workers

The verbal and non-verbal skills that enables in communicating some advice to the mother is known as counseling skills of the FHWs. This section discusses the counseling skills of FHWs, places, and methods applied by the FHWs for awareness and counseling of the mothers on Infant and Young Child Feeding practices. It was observed and shared that counseling and awareness dissemination on the issues are mostly verbal except a few in which they used materials for the purpose. The different places, occasions, and strategies of counseling adopted by each FHWs are discussed below in detail;

7.4.1. Awareness at beneficiaries’ home (Home visits):

The home visit was a step taken by the FHWs for the awareness and counseling of the beneficiaries (mothers/ caregivers of children below 2 years) related to IYCF practices. Under the ICDS schemes, one of the major role and responsibility of AWWs was to visit the homes of the beneficiaries to monitor and be cognizant of their health and nutrition status. Home visits are ideally part of AWWs daily routine. AWWs are assigned an area for which they must keep records of the number of children, weight of children, their immunization status, school attendance, and other facts. Home visits allow AWWs to give personalized advice to pre and antenatal care to mothers as well as to identify cases of malnutrition in their area and refer severe cases to MTC. This is also seen as a platform for AWWs to build rapport with other members of the community and understand their needs. Frequent home visits allow the AWWs to establish a lasting relationship with mothers and family members. This study reveals that home visits by AWWs in the last few years have declined and gradually stopped (in some cases) by them. Overlapping of roles between ASHA and AWWs

is one of the reasons which led to a lack of interest in home visits among AWWs as shared by some of the AWWs. They informed that if they need any information regarding the women and children, they approach ASHA because they are compensated for it. Women and family member's behaviour was another reason quoted by them. They stated that beneficiaries get upset and irritated from their frequent visits. Another reason stated by the AWWs was that they are more occupied and concerned with filling out the paperwork and registers leaving no time for their home visit activities. Since the home visit was still AWWs responsibility most of them make a false entry for record maintenance.

After the delivery of the child under the HBNC scheme, the ASHA worker had to make 7 total visits within 1 to 42 days of the childbirth. In each visit, ASHA must keep a record of the child's feeding practices, growth, and health. During each visit, ASHA must check for any post-delivery complications, examine the child's weight, arm circumference, the sign of infections, stomach pain, and fever, be aware of the mother for timely vaccination of the child, and suggest correct breastfeeding practices. On finding any kind of complications they advise and bring it to the notice of child's mothers including family members. As shared by the ASHA workers, if they track any child to be weak and malnourished (based on the weight of the child) they advise mother, father, or any family members of 'Kangaroo Care'. It is special care to be provided by the caregiver to the malnourished children. During these days ASHA examine the baby and look for signs of complication, such as the child having a problem in passing urine and loss of weight, which may require attention. The mother's health and food intake were an important factor impacting child's overall development. To overcome these, they bring awareness and advise mothers for a different type of local food, which will increase their breastmilk. They also advise and demonstrate mothers about correct postures of breastfeeding. To address the problem of mothers regarding insufficiency of breastmilk, they also advise mothers to have healthy and locally available foods at least three times a day to produce a good quantity of breastmilk.

As discussed in chapter 2 'Review of the literature', HBYC shall deliver the range of care from birth to help achieve the goal in preventing early childhood illness. It will deal with adequacy of complementary feeding, monitoring growth of the child, including vaccinations as well as counseling. . During the study, ASHA trainers informed about the notification they received on HBYC. Under HBYC, trainers would be called for the training workshop, who in turn will further give training to Sahiya Sathee and Sahiya at ground level. They only have a

basic understanding that ASHAs have to continue their home visit after the completion of 42 days of the childbirth. They must do at least 5 quarterly home visits to the same child's house to keep the health, nutrition, immunization, and overall development records of the child. On completion of these 5 visits, ASHA will get an incentive of Rs. 250 per child, (which was the same amount of Rs. 250 / child) they got after completion of 7 visits during first 42 days of the new-born baby.

7.4.2. PLA (Participatory, Learning and Action)

The term “PLA” stands for Participatory, Learning and Action and the meetings conducted under this is called as PLA meeting or “PLA Baithak” at village level. According to the module PLA is an approach that can help bring the community together to identify, understand and solve common community health problems (Ekjut, 2018). This process involves a community group in participatory decision making to help address the local issues through a series of meetings encouraging them to discuss, learn and engage. This module was prepared for ASHA workers to conduct PLA meetings in villages and facilitate the processes to establish significant decrease in neonatal mortality in Jharkhand, Odisha, and Madhya Pradesh. This module was developed by the National Health Mission in partnership with a NGOs named “Ekjut” working in these states. The concepts, activities, tools, and drawings used in this guide are largely derived from previous work by Ekjut and adapted to the content of the ASHA training module (Ekjut, 2018).

In a PLA meeting, as per the module ASHA workers had to organize meetings with community groups in the coverage area including all women and men, adolescents and boys, pregnant and breastfeeding women, other community health workers, representatives of the panchayat, and the VHSNC (Ekjut, 2018). Whereas, during the field visit in PLA meetings it was observed that only mothers, pregnant women and few adolescent girls were present as beneficiaries. The importance of other section of target groups are missing from the meeting. The number of attendees in the meeting also reported very less as compared to the total population. The module was developed to engage and help FHWs within communities that is respectful in a way and sensitive to the inequalities existing in the society. They are trained in the use of the module in three cycles of five days each i.e., 9 meetings per cycle covering 18 PLA meetings and the third cycle would cover the methodologies for the remaining 12 meetings. During the training, all methods of conducting the PLA meetings are explained in detail. All the 15 Sahiya Sathee get batch-wise training on how to conduct the PLA meeting.

Further, they give training to their cluster Sahiya. The Sahiya Sathee's conducts practical training to Sahiya during the meeting and provide handholding support wherever required.

BOX 7.2: List of PLA meeting contents (Meetings on Maternal and Newborn health)

Meeting 1:	Introduction to the PLA initiative
Meeting 2:	Understanding social inequities in society
Meeting 3:	Identifying common health problems in the community
Meeting 4:	Prioritizing common health problems in the community
Meeting 5:	Understanding causes and discussing solutions for prioritized problems
Meeting 6:	Exploring and choosing appropriate strategies
Meeting 7:	Taking responsibilities for the implementation of selected strategies
Meeting 8:	Community meeting-1
Meeting 9:	Improving the nutritional status of women
Meeting 10:	Complications during pregnancy and delivery
Meeting 11:	Planning for the safe birth
Meeting 12:	Newborn complications and care practices
Meeting 13:	Importance of postnatal care for mothers and newborn
Meeting 14:	Exclusive breastfeeding practices
Meeting 15:	Management of high-risk babies
Meeting 16:	Identification and classification of neonatal infection
Meeting 17:	Understanding the importance of the Intergenerational cycle of undernutrition
Meeting 18:	Importance of timely introduction of complementary food
Meeting 19:	Management of diarrhoea
Meeting 20:	Management of worms infestation
Meeting 21:	Management of acute respiratory illness/infection
Meeting 22:	Delaying early/adolescent pregnancies
Meeting 23:	Access to safe abortion services
Meeting 24:	Prevention and management of reproductive tract infections, sexually transmitted diseases, and HIV/AIDS
Meeting 25:	Prevention and management of tuberculosis
Meeting 26:	Prevention and management of malaria
Meeting 27:	Addressing violence against women
Meeting 28:	Planning for the cluster community meeting
Meeting 29:	Cluster community meeting
Meeting 30:	Evaluation of PLA activities by group member"

Source: (Ekjut, 2018)

The four PLA meetings were observed and attended during the field study had only mothers, small children, and few adolescent girls, whereas the rest didn't attend the meetings. Sahiya Sathee informed that most of the Sahiya's understand and do not need handholding but still they accompany them, observe, and support them if needed. The training of the Sahiya Sathee was conducted in two phases, the first phase consists of modules 1 to 18, and the second phase was on meeting 19 to 30. These meetings are based on maternal and new-born health issues on which awareness meetings were conducted in a

village. In some methods, FHWs have used picture manuals and booklets for awareness generation and counseling. The list of the issues/topics addressed in these 30 meetings are listed in detail (Box 7.2). It is observed that PLA has played an important role in counseling women for ASHA workers. Due to these meetings, women see them as a good counsellor and their faith have increased more for suggestions and advice about children feeding practices.

7.4.3. Awareness meeting during VHND

Village Health and Nutrition Day within a community is seen as an important day by the Frontline Health Workers for interaction with the beneficiaries. As apprised, FHWs also utilize this day for addressing beneficiaries' problems and for counseling them. As reported, all the ANMs were aware about the issues they had to guide to the beneficiaries. They informed that they are required to give information regarding immunization and its importance, family planning, new schemes and disease occurrence within the community, malnutrition among mothers and children, and address problems related to adolescents on VHND. Despite their knowledge and skills, it is observed that this day was not fully utilized by ANMs. As discussed earlier in chapter 4, few ANMs do inform newlywed women about the use of contraceptive and mothers about the immunization (vaccine dose) and precautions however, the number is less as compared to their skills and capabilities.

In the case of AWWs, VHND was a day for vaccination, monitoring of child health and pregnant women, and for supplementary food distribution and also for some other activities. However, the AWWs have clubbed the counseling sessions and different meetings (Maitre Mahila Baithak and Adolescent meeting) on the same day. As earlier discussed in chapter 4 that these meetings are only conducted on paper for which these workers (AWWs) blamed women for not giving time for these meetings. These activities include adolescent meetings, Matri Mandal Baithak, awareness about growth monitoring charts, and so on. Recently two more activities were added on VHND for AWWs as Godh Bhabraie and Mooh Jhuthi. These activities were launched for awareness generation among other women in similar conditions, but it was observed that counseling was missing in the entire activity (discussed in detail in chapter 4). Hence, it can be concluded that despite knowledge and skills they were not utilizing their potentials at their best. These are those awareness activities that were assigned by the government to be conducted but due to work pressure and negligence it remained on paper and do not reach up to the beneficiaries.

7.4.4. Informal Interaction (One to one)

Informal interaction was another mode of awareness generation and information sharing between the FHWs and mothers of children below 2 years. ASHA and AWWs shared that they were always ready to support beneficiaries and answer any queries at any given time. They informed that most of the time mothers catch them on the way, which was used for awareness of these women through informal talks and discussions. Some of them informed that they quote similar situations of other women as an example for better understanding. They find it more feasible and approachable. They also shared incidence when women visit their home for help, and they do extend along with awareness where ever possible.

7.4.5. Awareness sessions for MTC children's mothers at MTC

Awareness session was arranged by the ANM at MTC for all the mothers whose children are admitted at MTC. This session was conducted everyday evening at MTC for half an hour. Based on the module, in the first two sessions, ANM listen to the mother's problems and try to comprehend the reason for malnutrition among the children. After this, they advise mothers on how to take care of the child's food and feeding habits and what precautions need to be taken care of during their stay at MTC? How to feed the child and rear them? What are the alarming signs they should consider and inform ANMs immediately? Before the child's discharge, mothers are also informed about the best local available food composition for the child's overall development and advise them for follow-ups. It was reported that despite all possible counseling sessions they don't turn up for follow-ups, which increased their difficulty in keeping a track of the child after discharge.

7.5. Challenges and hurdles faced by the Frontline Health Workers

Frontline Health Workers were chosen within the community, they are familiar with people within the community and their ways. They are comfortable with the language, dialects, and people's behaviour, which makes them relate to and understand the problems faced by the mother and the child. At a point, it was easy for them to interact and be aware of the beneficiaries whereas at the same time it turns to be the greatest challenge. Some of these challenges and hurdles shared by these FHWs (AWWs and ASHA) are discussed below.

7.5.1. Poor rapport due to implementation of new schemes

Any new schemes launched by the Ministry of women and child welfare were executed by these FHWs at the community level. Schemes for adolescents, girl children, women, children, and pregnant women are executed by the FHWs among them. These schemes address the most common problems faced by the AWWs in the study area. Almost all the AWWs have complained and shared some of their experiences regarding the repercussions of the new schemes for beneficiaries. An example stated by the AWWs during an interview was that if they fill the form for the beneficiary under a scheme (Ladli Yojna, Sukanya) then after some time they would start enquiring about the benefits. And if they the beneficiaries don't get any reply or benefits then they would start blaming and abusing the AWWs.

“Due to these schemes, we are losing our good relationship within the community. Now they don't believe in us. Our day-to-day activities and rapport are getting affected due to launch of new schemes through us”

[AWWs 41, Dungri]

These schemes also consume extra time apart from other activities. Misbehaviour of villagers with the FHWs was also reported during the discussion due to implementation of these schemes and programs. The decline in the rapport with the villager shows an influence on the impact of the awareness generation counseling sessions conducted by these AWWs. In such a situation beneficiary and their family members either do not pay attention or disregard their advice.

7.5.2. Lots of paperwork and other activities

Another major challenge faced by the AWWs and ASHA in performing their duties and responsibilities was paperwork. Paperwork includes form (schemes) filling, bookkeeping, survey, and report submission. There are other activities apart from their regular duties such as cluster meetings, VHND, PLA meetings, block-level meetings, surveys, Gram Sabha meetings, and frequent calls from the supervisors for report submission. This extra paperwork and additional responsibilities impact their basic day-to-day responsibilities.

“In a week sometimes, I only get 3 days to be at AWC. The rest of the days either I have to travel to the block office for report submission or engaged in some other activities.” [AWWs 27, Tati Purvi]

7.5.3. Limited support and handholding from the Supervisors

During the study, it was observed and supported in the interpersonal interview of the AWWs that they had limited support and hand holding from their supervisors. During the entire study in which 11 VHND was observed and 105 interpersonal interviews conducted clearly states that supervisors lack onsite monitoring and support provided to AWWs and ASHA workers for better understanding and executions of their duties. A large area is covered by a supervisor i.e. number of centres for each supervisor high, which was found not feasible to monitor along with all the other activities. Hence it is observed that some of the centres which needs handholding doesn't get it at the right time. Even Supervisors due to work pressure and paperwork not able to give equal and proper attention to all the centres.

7.5.4. Family and Financial constraints

Low and irregular salaries and incentives of AWWs and ASHA workers was creating a big challenge for them to work. Money is one of the major factors which motivates them to work harder. While most of the time they have faced difficulty in getting their money. This demotivates them and their family members because of which they keep telling her to quit the job.

“My family members keep asking me that why I am doing this job. I must leave this job. No need to work so hard for the irregular low salary.”

[AWWs 31, Tonko]

Another constraint was the expectation of the family members to look after the children and in-laws. Due to different reasons, family members create pressure on AWWs and ASHA to leave the job and work at home. Due to this pressure, they are unable to work for long hours and perform their duties and responsibilities.

7.6. Discussions

This study tries to comprehend the impact of breastfeeding and complementary feeding practices to reduce malnutrition amongst children that is highly dependent on the Frontline Health Workers and mothers knowledge and counseling skills of FHWs. Hence, based on the study it is believed that the role of the Frontline Health Workers needs to be increased and emphasized towards counseling and awareness generation of caregivers. This

would positively impact the child nutritional status and reduce the malnourished children in the state and the country.

All ANM workers take either the ANM course or the B.Sc. Nursing after completing their intermediate studies. An approximately equal percentage of ASHAs are either matric or non-matric (33.3% and 37.8% respectively) whereas, there is also a good percentage of (26.7%) ASHA workers who studied up to class 8 or less. In case of the Anganwadi Workers, their qualification ranges from illiterate to graduates and B.Ed. The majority of AWWs are 10th passed (35.5%), whereas 6.7% of them are illiterate and some even don't know to write. There are also AWWs who are graduates (8.9%) and 2.2% B.Ed. As informed by AWWs trainers and supervisors, the shift in the qualification trend of workers had been noticed over the past 5 years. This study shows a significant impact between higher education and knowledge on organizations working for IYCF and BF practices, but the level of knowledge does not depend on education. While another study reveals that AWWs with higher education had more knowledge about organizational working for IYCF and BF practices than others. (Shinde MB et al, 2015).

Previously, less qualified women were selected for the post whereas nowadays women graduates and B.Ed. to do this job. This was possible due to changes in the selection criteria and the financial needs of the FHW family. These qualified women (more qualified than matric) choose this job as a better option than daily wage work to meet their financial needs and those of their families. In a survey AWWs on their breastfeeding knowledge, attitudes, and practices indicated that the average breastfeeding knowledge reported was adequate.

The professional experience of Frontline Health Workers corresponds to the number of years they worked in the profession (as AWWs, ASHA, and ANM). From the data gathered and studied, it was apparent that majority of them worked for more than 6 years. About 40% and 31.1% work as AWWs for 6-10 years and 11-15 years respectively. While in the case of ASHA and ANM workers, 71.1% and 60% worked for 6-10 years. About 13.3% and 33.3% reported a work experience of 1 to 5 years. Only AWWs reported 8.9% less than one year and 6.7% 16-20 years of work experience.

7.6.1. Anganwadi Workers (AWWs)

Data shows that 93.3% of AWWs have undergone professional training before or after taking up their duties. However, 6.7% of them also revealed that they could not attend professional training for personal reasons. Refresher course as a review of their knowledge, only 13.3% of AWWs attended 2-3 times in their years of work, 35.6% once and 24.4% do not remember if they received it or not. There are cases supported by data that in 9-12 years of work the AWWs have followed only one refresher course. The data also indicates that 26.7% of healthcare professionals did not receive any type of update. It was reported that 48.9% of AWWs attended less than 3 workshops. Whereas another study by Bhasin et.al, found that the overall encouraging results on breastfeeding may be due to the increased emphasis on the importance of breastfeeding education during pre-employment training and perhaps because of repeated health education messages about breastfeeding through the media (Bhasin SK et al, 1995). The reasons given by the Anganwadi Workers was that the supervisors do not recommend their name for these courses, or if they do they are unable to attend these refresher courses due to family responsibilities. The same reason was cited by supervisors, with an addition indicating AWWs disinterested attitude and an apology for avoiding training.

While only 86.7% of women shared early onset of breastfeeding and 13.3% answered incorrectly or are unsure of the answers. Another study reveals in contrast that knowledge of AWWs was average regarding key IYCF practices. “None of the AWWs knew the full reasons for promoting breastfeeding up to 2 years and beyond”. (Parikh P. et.al. 2011)

In the present study, 13.3% of AWWs informed that now the trend in delivery has changed from normal delivery to caesarean, which is performed mostly in private hospitals. In such circumstances mothers are unable to breastfeed their baby within an hour of childbirth. And all the workers do know the initiation of breastfeeding after caesarean delivery. While other studies show the knowledge and attitude of AWWs regarding the onset of breastfeeding (BF) after a normal delivery were adequate in 95.12%. This percentage dropped to 44 (35.77%) with adequate knowledge of breastfeeding after a caesarean section. (Shinde MB et al, 2015). Contrary to the desired response, in this study AWWs advise mothers to breastfeed within 4-5 hours or on the same day depending on the situation and complications of childbirth. In a study by Bhasin et.al. about 98.7% knew that breastfeeding

should start immediately after giving birth. 92.7% knew that the newborn needed colostrum. (Bhasin SK et al., 1995)

The study states that all the FHWs have knowledge and understanding that all the mothers should give their baby colostrum milk (first milk) and its importance. In a study conducted by Shinde et.al, found that AWWs had sufficient knowledge about exclusive breastfeeding, while 66 (53.65%) AWWs knew about colostrum and its benefits. Interestingly, knowledge on the benefits of breastfeeding (BF) was adequate in 50.41% of AWWs. (Shinde MB et al, 2015).

All AWWs are familiar with exclusive breastfeeding until the age of 6 months, and infants should not receive prelactating foods (water, honey, tea, sugar water, growling water, and ghutti) before six months. About 46.7% AWWs knew that oral medication given to a baby is counted as exclusive breastfeeding and 73.3% believe that bottle-feeding should be avoided when feeding children. In one of the studies, only 50.5% knew that mothers should avoid bottle feeding completely. (Bhasin SK et.al, 1995) Knowledge of the frequency of BF in 24 hours and advice to the mother regarding bottle feeding was sufficient (Shinde MB et.al, 2015). While in 2016 a study conducted in Hyderabad found that 75% of AWWs thought the bottle was better than Katori and spoons for baby feeding. (Ahmad SR, 2016)

Among 77.8% AWWs have correct knowledge of breastfeeding frequency for normal infants and 17.8% for low birth weight infants. In a study, only 70 % of AWWs believed that breastfeeding should be given on demand (Ahmad SR, 2016). In the present study about 22.2% of pregnant women answered incorrectly or have no idea how often to breastfeed normal babies. The responses received for the frequency of breastfeeding are 4 to 5 times a day, which also relates to the domestic workload and the work pressure of mothers. The percentage of incorrect responses for the frequency of breastfeeding a low-birth-weight baby is reported to be high (82.2%) in older women.

About 68.9% AWWs believed that mothers should continue to breastfeed their babies with complementary feeding for up to 2 years and beyond. However, 86.7% of AWWs knew how to continue feeding breastmilk when the child was sick. In other studies, only 18% of AWWs recommended having small, frequent meals while they were sick, and only 6% recommended having an extra meal after they became sick. A total of 41% said that illness was the main reason why the child did not feel hungry and overlooked the other two compelling reasons: H. Micronutrient deficiencies and mouth injuries. (Parikh P et.al, 2011)

On the other hand, 40% said that breastfeeding should be immediately stopped in case when the mother is ill. (Ahmad SR, 2016)

The data shows that all AWWs knew the correct age to introduce complementary feeding to the babies as early as 6 months. Singh A. in a 2017 study reveals that approximately 84% of AWWs believed that 6 months was the right age to start supplemental feeding for the infant. While around 10% were in favor of starting supplementary feed after 4 months. Others believed that complementary feeding could be started at any time, depending on the child's health. (Singh A, 2017)

While in the present study, 57.8% of AWWs have correct knowledge of food consistency. They knew that the child had to start with semi-solid foods and increase their consistency each quarter. While the remaining 42.2% focused and shared on the liquid diet such as dal ka paani and juices. In another study, only 23% said the correct consistency of food supplements should be semi-solid, and many believed that the initial food supplements should be liquid, especially daal ka paani. (Singh A, 2017) According to a study, only 65% of AWWs recommended solid foods whereas, about 47% suggested liquid diets for children. “Indeed, these practices are one of the main reasons attributed to the low energy and protein intake during complementary feeding”. (Parikh P. et.al. 2011)

The data indicate that AWWs (35.6%) knew the correct frequency and amount of supplemental feeding, but most of the time they forget to educate mothers about this problem, and they all knew that separate foods were prepared for them. “None of the AWWs recommended persistence in feeding the child with adequate quantity of food”. (Parikh P et.al, 2011)

This study found that 57.8% of AWWs knew the correct composition of foods to give to the child. As they share, they are aware of this and suggest that mothers start feeding their children semi-solid foods. Due to the new practice (Mooh Jhuthi) on VHND for 6-month-old children, 57.8% of AWWs knew which tricolor foods to include in the child's diet for overall nutrient intake. Although more than 50% of AWWs knew the composition of foods none of the Anganwadi Workers advised the food components to be included in mother's diet. They also failed to advise the mothers regarding food composition (tricolor foods) for children's food intake. All FHW believe that mothers should avoid giving cookies and crisps (papad) food to children under 2 years old. Data indicates that 91.1% of AWWs did not know the feeding skills or methods that a mother should adopt and practice when feeding her children.

A study conducted in 2011 suggested correct knowledge and perception of promoting complementary feeding practices were found to be 40% among ICDS AWWs (Parikh P. et.al. 2011).

All AWWs were aware of exclusive breastfeeding, of which only 68.9% believed that breast milk was better for the baby than cow's milk and only 46.7% of AWWs knew that oral medications given to a baby were counted as exclusive breastfeeding. The most common responses received regarding continued breastfeeding with complementary feeding practices depend on the needs and demands of the child. In this study, 64.4% of AWWs either do not remember or have no idea or gave an incorrect response for the frequency and amount of complementary foods for children.

7.6.2. Accredited Social Health Activist (ASHA)

All ASHA workers have completed comprehensive vocational training. According to the data, 42.2% of ASHA workers had taken refresher training once and 22.2% remember nothing from refresher courses. Amongst ASHA workers, 64.4% participated in less than 3 and 20% in more than 3 workshops. During the study, 15.6% of ASHAs do not recall whether they had attended any workshops. The effects of the training had also shown in other studies that the ASHA employees and their superiors have acquired the knowledge and skills for breastfeeding and supplementary nutrition after the training (Thakare SS et al., 2012).

All ASHAs know when to start breastfeeding a newborn baby and children should not be fed with solid foods for initial six months. All ASHA workers were aware of exclusive breastfeeding of children up to 6 months. Saxena V. et.al, found in their study that 98% of the ASHAs had complete and correct information about exclusive breastfeeding (Saxena V. et.al. 2014), while only 18% of the ASHAs stated that they were able to motivate mothers to exclusively breastfeed. In another study, it was found that roughly a similar percentage of workers had sufficient knowledge of the need to avoid pre-lacteal nutrition. (Thakree SS et al., 2012). About 71.1% of ASHAs knew that oral medications given to a baby also count as exclusive breastfeeding and 82.2% of ASHAs believed that bottle-feeding should be avoided altogether when feeding infants.

In the case of ASHA workers, 80% and 48.9% have a correct understanding of the frequency of breastfeeding for normal weight and low birth weight babies, respectively. While more than half the percentage (51.1%) of ASHA workers have no idea or responded

poorly about the frequency of breastfeeding for the low-birth-weight baby. About 71.1% of ASHAs knew that a child should continue to breastfeed at least until the age of 2 years, and they believed that mothers should continue to feed their children, breastmilk with complementary foods according to child's demand. A similar percentage (71.1%) of ASHA believed that the sick child should continue to breastfeed.

The data shows that all ASHAs knew the correct age to introduce complementary feeding to the baby at 6 months. While 66.7% of ASHA workers have correct knowledge of food consistency. They knew that the child had to start with semi-solid foods and that their consistency had to be increased every trimester. Saxena and Kumari in a study conducted in Dehradun district record a contrast finding with regard to complementary feeding, only 45% of ASHAs knew the correct time to start complementary feeding; however, 58% of the ASHAs had introduced complementary feeding at 7 months in their children (Saxena V. et.al, 2014).

The data indicate that ASHA (46.7%) knew the correct frequency and amount of complementary feeding, but most of the time they forget to educate mothers about it. All ASHAs knew that separate foods should be prepared for children with the utmost care, that is, maintain hygiene and cleanliness during cooking and feeding. In the study, 66.7% of ASHA workers knew the correct composition of foods that should be given to the child along with semi-solid foods. Data indicates that 88.9% of ASHAs did not know the feeding skills or methods that a mother should adopt and practice when feeding her children. Among the 11.1% of ASHA workers who knew the proper feeding methods are the “Sahiya Sathee” who recently received training in PLA meetings. In this study, 53.3% of ASHA workers either do not remember/have no idea or gave an incorrect response for the frequency and number of complementary foods for children.

7.6.3. Auxiliary Nurse Midwife (ANM)

All ANM workers take either the ANM course or B.Sc. Nursing after completing their intermediate studies. All the ANMs after taking the intermediate or matriculation study took the ANM or the B.Sc. breastfeeding course. None of the ANMs received refresher training as part of the study. Occasionally, the number of training/workshops were organized on different themes according to the new programs of the project.

Data reports, all ASHA and ANM workers knew when to start breastfeeding a newborn baby. All FHWs knew and understood that mothers after delivery should start breastfeeding their baby with colostrum milk ('Khirsha doodh') and its importance. All ANMs knew when to start breastfeeding a newborn and advised mothers to give their babies colostrum ('Khirsha doodh'), and shared about its importance, also advocated that infants should not be pre-breastfed for six months. All ANMs knew that oral medications are given to a baby also count as exclusive breastfeeding and 80% of them believed that bottle-feeding should be avoided entirely when feeding children. Data shows that 80% of ANMs knew that a child should continue to be breastfed up to 2 years. They believed that mothers should continue to breastfeed their infants with complementary foods according to the child's demand. All ANMs consider that the sick child should continue to be breastfed.

The data shows that all ANMs knew the correct age for the introduction of complementary feeding to the baby at 6 months. Data reveals that 20% of ANMs do not have a correct idea or remember the consistency of complementary feeding given to a child. Similar results can be found in a study where more than 80% FHWs knew when to start the breastfeeding, avoid any pre-lacteal diet i.e. to provide exclusively feeding breastmilk, during diarrhea, fever, and breast cancer, optimal length of breastfeeding, and to what age Complementary foods can be given. However, less than 50% of FHWs had proper knowledge of indicators when to initiate breastmilk in case of caesarean delivery, the interval or frequency of breastmilk to be given, its complications, and consistency. (Kohli S, et al., 2017).

7.6.4. Counseling Strategies and their challenges

This study reveals that home visits by AWWs in recent years have declined and have completely stopped (in some cases) by them. The overlap in roles between ASHA and AWWs was one of the major reasons that led to the lack of interest in home visits among AWWs, as some of the AWWs shared. They shared that if they needed information regarding women and children, they turned to ASHA, as they are compensated for it. Since then, the home visit was still the responsibility of the AWWs and most of them make a false entry for record-keeping.

After childbirth under the Newborn Home Care (HBNC) program, the ASHA workers should make a total of 7 visits within 1 to 42 days of delivery. At each visit, ASHA must keep a record of the feeding practices, growth, and health of the child. As shared by ASHA

workers, if they find that a child is weak and malnourished (based on the child's weight), they advised the mother, father, or any family member of "Kangaroo Care". During this period Breastfeeding and proper monitoring of child and mother was conducted. Whereas, after this period the days of contact was mostly restricted to VHND and informal interactions. Hence, during initiation of complementary feeding of children, ASHA workers role and responsibilities gets minimized. It was observed that extension of HBNC to HBYC is still not implemented in the area.

It was observed that the PLA meetings had played an important role in advising women for ASHA workers. As a result of these meetings, the women see them as good counselors and their faith has increased further in the suggestions and advice on child feeding practices. It was observed that the knowledge of ASHAs has improved due to the PLA training they have received in recent years. In a 2012 study, the results also indicated that training on infant and toddler feeding practices had significantly improved both theoretical and practical breastfeeding knowledge among the trainees. (Thakare SS et al., 2012). Whereas this study coincides with similar previous 2014 study which states a great contrast between the knowledge of the AWWs and their aptitude to apply them in official counseling sessions with caregivers. Inability to empathize with caregivers, lack of regard for children's feeding history, poor listening skills, and failure to provide needs-based advisory was found during counseling (Chaturvedi A. et.al, 2014).

VHND was considered an important day by Frontline Health Workers for interaction with beneficiaries. Whereas this day was not used at best by the FHW to address the problems of the beneficiaries and to advise them. Informal interaction was another mode and the most common method of awareness-raising and information sharing between FHW and mothers of children under 2 years old. Children at MTC are the target and priority group that required special counseling sessions that was given by ANM at MTC for all mothers whose children were admitted to MTC. On the contrary previous study reveals poor performance of basic home health practices may be related to the irregular supply of medicines and the need for adequate follow-up by FHWs (Perez F. et.al. 2009).

Poor reporting due to the implementation of new programs, a lot of paperwork and other activities, limited support and ownership from supervisors, family, and financial constraints are the challenges shared by Frontline Health Workers in their performance of duties. Even these problems are noticed and identified as some of the major reasons for the

gap between the knowledge and counseling of the Frontline Health Workers regarding the IYCF practices. Thakare et al. in his study revealed that with an increase in the awareness level about the ICDS services proportionally dependent on the rise of education (Thakare, 2011). They also found that lower fees with excessive work can make AWWs less efficient. In the present study, 100% of AWWs were not satisfied with the amount paid to them as a fee instead of their workload. Another study shows that awareness of ICDS services increased as the level of education increased. Similarly, the same study shows that lower revision of fees can be an efficiency factor for AWWs.

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CHAPTER 8

SUMMARY, DISCUSSION AND RECOMMENDATIONS

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CHAPTER 8

SUMMARY, DISCUSSION AND RECOMMENDATIONS

8. Overview

The previous three chapters (chapter 5, 6, and 7) have dealt with analysis and interpretation of data obtained from interviews and focus group discussions during the field study. This chapter concludes the study by dealing with a brief introduction of the study, summary of findings, conclusions and recommendations on the IYCF practices. This chapter is divided into four sections, as follows.

- Gives a brief introduction about the study, its methodology and its relevance (Section 8.1)
- Summarizes the data analysis and its major findings obtained from the field study (Section 8.2)
- Discuss and concludes the study in brief (Section 8.3)
- Suggests implications and recommendations on the basis of findings (Section 8.4)

8.1. Introduction

Every child has a right to sufficient nutritious food as per the Convention on “The Rights of the Child”. Stunting is a grave public health issue which remains excessively high as of now in the developing countries. The frequency of “stunting” increases during complementary feeding period (6 month to 2 years) primarily due to insufficient intake of nutritious food which are essential to preserve the development of the child. Among the data and surveys analysed in the IYCF, an alarming situation is shown, i.e., a decline in complementary feeding practices which is impacting the health of children at regional, state, and national level. It also reveals the gap in nutritional programs and policies towards complementary feeding. State indicators in NFHS 4 points to low rates of infant feeding practices, both in the states that have experienced the greatest decline and some improvements in nutritional status. In dozen of states the decline is below the national average. Jharkhand is one of them as it reported the second highest decrease in the percentage of children 6 to 9 months who received solid and semi-solid foods and breast milk, along with high stunting and wasting. It is critical to intervene with nutritious food in

the first 2 years of life after pregnancy to avoid the prolonged penalties of stunting during early childhood. . Lack of appropriate feeding practices are amongst the key reasons of stunting which highly depends upon the availability of nutritious - foods and awareness of the mother about it, prevailing cultural beliefs and knowledge of the Frontline Health Workers. Based on the literature review (refer Chapter 2), awareness generation on the value of nutritional foods could improve the knowledge of mothers on increase dietary diversity, nutritious food intake, and therefore, improve nutritional status of young children. But, its effectiveness depends largely on many factors that includes how effectively the knowledge is shared by the health workers and the attainment of maternal knowledge, and the availability of resources that could help mothers to implement the recommendations.

Hence, the study focuses on the major problems extracted from the literature review are; (a) nutritional deficiency in children is due to inadequacy, (b) inadequate and inappropriate feeding practices among the children, (c) complementary feeding has attracted less attention in feeding practices, (d) less emphasis on complementary feeding as compared to breast feeding in training of FHWs and also in National policies, and (e) limited studies have been carried out on the evaluation of VHND in relation to child feeding practices.

This study is an attempt to understand the present scenario and the trends of IYCF in India. And also, the factors at multi levels impacting the overall development of children below two years of age. Moreover, it aims to assess the role, knowledge and counseling skills of Frontline Health Workers (FHW) in child feeding practices. Based on the above premises this study tries to answer some of the research questions from the literature review and other aspects from the empirical field studies. Therefore, it tries to focus on four objectives; (a) to review the trends in Breastfeeding and IYCF indicators at national and state level, (b) comprehend the quality of health services at VHND and the role of Frontline Health Workers for ensuring the nutritional dietary practices for children, (c) to assess the knowledge, support and problems faced by the Frontline Health Workers (ASHA, AWWs, and ANM) in child feeding practices and how they address their challenges and (d) to understand the awareness level and perception of mothers regarding IYCF practices and awareness skills of FHWs. The first objective of the study is attained by the analysis of secondary data and discussed in the chapter 2 (Review of Literature). Further, to achieve the last three objectives Namkum block of Ranchi District in Jharkhand state was selected as the research area and total 157 interviews were conducted with different respondents (Frontline Health Workers, health workers supervisor and mothers) for empirical study.

8.2. Summary of the major findings

The following are the findings obtained from the interactions with the respondents.

8.2.1. Profile of the Frontline Health Workers (FHWs)

The age of the AWWs interviewed in the study range between 27 to 56 years in which majority are 36 to 45 years (42.2%) and only 6.7% are above 55 years. Approximately 71.1% of AWWs are matric pass and 6.7% are illiterate. In last five years there is a shift in the AWWs qualification and recruitment criteria. During the study AWWs interviewed had also graduated (8.9%) and completed B.Ed. (2.2%). This is possible because of the changes made in the criteria of selection and the financial need of the FHWs family. These qualified (higher qualification than matric) women opt for this job as a better option compared to the daily wage labourers to meet the financial needs for themselves and their families. Majority of the AWWs (40%) interviewed have experience 6 to 10 years and approximately 8.9% have less than 1 year job experience. Approximately 93.3% of Anganwadi Workers have done the job course before joining their work. At least one refresher course is received by 35.6% of Anganwadi Workers except those whose work experience is less than 1 years. There are cases in which workers have taken only one refresher course once in their 9 to 12 years of job.

The age of ASHA workers interviewed range between 26 to 48 years consists of 53.3% and 8.9% were aged 36 to 45 years and 46 to 55 years respectively. Among them 60% are non-matric, 37.8% matric and 2.2% are illiterate. Approximately 71.1% have work experience of 6 to 10 years. All the ASHA workers have received the training. Total 13 trainings have been conducted based on different modules. Each module is numbered as 1, 2, 3, 4, 5 A, 5 B, 6 A, 6 B, 7 A, 7 B, 8 A, 8 B and 9. Module 2, 5B, 6B and 7A is on child rearing and feeding practices. Module 8A is on refresher course.

Table 8.1 Profile summary of the Frontline Health Workers (FHWs)

Parameters	AWWs	ASHAs	ANM
Age (Years)	Range - 27 to 56 42.2% - 36 to 45 6.7 % - Above 55 years	Range - 26 to 48 53.3% - 36 to 45 8.9 % - 46 to 55	Range - 30 to 45 53.3 % - 25 to 35 46.7% - 36 to 45
Education	Illiterate - 6.7% 5 th to Matric - 71.1% Intermediate – 11.1% Graduation – 8.9% B.Ed. - 2.2%	Illiterate – 2.2% 5 th to Non matric – 60% Matric – 37.8%	ANM course – 100%
Work experience (Years)	less than 1 – 8.9% 1 to 5 – 13.3% 6 to 10 – 40 % 11 to 15- 31.1% 16 to 20 - 6.7%	6 to 10 – 71.1% 11 to 15 – 28.9%	1 to 5 – 33.3% 6 to 10 – 60% 11 to 15 – 6.7%
Training received	93.3% of Anganwadi Workers have done the job course.	All the ASHA workers have received the training. Total 13 trainings have been conducted based on different modules.	All the ANM after completing intermediate have done the ANM courses.

Source: Data collected from the field

All the ANM workers are between 30 to 45 years of age. About 53.3 % of them are 25 to 35 years of age. Approximately 60% of the ANMs have 6 to 10 years and only 6.7% have 11 to 15 years of work experience. As observed, all the ANM workers after intermediate have completed the ANM course for the job. Time to time number of trainings were conducted on different topic as per the project.

8.2.2. Frontline Health Workers knowledge on Breastfeeding

- *Good knowledge on early initiation of breast feeding and Colostrums milk* - All of the ASHA workers and ANM are aware about the early initiation of breastfeeding, colostrum milk and its importance. Whereas only 86.7% of AWWs shared about the early initiation of breastfeeding, and 13.3% either responded incorrectly or were not sure of the answers. About 13.3% of AWWs raised doubt due to the change in delivery trend i.e. more caesarean deliveries were done where mothers are not able to feed their child within an hour.

The data shows a good percentage of institutional delivery including both private and government hospital delivery. Breastfeeding initiation were most likely to get delayed for children who were born through cesarean delivery method. Meanwhile, children were fed with bottled milk till the mother is not able to feed with breastmilk. It is found that Frontline Health Workers do have good knowledge of the early initiation of the breastfeeding and colostrum milk which gets diminished due to poor counseling and mother's delivery complication.

- *Prelacteal feeding and exclusive breastfeeding* - All the Frontline Health Workers have the knowledge that children should not be given any prelacteal feed before six months. Frontline Health Workers had clear understanding about the exclusive breastfeeding supporting no prelacteal feeding to the baby. All the FHWs (AWWs, ASHA, and ANMs) know the importance of exclusive breastfeeding for children upto 6 months of age.
- *Poor knowledge on frequency of breastfeeding for low birth weight babies* - All the ANMs have the correct knowledge and perception on the frequency of breastfeeding for both categories of normal and low birth weight babies. Among the AWWs, 77.8 % have the correct knowledge about the frequency of breastfeeding for normal children and 17.8 % for low-birth-weight babies. Only 20 % of ASHA workers have given incorrect answers regarding the normal babies. Whereas, more than half (51.1%) of ASHA

workers, either have no idea or responded incorrectly to the frequency of breastfeeding for the low-birth-weight babies. The incorrect responses received from the AWWs and ASHA workers for the frequency of breastfeeding for the low-birth-weight babies were similar. Few of them believed that in case of low birth weight, babies are not capable enough to suck the breastmilk, so the frequency of breastfeeding does not matter. Another reason quoted by them was poor intake of the mother herself, which impacts the low birth weight of the baby and not the frequency of breastfeeding.

- *Continuation of breastmilk along with complementary feeding* - Among the AWWs, 68.9 % believed that mothers should continue breastfeeding their baby along with complementary food after 6 month up to 2 years and beyond. Similarly, 71.1% of ASHA and 80% ANMs knew that a child should continue breastfeeding for at least up to 2 years. FHW shared that despite their knowledge they are not able to suggest or convince mothers to continue breastfeeding, because children become cranky during illness. Hence, in such situations they suggest mothers to take them to the hospitals.

When it comes to practice the continuation of Breastfeeding with complementary feeding, the child gets neglected due to several reasons among which mother's health is important. In continuation of breastfeeding along with complementary feeding is not up to the mark. The reasons for 35.6% of mothers not able to continue Breastfeeding up to 2 years of the child are early pregnancy, mothers own health issues and weakness, insufficiency of breastmilk, household chores, and employment. In some cases, if the mother gets pregnant still, she continues to feed the child with breast milk until the foetus is five months old or pregnancy is confirmed. In such cases, the mother uses seductive things like Murra (puffed rice), biscuits, and tea to make the child forget about breast milk.

8.2.3. Frontline Health Workers knowledge on Complementary Feeding

- *Good knowledge on when to introduce complimentary feeding* - All the Frontline Health Workers knew the correct age to start complementary food as 6 months after birth of the child. When it comes to practice at community level it was found that in Sarna community, the introduction of complementary feeding age for girls is 5 months and for boys is 6 months. In the study area Mooh Jhuthi ceremony is conducted to fulfil the rituals whereas, the children are already being introduced to biscuits, bottle milk, and cerelac prior to completion of six months. After six months, it is observed that most of the

children have started eating more biscuits, chips, packet food items, and cerelac who can afford. The reason for children being introduced towards ready-to-eat food items are easy accessibility, time constraint and work pressure of the mother. It was observed that villages have small shops filled with these kinds of food items available in small packets of Rs. 2 and 5. This is also a major factor due to which children get attracted towards these junk food items impacting the healthy feeding practices of children.

- *Poor knowledge on consistency of food and feeding* - The common statement given by the AWWs and ASHA on the consistency of food to be introduced to children was whatever food that were available at home should be given to the child. There was no focus given on consistency. Some of them stated that children should start with food in liquid form and a common example quoted by them is dal ka paani. The percentage of AWWs and ASHA who had incorrect knowledge or had no idea on the consistency of the complementary food was 42.2 % and 33.3 % respectively. They mostly focused on liquid diets. Whereas rest either blamed the mother for not giving time for a meeting or they don't remember the correct practice. ASHAs who knew about the consistency of food shared that PLA training in recent months had helped them to remember all the points on child feeding practices. This was also observed during the study that training for PLA meetings had improved the knowledge level of ASHA workers.
- *Lack of knowledge on frequency and quantity of complementary feeding* - Approximately 64.4 % of AWWs and 53.3% ASHA workers either don't remember/have no idea or gave incorrect answers to the frequency and quantity of complementary food for the children.

Mothers are aware about the minimum number of meals to be given to the children but due to the workload they are not able to feed them frequently. In most families, children eat from their parent's plate. In this situation, children eat proper meals twice a day, and gaps between the meals are filled with breastmilk, biscuits, and chips. In such cases, the quantity of food given to children is not determined and measured. Later on after few months down the line, gradually the mother starts feeding their children with overcooked rice, mashed potato, dal ka paani, and khichdi, which is observed for children who are about 11 months or above. Food is not prepared separately for the children. Children are fed from the same family pot after 11 months.

- *All the FHWs (AWWs, ASHA, and ANMs) knew that separate food cooking-* All the FHWs (AWWs, ASHA, and ANMs) knew that separate food should be prepared for the children with all precautions i.e. maintaining hygiene and cleanliness while cooking and feeding. Due to the new practice of Mooh Jhuthi on VHND for 6 months old children, 57.8 % of AWWs were aware of the Tri-colour foods as part of diet of the child for overall nutrition intake.
- *Poor knowledge of feeding skills development* – Very few Frontline Health Workers shared about the feeding method (playfully, slowly, patiently and spending time with children). The data states that 88.9 % ASHA and 91.1% AWWs do not know about the feeding skills or methods mother should adopt and practice while feeding their children.

8.2.4. Frontline Health Workers counseling skills and strategies

- ASHA workers plays a major role in counseling of mothers on breastfeeding. ASHA workers guided mothers time to time regarding initiation of breastfeeding. They also advised the mothers to avoid bottled milk and feed more breastmilk. ASHA accompanied the pregnant women to the hospital and stay there till the delivery. The time is best utilized by ASHA to advice the would-be mothers about introduction of colostrum milk, initiation of Breastfeeding and exclusive Breastfeeding. ASHA workers make a visit to the house of new mother's post-delivery of the baby for a fixed period of six consecutive days. During these visits, she examines and measures height and weight and temperature of the child and teach mothers on the correct posture for Breastfeeding. ASHA workers guide mothers how to hold the child and feed breastmilk. They also advice mothers what to have in food items to improve the quantity and quality of breastmilk. Foods which are be easily and cheaply available nearby. After seven home-based visits which ends after 42 days of the delivery, ASHA workers stop visiting houses. After that their point of contact is during the Village Health and Nutrition Day.
- All Frontline Health Workers counselled the pregnant women about colostrum milk, its importance, and importance of Breastfeeding up to the age of 6 months. During the communication with the Frontline Health Workers, 77.8 % of mothers got advice on not feeding the children with any kind of prelacteal (water and any other fluids).
- It reveals that still, 35.6 % of mothers do not approach Frontline Health Workers for problems related to feeding the child. The reason for not seeking advice from Frontline

Health Workers was due to poor relationship with them, lack of trust, belief in elders and relative's suggestion, who are more accessible than Frontline Health Workers. Mothers shared that most of the recommendations they received about breastfeeding and complementary feeding practices were from their elders (mother/mother-in-law) and their relatives /siblings. For seeking advice on child feeding, mothers feel comfortable either with Anganwadi Workers or ASHA depending on the approachability and cordial relationship with them.

- There is an overlap between the rituals of Mooh Jhuthi at family and at Anganwadi Centres. At AWC along with ceremony they are expected to advise mothers on the initiation of semi-solid food which is missing.
- It is found that only 66.7% mothers remembered the advice received on the continuation of Breastfeeding along with semi-solid food after 6 months of the child at different intervals. Some remembered that they received the advice during ASHA home visits and when they visited Anganwadi Centre for vaccination. Only 11.1% mothers received advice by the frontline works on the consistency, food quality and quantity to be given to the children.
- The mothers who have received guidance from the FHWs on the number of times to feed the children are about 60 %. It is found that 66.7 % of the mothers have also got advice on feeding the child during and after an illness.
- Home visits, PLA (Participatory Learning Appraisal), awareness meeting during VHND and at MTC, and informal interaction (one to one) are the counseling places, and methods adopted by the FHWs for awareness and counseling of the mothers on IYCF practices. Counseling and awareness dissemination on the issues is mostly verbal except a few in which they used recommended materials for the purpose. As in the case of PLA, ASHA workers are given pictorial booklets for awareness generation meetings. Posters for the Anganwadi Centres which are missing in most of the centres. Informal interaction (one to one) has more weightage as mode of counseling among all others.
- Dietary practices in the first two years of a child's life largely determines their general health and long-term survival. It is the responsibility of both parents to provide the child with nutritious food however, the emphasis is only placed on mothers. Father's and

mother in laws (as caregivers) involvement in IYCF has been found to be of utmost importance, but it is accorded limited significance while counseling.

8.2.5. Barriers and factors influencing child feeding practices (Culture and beliefs) - fading the counseling outcome

- *Correct timing for dissemination of information to the beneficiaries are missing* - During the discussion, it was concluded that the correct timing for dissemination of information to the beneficiaries are missing. The gap created after the 42 days of ASHA home visit, mothers still follow the recommendation by family member's , and therefore, impact of Frontline Health Workers advisory gets diminished. The engagement of mothers and their socio-cultural barriers are also not considered by the Frontline Health Workers while counseling them.
- *Misconception regarding prelacteal feed* - Whereas, on the field the practices followed by mothers on prelacteal feeding gives different outcomes. Prelacteal feeding is another concern highlighted during the study. Mothers fed their children with prelacteal feed such as water during summer, biscuits from 4 months, cow milk, and bottle milk. One of the common reasons stated for pre-lacteal feed is the summer season and insufficiency of breastmilk. There are some cases that women are aware of exclusive Breastfeeding but they have the misconception that water is not included as prelacteal and can be given to the children.
- *Impact of Mother's food intake during the first three days* - Another major concern shared by the mothers regarding their food intake during the first three days after the delivery is also impacting the pre-lacteal intake among the children. Post-delivery mothers are fed twice a day with a limited and restricted diet for at least three days. Due to which after delivery, some of the children are fed with bottled milk or cow milk. Bottle milk is another major concern in feeding practices. Among the children, 22.2 % of the children are fed with bottled milk within 6 months and when the child is one year old the percentage increases to 64%, which itself is a health concern and suggests precautionary measures.
- *Impact of mother's workload and work pattern* - Married women have to perform various activities in different spheres such as household, agriculture, and workplace. It is believed and practiced within the community that mothers whose children are less than 2 years are

supposed to stay at home and look after the child. The work pattern and workload depend on the kind of work they do. Due to household work round the clock, mothers are not able to focus on the child's feeding. In between her work, she tries to feed her children with food and breastmilk, but most of the time she is not able to maintain the timeline on the number of times the child should be fed. Overall due to household work pressure mother is not able to feed her child on time appropriately. Slowly this leads to severe malnutrition in children.

The mothers of small children (less than 1 year) don't go outside to work. If there is a need to work than mother's either leave their kids at home with their husband (who is not working and indulge in alcohol) or with her mother-in-law. In most of the cases they do carry their children at workplace. In such cases they are at least able to maintain some amount of breast feeding for their children.

- *Impact of seasonal migration on child feeding practices* - Seasonal migration and alcoholism increases the burden of rearing children on mothers. There are also cases where husbands have migrated to earn their livelihood. In such a situation, the burden on the women doubles up which further impacts the rearing and feeding of the children. The left-behind women have to take care of household work, children, elders at home, and animals. Despite all the efforts, some part of the responsibility gets neglected in which child feeding habits and practices is the one which is sometimes done unknowingly, and by not following any relative pattern.
- *Impact of delivery on introduction of colostrum milk* - There are few cases supporting the relation between the impact of delivery on the initiation of breastfeeding within one hour and it does show on the intake of colostrum milk. The village with high number of home deliveries reported discarding of the colostrum milk (Yellow milk) in a piece of cloth as suggested by the elder women considering it to be dirty.
- *Early marriage and early pregnancy within the community* - Early pregnancy and early marriages impacts the knowledge of mother and their child feeding practices – Early age of marriage is reported within the community. Early pregnancy leads to lack of knowledge in mother, poor physical growth of mother, lack of breastmilk to feed the child, anaemic mother and introduction of prelacteal feeding. Since these young mothers

are unaware of the child care practices, they sometimes get misguided by their elderly women in the households.

- *Spacing between two children is less than one year* - Spacing between two children is less than one year impacting the continuation of breastfeeding with complementary parameter – Age gap between two children are another major concern found during the study impacting both child’s feeding practices and mother health. Due to this, the crucial phase of the continuation of feeding breastmilk along with complementary feeding in children gets neglected.
- *Adverse impact of alcoholism and domestic violence on child feeding practices* - Prevalence of alcohol among males and women leads to domestic violence and fight within the family and spouses impacting the child feeding practices. It impacts the food preparation and feeding of the children, which is prominently taken care by women of the family because they get physically and mentally disturbed.
- *Decline in home visits and counseling* - This study reveals that home visits by AWWs in recent years have declined and have completely stopped (in some cases) by them. The overlap in roles between ASHA and AWWs was one of the major reasons that led to the lack of interest in home visits among AWWs.
- *Poverty rather than ignorance* - Poverty rather than ignorance is another truth which impacts the child feeding practices. It is concluded from the data that more than the mothers, ignorance as perceived by the officials and Frontline Health Workers is the social and economic situation that plays a major role in child rearing and feeding practices.

8.2.6. Frontline Health Workers challenges impacting the infant and child feeding practices counseling

- *Poor rapport due to implementation of new schemes* - Apart from the regular official works they are involved and engaged in various other activities and schemes impacting their responsibilities. These schemes also consume extra time apart from other activities. The decline in the rapport with the villager shows an influence on the impact of the awareness generation, counseling sessions conducted by these AWWs. In such a situation beneficiary and their family members either do not pay attention or disregard their advice.

- *Lots of paperwork and other activities* - Another major challenge faced by the AWWs and ASHA in performing their duties and responsibilities was paperwork. This extra paperwork and additional responsibilities impact their basic day-to-day responsibilities.
- *Limited support and handholding from the Supervisors* – This was another concern raised and discussed during the study impacting FHWs knowledge and counseling skills. Supervisors lack onsite monitoring and support provided to AWWs and ASHA workers for better understanding and executions of their duties.
- *Family and Financial constraints* - Low and irregular salaries and incentives of AWWs and ASHA workers was creating a big challenge for them to work consistently. Another constraint was the expectation of the family members to look after their children and in-laws. This demotivates them and their family members because of which they keep telling her to quit the job.

8.2.7. Functioning of Village Health and Nutrition Day impacting the child feeding practices

- *Late registration of pregnancy* - Late pregnancy registration (i.e. fifth or sixth month of pregnancy) is a common trend seen in all eleven VHNDs. One reason for late registration is that girls who are pregnant for the first time feel shy and nervous when sharing about their pregnancy. Another reason or myth is the instructions and suggestions given by the nearby elderly women or mothers-in-law of the town not to share about the pregnancy with strangers before completing the first trimester, otherwise it could bring complications and setbacks during pregnancy.
- *Lack of basic infrastructure, facilities and privacy necessary for pregnant women* - It is common practice to measure blood pressure and give tetanus toxoid injections to pregnant women. While in very few VHNDs, weight measurement was taken for the pregnant women. The reasons for not weighing in some of the Centres are the unavailability of weighing machines and lack of interest in record keeping. In none of the VHNDs, abdominal control examinations of pregnant women are performed. One of the reasons is the lack of basic infrastructure, facilities and privacy necessary for pregnant women. Blood samples are taken for hemoglobin testing from newly registered pregnant women and also from other women to examine their anemic condition. Due to non-availability of iron or calcium tablets there is short supply to pregnant women or lactating mothers.

- Poshan Saaptha, Poshan Maah, Mooh jhooti and Godh Bhabraie is celebrated in the centres and community. While this activity loses its objective, such as in the case of Poshan Saaptha no counseling or information session given to women regarding the importance of this plate preparation. In case of Godh Bhabraie all guidelines are followed except the awareness generation and counseling by the Frontline Health Workers on Godh Bhabraie's importance.
- *Frontline Health Workers negligence in counseling on child feeding practices* - Another important concern observed during the VHND visit is the poor counseling of FHWs. Counseling and awareness during the VHND is the most neglected topic by all the three Frontline Health Workers (ANM, AWWs, and ASHA). Only 18.1 % mothers are counseled and informed about their children's weight and growth status. In 9.1 % of cases, parents are counseled for proper supervision of children to fight with undernutrition. Only malnourished or severely malnourished children's mothers were counselled and guided during VHND.
- *Difficulties faced by the VHND beneficiaries* - Due to busy household, distance of the houses from the centre, long waiting time, timing of VHND and its venue, lack and poor of sitting space due to overcrowding on the day, and lack of medical supplies, the beneficiaries (mothers) face difficulties to attend regular VHND sessions. According to beneficiaries, session timings were not convenient for them to attend. During VHND (9am to 2pm) they are busy with household chores and the long waiting time for their turn makes them impatient and reluctant. Although willing, most women feel ashamed to carry out health checks in places that do not have privacy. Beneficiaries were satisfied with the behaviour of health workers in the front line. The rest complained of bad behaviour such as biasness, negligence, and lack of sensitivity, rude and abusive behaviour from the front line health workers.

8.3. Discussion

“Investing in Early Childhood Nutrition is a surefire strategy, the returns are incredibly high”

Anne M. Mulcahy

In most of the previous studies conducted on the knowledge of Frontline Health Workers on infant and child feeding practices either consider Anganwadi Workers, ASHA workers and ANMs as individuals in separate studies. Very few have included both the categories (AWWs and ASHA) as Frontline Health Workers. *Whereas, this study has included all the three Anganwadi Workers, ASHA workers and ANMs as Frontline Health Workers.* It is apparent that socio-demographic factors such as mother’s education, marital status, religion, and socio-economic condition doesn’t impact the Breastfeeding and complementary feeding practices of a child. On contrary, it is the demographic factors such as age of mother, occupation of mother and father, place of delivery, number of children, and the type of family that have a significant impact on the infant and child feeding practices. Similar findings have been recorded previously in various studies conducted by Banapurmath CR in 1995, Parida in 2005, Gupta A. et.al in 2015, Raghavan V. et.al in 2014 and NFHS 4 as earlier emphasised in chapter 6.

Based on the summary of the findings, the study can be concluded that most of the Frontline Health Workers have correct knowledge on young child feeding practices such as a) early initiation of breastfeed, b) avoidance of pre-milk feeding, exclusive breastfeeding, and c) age of initiation of complementary feeding. However, less than half of the FHWs reported correct knowledge regarding the initiation of breastfeed after caesarean delivery, its advantages, interval / frequency of lactation, its complications and consistency of complementary feeding. There is not enough proof available on FHWs know-how about complementary feeding practices. As discussed in chapter 7, other previous studies conducted by Kohli S et al. 2017, Parikh P et.al. 2011, Singh A, 2017, Ahmad SR, 2016, Shinde MB et.al. 2015, Bhasin SK et.al, 1995 observed similar findings complimenting this study that the gaps in FHWs advisory skills such as the inability to translate knowledge through messages, failure in providing need-based and appropriate advice. The study highlighted some of the findings similar to previous studies conducted in similar conditions. Sub-optimal quality of services and the role of Frontline Health Workers in the VHND is a finding which coincide with similar studies previously conducted by Johri, M., Rodgers, L., Chandra, D. et al. 2019,

Saxena et al. in 2015 and S. Pati., 2016. The eminent gaps reported in the study were inadequate infrastructure and logistics availability, limited awareness generation by the Frontline Health Workers, minimal site support, monitoring and handholding, and low involvement of community leaders and local authority in the provision of services. Apart from all the previous findings, this study also explored some new factors impacting the child feeding practices, and discussed it in detail such as *seasonal migration, women household chores and workload, women double burden, alcoholism and domestic violence*. In case of Frontline Health Workers this study explored new factors under the section barriers impacting the knowledge and counseling skills of FHWs on child feeding practices. These new factors are *poor knowledge of FHWs on few parameters regarding complementary feeding, impact of workload and launch of new schemes on their counseling skills, lack of support from their seniors and financial constraints*.

Therefore, more studies are needed to unravel the advisory competency of Frontline Health Workers on their knowledge about IYCF. A fundamental change in approach is required in the training modules with more focus on FHWs counseling skills and to strengthen their efficiency to share knowledge including improvement of their knowledge regarding the IYCF practices. Knowledge of Frontline Health Workers with respect to IYCF internship is also similarly important to fulfil the knowledge gaps in their day to day work. Emphasis on more refresher trainings and on-job capacity building is required. In addition, it is necessary to do fundamentals of communication and counseling skills training and strengthening. Training needs to be expanded to enhance the knowledge and skills of frontline workers in particular. The emphasis therefore should be not only on achieving high service coverage, but also on ensuring the quality of training as a basis for improving the child feeding practices. A significant proportion of mothers turn to the primary health care system for support but receive little or no counseling. To develop the knowledge, skills and capacities of Frontline Health Workers and primary health care professionals to provide mothers with accurate and timely information including counseling and support on IYCF during and after common childhood illnesses, combined with large-scale communication programs to address traditional beliefs and norms that may be detrimental. There is also an urgent need to reduce the heavy burden of stunting in children.

Multi-sectoral efforts and reforms are needed to improve infant feeding practices and to reduce the severity of burden of malnutrition in the country. The promotion of suitable IYCF which uses interventions based on evidence must be an essential measure for the

protection and backing of mothers' knowledge, emboldening her beliefs, and nurturing her confidence towards the child feeding practices. Some of the actions which could significantly improve the IYCF are a) “Community-based” and “facility-based” interventions from providing direct support to mothers and their immediate family members by educating them and providing mandatory training to health professionals on disposition of suitable IYCF behaviour. Over the past few decades the global effort to bring about IYCF maternal behaviours have seen an increase however, with little importance to complementary feeding. These endeavours include the International Code of Marketing of Breast-milk Substitutes; the Innocenti Declaration; the Baby Friendly Hospital Initiative (BFHI) the Millennium Development Goals (MDGs); and more recently, the Global Nutrition Goals and the Sustainable Development Goals (SDGs) are meeting the requirement to some extent. However, there is still a long way towards achieving or meeting the prerequisites under IYCF and particularly, in case of complementary feeding.

8.4. Recommendation

On the basis of the findings multi-dimensional and sectoral efforts/reforms are needed to improve the feeding practices of children and to reduce the severity of burden of malnutrition in the country. As a way forward, recommendations are suggested for the further comprehensive development and growth improvements under IYCF practices.

a) Improving the child feeding practices through providing support to mothers at different domain (phases)

Support to mothers is the first strategy or step to be made for the improvement in Infant and Young Child Feeding practices. Support includes education of adolescent (would be mothers), improvement and sustenance of maternal nutrition, and improvement in socio economic condition of mothers.

- Maternal nutrition is the most important and crucial determinant of the successful breast-feeding and complementary feeding. In all nutrition intervention programmes directed to infants and children should include mothers, such as nutrition supplements should be provided to mothers and its relative impact on the growth of the children should be monitored.
- Most of the girls in the research area enter into marriages and attained motherhood at a very tender age with no training in motherhood and in total

ignorance of wholesome child and rearing practices. The key to successful child feeding and rearing is the improvement of the knowledge and competence of the mothers or would be mothers.

- Another important support is from the family both mentally, physically and socially. To overcome the problems impacting the child feeding practices such as alcoholism, domestic violence, work pressure and household work load needs family (husband and in-laws) attention and support. Hence, these problems need to be addressed through programs and awareness generations inclusive of all the family members.

b) Improvising the training module of FHWs

To address the counseling skill problems of the FHWs, first and foremost the training modules (both job course and refresher course) needs urgent changes/reforms. Module should have equal weightage on breastfeeding and complementary feeding. Time to time this module should be revisited/reviewed and revised based on the FHWs field experiences. Refresher training should be conducted regularly (within 2 years) and all the FHWs should compulsorily get the opportunity once in every two years. During the trainings Frontline Health Workers must be encouraged to develop and provide manuals containing information regarding suitable supplements for infants based on local food items for easy accessibility of the mothers.

c) Enhancement of role and responsibilities of FHWs

Impact of the work overload and involvement of Frontline Health Workers in the implementation of other programs impact their work and their relationship with the community. To overcome this, senior officials must define easy guidelines for their roles and responsibilities. Their personal needs must be taken care by both frontline healthcare workers and their senior officials. Home visits can be best utilized by the workers for rapport building with the mothers, building trust and development of cordial relationship of workers with the community which lacks in most of the cases, where mothers get detached and stop seeking support from FHWs. These are some of the initiatives that could be introduced which can immensely help in the

enhancement of role and responsibilities of the FHWs regarding child feeding practices within the community.

d) Focus on hand holding and supervision of FHWs

Supervisor's roles must include and emphasis on handholding and monitoring of FHWs in the field. They should be trained and counselled for enhancing the skills of the Frontline Health Workers and support them in every circumstances. Based on their work and responsibilities they should monitor their skills and guide them accordingly which is missing in the present scenario.

e) Developing strong and responsive policy and strategies- It is highly recommended to maintain well established policies to support IYCF programs to sustain IYCF best practices. For effective interventions to improve child feeding practices strong and responsive policies and strategies support are needed. The main opportunities to strengthen support for IYCF policies were related to the translation of strategic guidelines into implementation documents; improve multisectoral support and coordination; and greater clarity regarding the roles and responsibilities of frontline workers who interact with mothers. Further, under the revisions of policies and program for IYCF equal weightage should be given to breastfeeding and complementary feeding during planning and counseling, extension of breastfeeding programmes to complementary feeding, and FHWs remuneration should be reviewed and implemented for better outcomes. The policies should also focus on improving IYCF practices and complementary dietary diversity by taking initiatives to design and implement effective interventions to address childhood morbidity as well.

f) Involvement of other adult household members during counseling

Infant and Young Child Feeding counseling effectively improves the quality of child feeding practices. Therefore, it is necessary to continue with the strengthening of the number of counsellors, registration and supervision activities. The change in counseling strategy through the involvement of other adult household members, such as husbands, grandmothers, and neighbours should be explicitly aimed at improving the effectiveness relative to IYCF practices.

g) Formal and focused timely counseling by Frontline Health Workers

Informal interaction is the most common mode of counseling that is practiced by the Frontline Health Workers in the study area. However, timely and targeted counseling about complementary feeding and caring practices should be recommended and diligently monitored in the community.

h) Behavior change communication interventions

Communication interventions for behavioural change using appropriate community strategies should be introduced. That is, targeting IYCF-related culture, beliefs and practices using religious leaders, teachers, students, youth associations, women's associations, health professionals and front-line health workers to bridge the knowledge-practice gap.

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ANNEXURES

Annexures 1: Comparative analysis of survey characteristics of nine national health surveys

	National Family Health Survey				District Level Household Survey				Rapid Survey on Children
	NFHS 1	NFHS 2	NFHS 3	NFHS 4	DLHS 1	DLHS 2	DLHS 3	DLHS 4	RSoC
Year	1992 - 1993	1998 - 1999	2005-2006	2015 -2016	1998 - 1999	2002 - 2004	2007 - 2008	2012 - 2013	2013 - 2014
Population Covered	24 states and Delhi, (ever married women age 13-49)	26 states and Delhi, (ever married women age 15-49) (no Union territories)	29 states and Delhi, ever married women age 15-49, men age 15-54, never married women age 15-49	All states / union territories and for the first time district level estimates, ever married women age 15-49, men age 15-54, never married	504 districts, Currently married women age 15 - 44 years	Currently married women age 15 - 44 years	Ever married women age 15 - 49 years, Never married women age 15 - 24 years	20 states and 6 union territories, Ever married women age 15 - 49 years, Never married women age 15 - 24 years	28 states and NCT of Delhi. Ever married women age 15 - 49 years

				women age 15-49					
Methodology	systematic, multi-stage stratified sampling design with 2 stages in Rural and 3 stages in Urban	systematic, multi-stage stratified sampling design in two phases	systematic, multi-stage stratified sampling design in two phases	systematic, multi-stage stratified sampling design in two phases	systematic, multi-stage stratified sampling design	systematic, multi-stage stratified sampling design	systematic, multi-stage stratified sampling design	multi-stage stratified sampling design	multi-stage stratified random sampling survey
Type of Questionnaire	Household, women's and village	Household, women's and village	Household, Women's and Man's	Household, Woman's, Man's and Biomarker	Household, Woman's	Household, Women's, Husband's, Village, Health	Household, Ever married woman, Unmarried woman, Village, Facility	Household, Ever married woman, Village, Facility	House-listing Schedule, Household, Ever Married Women, Anganwadi Centre

Health issues covered	Fertility, infant and child mortality, Practice of family planning, nutrition, Maternal, and Child Health	NFHS 1 issues + Reproductive health problem, the status of women & domestic violence, Hb estimation, lead contents, iodine and anthropometric measurement is extended to ever-married women	NFHS 2 + perinatal mortality, adolescent reproductive health, male involvement, high-risk sexual behaviour, family life education, blood testing for HIV, knowledge about TB	NFHS 3 + information on malaria prevention, migration in the context of HIV, abortion, violence during pregnancy, blood sugar, hypertension, tobacco usage,	Maternal health care, child health care, Family planning, RTI/STI, and HIV/AIDs	DLHS 1 + Testing of the blood of children and women to assess anaemia, the weight of children	DLHS 2 + Assess the effectiveness of ASHA and JSY, Adolescent health problems	DLHS 3 + health facilities at different levels, Clinical, Anthropometric and Bi-Chemical (CAB) tests at HH level	Maternal and Child Health, nutrition of children and adolescent girls, Utilization of ICDS services,
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Annexure 2: IYCF components: a review of the survey

	National Family Health Survey				District Level Household Survey				Rapid Survey on Children
	NFHS 1	NFHS 2	NFHS 3	NFHS 4	DLHS 1	DLHS 2	DLHS 3	DLHS 4	RSoC
Global and National Recommendations on IYCF	1990 - WHO recommendations - exclusive breastfeeding 4-6 months, age 4 - 6 months adequate and appropriate complementary food should be added	WHO and UNICEF recommends - only breast milk for the first six months. Under the Reproductive and Child Health Programme (GoI) recommends - exclusively breastfed from birth to age four months	Ministry of Women and Child Development , 2006, (GoI) recommendation	Not Defined	Not Defined	WHO - breastfeeding should be initiated immediately after birth and should be continued exclusively up to a minimum of six months. It also talks	WHO - yellowish milk, known as colostrum , should be given to the baby. BF supplemented with semi-solid and solid food at proper	NA	WHO and UNICEF recommendation

		Complementary feeding from 6 months onwards				about colostrum milk & semi-solid & solid food at the right interval	time intervals.		
Breastfeeding defined in a particular survey	Exclusively breastfed for the 0 - 3 months of life	Exclusively breastfed for the 0 - 3 months of life	Exclusively breastfed for the first six months of life	Not Defined	Not Defined	GOI (RCH program) - exclusively breastfed from birth to age four months	Early initiation within one hour of birth	NA	The correct or good breastfeeding practices include initiation of breastfeeding within the first hour of life, exclusive breastfeeding for the first six months,

									and continued breastfeeding for at least two years
Complementary feeding defined in a particular survey	age 4 - 6 months adequate and appropriate complementary food should be added	age 4 - 6 months adequate and appropriate complementary food should be added	appropriate and adequate complementary feeding in addition to continued breastfeeding from six months of age	Not Defined	Not Defined	Not Defined	Not Defined	NA	After the completion of six months, children need to be fed the right foods both in quantity and quality along with mother's milk
IYCF issues covered in Questionnaire	Questions on BF, exclusive BF, Prolacteal, and one	NFHS 1 + supplementary food	NFHS 1 & 2 + complementary feeding, vitamin A	NFHS 1, 2 & 3 + adequate diet	Early initiation of BF, advise	Early initiation of BF, advise received on BF,	DLHS 1, 2 + Complimentary food	NA	BF (early initiation, prelacteal liquids, exclusive,

	question stating "How many months old was the kid when you started giving the following regularly? Plain water, formula milk, other liquids, any solid or mushy food.		supplements, and iron supplements	intake	received on BF, duration of BF	duration of BF and colostrum milk,	introduced		continuation up to 2 years), complementary feeding.
Number of questions asked	12 (BF), 1 (Solid/mushy food + BF)	12 (BF), 2 (prelacteal + solid/mushy food)	10 (BF) + 7 (CF & supplements)	6 (BF) + 4 (Prelacteal & CF)	NA	BF - 5	NA	NA	8 (BF), 4 (BF + prelacteal), 3 (CF)

Annexure 3: Interview Schedule and Focus Group Discussion for Respondents

AWWIS no.

Interview Schedule for Anganwadi Workers

Name of the Anganwadi Centre:

Panchayat Name:

Village Name:

Block Name:

Date and Place of interview:

Personal Information

1. Name of the Sevika: Age:
2. Marital Status:
3. Number of children (if applicable):
4. Religion:
5. Language:
6. Caste: ST/SC/OBC/GENERAL/OTHERS (Please Specify)
7. Education qualification:
8. Who all are there in the family? (Number of family members)

Anganwadi Centre information

9. Date of establishment of the centre (years):
10. The anganwadi centre belongs to whom (Government or Private):
11. Distance from the block office:
12. Total Population covered by the particular AWC?

Male:

Female:

13. Number of children enrolled:

Months	Boy	Girl
0 -6		
7-12		
12 - 36		
36 - 72		

14. Number of malnourished children:
 15. Number of pregnant women:
 16. Anganwadi centre timing:
 17. Food supplements for children and pregnant women

.....
(Probe: items, quantity, quality, number of days and availability)

Work profile

18. Share your journey as Sevika from your joining date.

.....
(Probe: when joined, years of experience, reasons, formalities, salary/ honorarium, and reporting)

About training and curriculum

19. What all sorts of training you received till date?

.....
(Probe: where, when, training module, curriculum, and refresher training)

20. How these training helps you in your work as Sevika?

21. What do you feel about these trainings? Any suggestions?

Roles and Responsibility:

22. What all duties and activities you perform as Sevika?

.....
(Probe: daily activities, monthly activities, changes in roles and responsibilities, records maintained, pressure, efficiency, and suggestions) (Refer: checklist 2)

23. About the Village Health and Nutritional Day (VHND)

.....
(Probe: when, who all attend, and activities)

24. About the Village meetings and Gram Sabha meetings

.....
(Probe: your role, information shared, support and outcome)

Knowledge and Skills about IYCF (Infant and Child Feeding) Practices

Breastfeeding

25. What information given to mothers (new born or below 2 years) or pregnant women on breastfeeding?

.....
(Probe: colostrum, prelacteal feed, initiation, frequency, social norm, beliefs, practices, exclusive breastfeeding, continuation of Breastfeeding, and counselling)

26. What suggestion and information given to mothers whose children are low birth weight babies, sick and malnourished?

.....
(Probe: continuation, frequency, other source of information, cultural & social norms, gaps in information and mothers following it, referring to hospital, mother & society beliefs, barriers and counselling)

27. What strategy and kind of information given to the working mothers?

.....
(Probe: care giver, frequency, hygiene, prelacteal feed, preparation of milk, impact on health, social norms, difference between house mother and working mothers, strategy vary accordingly)

28. How you overcome this barriers and challenges regarding breast feeding?

.....
(Probe: new initiative, contribution from others and seek support from others)

Complementary Feeding

29. What you inform mothers regarding complementary feeding?

.....
(Probe: introduction age, adequate diet, frequency, composition, separate food preparation, consumption, who feed the child, and food availability)

30. What strategy and kind of information given to the working mothers regarding complementary feeding?

.....
(Probe: caregiver, who feed, cooks food, consumption, frequency, quality, quantity, local community practices, workload on women, impact on children food intake and health, difference between house mother and working mothers, strategy vary accordingly)

31. What is the child feeding practices and food intake?

.....

(Probe: Mother's perception, suggestions, feeding problems shared, counselling, local practices and children feeding habits, local market & shops, junk foods influence, trend in changing of food habits and its impact on child health)

32. What are the government schemes available to ensure proper nutritional dietary intake of children in Jharkhand? How these services are beneficial for addressing the problem of malnutrition and feeding practices in children?

33. What are the problems faced within the family and community in performing your job smoothly?

.....
(Probe: social and cultural norms, community perception, barriers, salary/ honorarium, work load, and support)

ASHAIS no.

Interview Schedule for Accredited Social Health Activist (ASHA)

Name of the Anganwadi Centre:
Village:
Block:
District:
Date and Place of interview:

Personal Information

1. Name:
 - a) Age:
 - b) Sex
2. Marital Status:
3. Number of children (if applicable):
4. Religion:
5. Language:
6. Caste: ST/SC/OBC/GENERAL/OTHERS (Please Specify)

7. Education qualification:

Family Background

8. Who all are there in the family?

9. What is the perception of her family's and other relatives' about her job?

10. How do you find your job?

11. Would you suggest any other girl to come into this profession? If not, what are the reasons?

About the community/Village

12. How does a mother's/care providers work pattern and work load influence the feeding practices of children?

13. What is the impact of women's work load on the preparation of food and consumption by the infant and young children within the family?

14. What are the different local practices and feeding habits with regard to feeding practices of children within the community?

15. What is the trend of changing food habits in the child feeding practices?

16. What are the opportunities available in government services (the Integrated Child Development Scheme (ICDS) and health) for ensuring the nutritional dietary intake of children in Jharkhand?

17. How these services are beneficial for addressing the enigma of malnutrition and feeding practices in children?

Work profile

18. When you joined as ASHA?

19. Years of Experience as ASHA:

20. What were the reasons behind your choosing ASHA job as your career?

21. What are the formalities you have to do before joining as ASHA?

22. What is your salary/ honorarium?

23. What is the format for reporting? How it is decided?

About training and curriculum

24. Have you undergone any training before joining?

25. Where you got the training (Place)?

26. Total number of days of training you received?

27. What are the topics included in the training?

28. Have you undergone any refresher training?

29. If yes, when:
30. How frequently these refresher trainings are conducted?
31. Total number of refresher training you have got?
32. Please state the recent training you received and when?
33. What are the topics covered in refresher training? What are the lessons covered during training on child feeding practices?
34. What do you feel about these trainings? Any suggestions?

Roles and Responsibility:

35. What all duties you have to perform as ASHA?
36. What according to you have been the changes in these responsibilities over a period of time?
37. What all information you collect during your house visit?
38. On what basis you priorities your house visit?
39. What are the information collected and given while your house visit (focus on pregnant and children below 2 years)?
40. Who decide the entire work schedule for you and how?
41. What are the activities performed and records maintained related to given headings
42. What are the supports you extend to Anganwadi workers for the benefit of the child and mother nutrition status?
43. What are the suggestion you give to sick child's mother?
44. How you counsel or encourage mother's for breastfeeding and exclusive breastfeeding?
45. What are the new methods you adopted in your village for counselling mothers regarding breastfeeding?
46. What are the cultural and social norms of the community which acts as barrier in promoting breastfeeding and exclusive breastfeeding?
47. How you overcome this barriers and challenges?
48. Any suggestions you would give for the improvement of training and curriculum?
49. How you guide and instruct a lactating mothers? What are the points included while counselling a lactating mother regarding the importance of breastfeeding?
50. What is the common trend of food preparation in the community? Who cooks the food in the house (housewife and working women)?
51. Food is separately cooked for children or not? If no, why?
52. If a women is working, who looks after the children?

53. At what age can a child begin to eat from the family pot or meal?
54. What are the cultural and social norms in the community which acts as barrier in optimal complementary feeding?
55. How you overcome these barriers and challenges in your counselling sessions?

Problems and Challenges

56. How do you manage between your family and the work?
57. What all problems you encounter in your work? (Probe for problems that arise because of her being a woman and being placed lowest in the organizational hierarchy).
58. What is the perception of village people about you and your profession?
59. Have the people of the village accepted you as a ASHA? If no, what may be the probable reasons?
60. Suggestions you will like to give regarding the ways you can perform smoothly.
61. What are the problems faced with your supervisors and co – workers? Any suggestions?
62. What are the problems faced within the family and community in performing your job smoothly?

ANMIS no.

Interview Schedule for ANM (Auxiliary Nurse Midwives)

Name of the Anganwadi Centre:

Village:

Block:

District:

Date and Place of interview:

Personal Information

1. Name:
 - c) Age:
 - d) Sex

2. Marital Status:
3. Number of children (if applicable):
4. Religion:
5. Language:
6. Caste: ST/SC/OBC/GENERAL/OTHERS (Please Specify)
7. Education qualification:

Family Background

8. Who all are there in the family?
9. What is the perception of her family's and other relatives' about her job?
10. How do you find your job?
11. Would you suggest any other girl to come into this profession? If not, what are the reasons?

About the community/Village

12. From how many years you are associated with this anganwadi and community?
13. On which dates and days of the month you visit this village/ anganwadi?
14. What are the information you get from AWW? How beneficial are those information in your work?
15. What is the health condition of children within this community?
16. What is the nutritional status of children in village?
17. How does a mother's/care providers work pattern and work load influence the feeding practices of children?
18. What is the impact of women's work load on the preparation of food and consumption by the infant and young children within the family?
19. What are the different local practices and feeding habits with regard to feeding practices of children within the community?
20. What is the trend of changing food habits in the child feeding practices?
21. What are the opportunities available in government services (the Integrated Child Development Scheme (ICDS) and health) for ensuring the nutritional dietary intake of children in Jharkhand?
22. How these services are beneficial for addressing the enigma of malnutrition and feeding practices in children?

Work profile

23. When you joined as ANM?
24. Years of Experience as ANM:

25. What were the reasons behind your choosing ANM job as your career?
26. What are the formalities you have to do before joining as ANM?
27. What is your salary/ honorarium?
28. What is the format for reporting? How it is decided?

About training and curriculum

29. Have you undergone any training before joining?
30. Where you got the training (Place)?
31. Total number of days of training you received?
32. What are the topics included in the training?
33. Have you undergone any refresher training?
34. If yes, when:
35. How frequently these refresher trainings are conducted?
36. Total number of refresher training you have got?
37. Please state the recent training you received and when?
38. What are the topics covered in refresher training? What are the lessons covered during training on child feeding practices?
39. What do you feel about these trainings? Any suggestions?

Roles and Responsibility:

40. What all duties you have to perform as ANM?
41. What according to you have been the changes in these responsibilities over a period of time?
42. What all information you collect during your Anganwadi visit?
43. Who decide the entire work schedule for you and how?
44. What are the activities performed and records maintained by you?
45. What are the supports you extend to Anganwadi workers for the benefit of the child and mother nutrition status?
46. What are the suggestion you give to sick child's mother?
47. What are the new methods you adopted in your village for counselling mothers regarding breastfeeding?
48. What are the cultural and social norms of the community which acts as barrier in promoting breastfeeding and exclusive breastfeeding?
49. How you overcome this barriers and challenges?
50. Any suggestions you would give for the improvement of training and curriculum?

51. How you guide and instruct a lactating mothers? What are the points included while counselling a lactating mother regarding the importance of breastfeeding?
52. What is the common trend of food preparation in the community? Who cooks the food in the house (housewife and working women)?
53. Food is separately cooked for children or not? If no, why?
54. If a women is working, who looks after the children?
55. At what age can a child begin to eat from the family pot or meal?
56. What are the cultural and social norms in the community which acts as barrier in optimal complementary feeding?
57. How you overcome these barriers and challenges in your counselling sessions?

Problems and Challenges

58. How do you manage between your family and the work?
59. What all problems you encounter in your work? (Probe for problems that arise because of her being a woman and being placed lowest in the organizational hierarchy).
60. What are the problems you face during counselling of pregnant women and mothers of children below 2 years?

ASIS no.

Interview Schedule for Anganwadi supervisor

Name of the Anganwadi Centre:

Panchayat Name:

Village Name:

Block Name:

Date and Place of interview:

Personal Information

1. Name of the Supervisor: Age:
2. Marital Status:
3. Number of children (if applicable):
4. Religion:
5. Language:

6. Caste: ST/SC/OBC/GENERAL/OTHERS (Please Specify)
7. Education qualification:
8. Who all are there in the family? (Number of family members)
9. Number of panchayat under you
10. Number of Anganwadi centre you supervise

Job profile and duties

11. Share your journey as Sevika from starting
(Probe: when joined, years of experience, reasons, formalities, salary/ honorarium, and reporting)
12. What all duties you have to perform as Anganwadi Supervisor?
(Probe: supervise, visit AWC, record maintenance, list of malnourished children, monthly meetings, VHND, new programme implementation and training, support to Anganwadi workers, and association with children child feeding practices)

Feeding practices

13. What is the common community child feeding practices?
(Probe: reasons for poor feeding, impact on child health, cultural norms, barriers in proper feeding practices, methods to overcome this barriers)
14. What is your role and contribution in improving the child feeding practices (breastfeeding and complementary feeding)?
(Probe: activities to improve, information, counselling, support to Anganwadi, new ideas adopted, and monitoring)
15. What are the programmes and schemes for the improvement of child nutritional status?
(Probe: name the scheme, its impact, barriers in implementations and suggestion for improvement)
16. How does a mother's/care providers work pattern and work load influence the feeding practices of children?

(Probe: food availability, food preparation, food consumption, impact of work on feeding, local practices, feeding habits, and trends in child feeding practices)
17. According to you what are the challenges Anganwadi workers faces within the community related to proper feeding of children below 2 years?
18. What are the opportunities available in government services (the Integrated Child Development Scheme (ICDS) and health) for ensuring the nutritional dietary intake of

children in Jharkhand? How these services are beneficial for addressing the enigma of malnutrition and feeding practices in children?

CDPO (Community Development Project Officer)

Name of the CDPO:

Name of the Block:

Total number of Anganwadi Centres:

Total number of mini Anganwadi Centres:

Total number of Anganwadi supervisor:

1. What are the roles and responsibilities you have as CDPO towards Anganwadi Centres?
 2. Who looks after the monitoring and evaluation of these Anganwadi centres?
 3. As CDPO what are the changes you have seen in Anganwadi centres?
 4. What are the major child feeding practices problems within the community and household level?
 5. What role the frontline health workers play in the child feeding practices?
 6. Are you satisfied with the role and responsibilities assigned to these frontline health workers? What changes you suggest in the role of these workers to improve the condition of child feeding practices?
 7. What are the government initiatives (POSHAN) for the improvement of the child feeding? What role you and the AWC have in the implementation of these initiatives?
 8. What are the challenges and problems these frontline health workers face? How you address these problems?
 9. What challenges and problems you face as CDPO?
 10. According to you what are the major problems within the society, at household level and in government policies which can bring changes in child feeding practices and nutritional status?
-

FGD No.

Focus Group Discussion with mothers

Focus Group Discussion with mothers of children below 2 years of age starts with a narrative welcoming the participants by the researcher. An overview of the purpose and format of the focus group discussion. Even convince them that everyone should feel free to say what she thinks, no matter what this may be. Everything they say here will be kept confidential and anonymous, so no one will ever know what you said personally.

Venue of the meeting:

Name of the Village:

Name of the block:

Name of the Panchayat:

Name of the Anganwadi Centre:

Total number of participation:

Date of discussion:

Composition of the participants

Age group: 15 – 20 21 – 25 26 – 30 31- 35 36-40 41 above Occupation Category: Homemaker working mothers **Health condition of Women**

What are the common diseases from which women and children suffer? What support and information you get from Anganwadi worker?

Probing questions: What are the common diseases from which the children below 2 years suffer? What are the common diseases women suffer? Where all you go for the treatment? What support and guidance you all get from the health workers when the children fall ill? When children fall sick what are kind and quantity of food is given to children?

Pregnancy details:

What is the health condition of women during pregnancy and the pattern of food intake during these days?

Probing questions: How was your pregnancy phase? Please share your experiences regarding your pregnancy (emphasis should be on their food intake and the cultural norms/myths/taboo related to food)? What all support, facilities, suggestions and guidance you got from Anganwadi workers on pregnancy and food intake during this period? Where you all got your baby delivered? Government /Private. Please quote the reasons for choosing the particular hospital for delivery? What are the supports you got from AWWs during your delivery?

Impact of work on feeding

How does a mother's/care providers work pattern and work load influence the feeding practices of children (preparation and consumption of food)?

Probing questions: What percentage of women work outside their home for earning? Who takes care of the children at home if mother is a homemaker or working women? Who feed the child in the absence of mother? Does separate food is prepared for the children at home? Who cooks the food in the family? Do you think work pattern and work load effects the feeding practices among the children? What kind of the food habits children develop? What role an Anganwadi workers plays in improving the feeding condition in children?

Breastfeeding and complementary practices details

What is the trend of breastfeeding practices and complementary food intake among the children? What role frontline health workers play in improving the feeding practices among the children below 2 years?

Probing questions: What initial guidance, information and support you all received from AWWs on taking care of new born and their feeding (Breastfeeding)? What information AWWs share regarding breastfeeding and complementary feeding? What are the different local child feeding practices and habits within the community? What is the trend of food habits in the child feeding practices? What are the most feasible and efficacious way adopted by mother's to improve feeding practices and to ensure improved nutrient intake?

What support, guidance and information caregivers receive from the frontline workers in taking care and feeding practices of the children? Does it brought any changes in your feeding practices? If you all are informed that your children are undernourished, what action you take and support you get from the frontline health workers? What support and guidance given by the health worker when children is malnourished/ severely malnourished? What are the facilities you all access from the Anganwadi centres? What do you all think that do health workers understand mother's social demographic and cultural situation and counsel accordingly?