

**The perceptions of Anganwadi workers and mothers of the  
importance of nutritional care of children during the first 3 years  
of life: A study of Jharkhand, India.**

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## KEY WORDS

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Impact

Integrated Child Development Scheme

Knowledge and Practices

Mothers

Multi-dimensional Poverty Index

Human Development Index



## LIST OF ACRONYMS

ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social health Activist
AWC	Anganwadi Centre
CDPO	Child Development Project Officer
FGD	Focus Group Discussion
GOI	Government of India
HDI	Human Development Index
ICDS	Integrated Child Development Scheme
IDI	In-depth Interview
IEC	Information Education and Communication
IMR	Infant Mortality Rate
IYCF	Infant and Young Child Feeding Practices
MPI	Multidimensional Poverty Index
MTC/NRC	Malnutrition Treatment Centre/Nutritional Rehabilitation Centre
NFHS	National Family Health Survey
NRHM	National Rural Health Mission
NGO	Non-Governmental Organization
NIPCCD	National Institute of Public Cooperation and Child Development
PHRN	Public Health Resource Network
SAM	Severe and Acute Malnutrition
THR	Take Home Ration
U5MR	Under Five Mortality Rate
UNICEF	United Nations Children's Fund
VHND	Village Health and Nutrition Day
WHO	World Health Organization

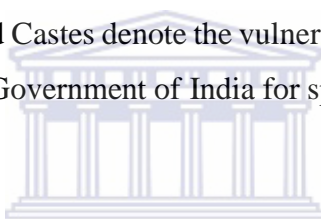
## DEFINITION

**ASHA:** Acronym for Accredited Social Health Activist. Also the name given to the Community Health Worker under the ASHA programme as part of the National Rural Health Mission of India launched in 2005.

**Block (also known as Community Development Blocks):** An administrative unit in India, below the district level. A Block would have several (around 100) villages and a few sub-urban units.

**Scheduled Tribe (ST):** Tribes or STs are indigenous communities as identified by the Government of India for special attention as per the Schedule V of Indian Constitution.

**Scheduled Caste (SC):** Scheduled Castes denote the vulnerable and marginalised racial groups in India that are identified by the Government of India for special attention as per the Schedule V of Indian Constitution.



**National Rural Health Mission (NRHM):** A nationwide flagship programme launched by government of India in 2005, for improving the rural health systems in India in a time bound manner.

**Lady Supervisor:** Lady Supervisors are the intermediary functionaries in the ICDS programme. They play an indispensable role in the outreach of ICDS as a crucial link between field workers and programme authorities, and also monitoring the implementation of the programme at the field level.

**Malnutrition Treatment Centre/Nutritional Rehabilitation Centre (MTC/NRC):** Nutrition Rehabilitation Centre (NRC) is a unit in a health facility where children with Severe Acute Malnutrition (SAM) are admitted and provided with medical and nutritional therapeutic care till she or he attains a minimum approved nutritional level.

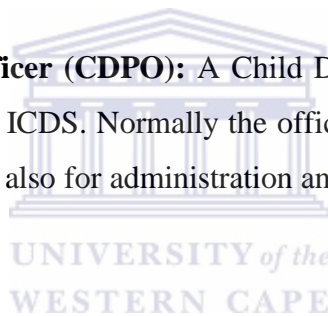
**National Family Health Survey (NFHS):** The National Family Health Survey (NFHS) is a large-scale, multi-round survey conducted in a representative sample of households throughout

India. The survey provides state and national information for India on fertility, infant and child mortality, the practice of family planning, maternal and child health, reproductive health, nutrition, anaemia, utilization and quality of health and family planning services.

**Take Home Ration (THR):** Take Home Ration is given to pregnant and lactating women, children from 6 months to 3 years and severely malnourished children as supplementary nutrition as they do not attend the AWC on a daily basis.

**Village Health and Nutrition Day (VHND):** Village Health and Nutrition Day (VHND) or Health Day is observed every month in every village of the state to provide health care services to women, adolescents and children. On this day, health related issues like nutrition, personal hygiene; care during pregnancy, importance of antenatal and post-natal care, institutional deliveries, immunization, etc. are discussed.

**Child Development Project Officer (CDPO):** A Child Development Project Officer is the key functionary of the scheme of ICDS. Normally the officer is a woman. She is responsible for the organization of services as also for administration and implementation of the scheme at the field level.



**Auxiliary Nurse Midwife (ANM):** An ANM is a Multipurpose Health Worker who is the first contact person between people and the health system. She is trained on Maternal and Child Health (MCH) services and midwifery.

**Saraswati Vahini:** 'Saraswati Vahini' is the children's mothers' association/committee at school level that looks after the monitoring and management aspects of Mid-Day Meal (MDM) programme in schools. This is a process of engaging community that also helps in improving the condition of school.

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## DECLARATION

I hereby declare that the work presented herein titled “The perceptions of Anganwadi workers and mothers on the importance of nutritional care of a children during the first 3 years of life: A study of Jharkhand, India” as part of my MPH mini-thesis is an original piece of work done by myself. This work has not been submitted for any examination or degree in any other university or institution for the award of any degree or certificate. I also declare that all the sources of information and data used or quoted in this document have been duly indicated and acknowledged.

Full Name: Haldhar Mahto



Signature:



Dated: December 2016



## ABSTRACT

India has the highest prevalence of child malnutrition in the world and is ranked among the worst performing Commonwealth countries in terms of child undernutrition. This poor performance is despite the implementation of the Integrated Child Development Scheme (ICDS) since 1975, which seeks to combat malnutrition through community-based Anganwadi workers. Anganwadi workers play a pivotal role in the implementation of the ICDS Programme and thus their understanding of the key concepts relating to the services provided at the centres is crucial.

This study is carried out in the Indian state of Jharkhand, where almost half of the population is undernourished. The study seeks to gain insights on the understanding and perceptions of Anganwadi workers and the mothers with whom they interact, regarding the long term impact of being malnourished in the first 3 years of life.

The study used a qualitative approach, with data collection methods including focus group discussions as well as individual in-depth interviews.

The study findings suggest that the majority of Anganwadi workers know about the services provided. However, they were unable to state the reasons underlying why these services are important. Mothers on the other hand could only mention three out of six services and many mentioned that the services were scheduled on certain days. In addition, mothers were concerned about the services provided and mentioned that there was poor information sharing even though at times they expressed an interest in the programme. The knowledge of Anganwadi workers about the importance of nutrition in the first three years of life was limited. The same was observed among the mothers in this study. Anganwadi workers identified deficiencies in their training as a reason for their limited understanding about issues pertaining to nutrition within the programme.

In conclusion, this study suggests a general lack of knowledge about programme components amongst the Anganwadi workers and mothers. The ICDS programme has failed to develop an understanding about the service components, its importance and consequences for malnutrition. Furthermore, there are limited services offered at the centre, presenting missed

opportunities. This has resulted in mothers being deprived of important information which may be crucial in improving child survival and cognitive development.

There is thus an urgent need to evaluate ICDS training provided to Anganwadi workers as well as constant retraining to reinforce critical messages. This will ensure that there is congruence between training and practice in the largest nutrition programme in the world.



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## CHAPTER 1: INTRODUCTION

### 1.1 Background

Malnutrition is a state of nutrition in which a deficiency or excess (or imbalance) of energy, protein and other nutrients causes measurable adverse effects on tissue/body form (body shape, size and composition), function and clinical outcomes (Muscaritoli et al., 2010).

Malnutrition is a broad term commonly used as an alternative to under-nutrition but technically it also refers to both over nutrition and under-nutrition. The World Food Programme (WFP) defines malnutrition as “a state in which the physical function of an individual is impaired to the point where he or she can no longer maintain adequate bodily performance processes such as growth, pregnancy, lactation, physical work and resisting and recovering from disease” (CDC, 2005:15). In the context of developing countries, under-nutrition remains a concern despite the fact that industrialization and changes in eating habits have led to overconsumption of energy dense food. Nonetheless, within the context of the World Food Programme (WFP) and assessments, malnutrition refers to under-nutrition, unless otherwise specified (CDC, 2005).

Under-nutrition is characterized by symptoms such as loss of appetite, weight loss, tiredness, and loss of energy, reduced ability to perform normal tasks, reduced physical performance, lethargy, depression, poor concentration and poor growth in children. In this mini-thesis the term malnutrition refers to under-nutrition as measured by underweight rates. A child is considered underweight if the child falls below an anthropometric cut off of 2 standard deviations below the median weight-for-age z-score of the National Centre for Health Statistics/World Health Organization international reference (Smith & Haddad, 2000). Furthermore the study will only focus in the state of Jharkhand, one of the poorest states in India.

## 1.2 Malnutrition in the Indian context

India, because of the sheer size of its population, has the highest prevalence of child malnutrition in the world (Gragnotati, 2005). India ranks amongst the worst performing Commonwealth countries with respect to the percentage of children under the age of 5 years who are underweight (Victoria et al., 2008; UNICEF, 2008). Malnutrition continues to influence morbidity and mortality rates in India. According to the most recent official survey on nutrition carried out in India, 38.4% of children under three years were stunted, 19.1% wasted and 45.9% underweight (IIPS, 2007). The severity of under-nutrition in India was so alarming that the Indian Prime Minister personally wrote letters on 16 January 2007 to the Chief Ministers of every state stating that:

*A number of reports and surveys, including the National Family Health Survey (NFHS-3) ...seem to indicate a noticeable decline in the qualitative aspects of the [ICDS] programme. There is strong evidence that the programme has not led to any substantial improvement in the nutritional status of children under six. Our prevalent rate of under-nutrition in this age group remains one of the highest in the world. (Press Information Bureau, Govt. of India, 2007).*

## 1.3 Malnutrition in the context of Jharkhand

Of all states in India, the severity of malnutrition in the newly carved state of Jharkhand is among the worst. Studies show that more than 59% of children below 5 years of age in Jharkhand are underweight. This state also has a very high Infant Mortality Rate (IMR) of 39 (SRS, 2011), Child Mortality Rates of 57 (MoHA, 2013) and a considerably higher percentage of low birth weight (28%) as highlighted by a national survey (IIPS, 2007). The National Family Health Survey 3(NFHS-3) data for Jharkhand suggests that 11.8% of children below 5 years have a very low weight for height (>3SD) with limited access to care (IIPS, 2007). In

addition, three quarters of young children and adolescent girls are anaemic, and many are deficient in vitamin A, while 50% of Jharkhand's children are not fully immunized against childhood diseases (UNICEF, 2010). The findings above are a clear illustration that malnutrition continues to be a problem in this state and that intervention strategies are necessary.

## **1.4 Integrated Child Development Scheme (ICDS)**

### **1.4.1. Description of ICDS**

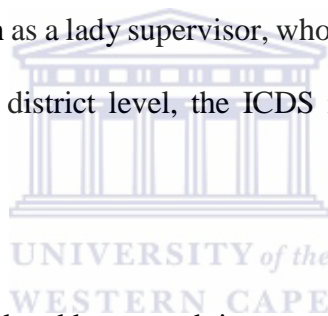
In order to address child malnutrition in India, a central government sponsored Integrated Child Development Scheme (ICDS) was put in place in October 1975 with the following objectives:

- To improve the nutritional and health status of children in the age-group 0-6 years
- To lay the foundations for proper psychological, physical and social development of the child
- To reduce the incidence of mortality, morbidity, malnutrition and school dropout
- To achieve effective coordination of policy and implementation among the various departments to promote child development, and
- To enhance the capabilities of the mother to look after the regular health and nutritional needs of the child through proper nutrition and health education (NHP, undated).

In order to achieve the above objectives, a package of six services – supplementary nutrition, immunisation, health check-up, referral services, pre-school education, health and nutrition education for mothers – are delivered through government sponsored Anganwadi centres (AWC). The Anganwadi system is mainly managed by the Anganwadi worker (AWW) who is a female health and nutrition worker chosen from the community and is given training in health, nutrition and child-care. She provides services to children in the 0-6 year age group. The

Anganwadi centre covers a population of 400-800 in rural/urban projects; 150 to 400 for a Mini-Anganwadi and 150 to 300 for a Mini-Anganwadi in tribal/riverine/desert, hilly and other difficult areas (Social Statistics Division, GOI, 2012).

An Anganwadi worker plays a pivotal role in delivering maternal and child services such as supplementary nutrition, immunization, health check-up, referral services, pre-school non-formal education, and health and nutrition counselling. Anganwadi workers are trained and expected to monitor the nutritional status of children of 0-3 and 3-6 years age group including: identification, prevention, referral and taking remedial measures in case the child is undernourished(DoWW, 1996). Usually, 20 to 25 Anganwadi workers are supposed to be supervised by a supervisor, known as a lady supervisor, who works under a Child Development Projects Officer (CDPO). At the district level, the ICDS is headed by the District Welfare Officer.



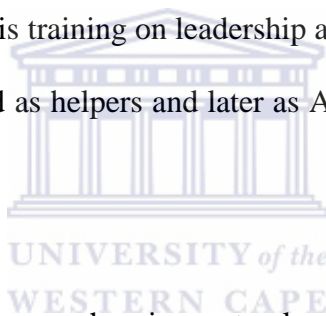
Anganwadi centres are widespread and have reach in up to 96% of villages in India. However, they are not always efficient in delivering services (Nandi Foundation, 2011). For example, it has been shown that ICDS workers perform poorly because they are underpaid; have other home responsibilities as well as poor training (Seema, 2001).

#### **1.4.2 Training of Anganwadi workers**

Anganwadi workers receive 30 days' training after their recruitment. The training content tries to cover broader perspectives on health, nutrition and social issues affecting women and children, and on the specific aspects of programme management involved in running an Anganwadi Centre, including the roles and responsibilities of Anganwadi workers (NIPCCD, 2004). On broader issues, the training curriculum covers the constitutional rights of women



and children in India, while the narrower aspects cover the setting up of AWCs, health infrastructure and communication skills. Training also discusses early child care and development along with the importance of pre-school education (PSE) and mental and physical activities, cognitive development and common behavioural problems in children and their assessment. The content is very exhaustive and comprehensive, also covering the importance of nutrition in infants, youth and adolescents, Protein Energy Management (PEM) and other micronutrient deficiencies, growth monitoring, childhood diseases, hygiene and safe drinking water. Training also emphasizes the importance of community participation, the role of panchayats in ICDS, conducting surveys, mobilizing the community, the role of IEC in ICDS, interpersonal and group communication skills development, behaviour change methods and their assessment. Further to these is training on leadership and management aspects of AWWs and practical exposure to the field as helpers and later as AWWs under supervision (DoWW, 1996).



The training program is thus very comprehensive, not only providing classroom knowledge but side by side field exposure, and covering almost all the important aspects of women and child care. Apart from this there is provision for on the job training to AWWs.

#### **1.4.3 Training of CDPOs and Supervisors related to AWWs and ICDS-**

The training schedule and programme content for CDPOs and Supervisors is similar to AWWs with 26 days working period of training sessions. The training sessions cover a broad overview of women and child health conditions to more specific roles and responsibilities of CDPOs and Supervisors with more focus on management, leadership and supervision.

## 1.5 Problem statement

Despite the implementation of the ICDS programme, childhood malnutrition continues to be a significant problem in Jharkhand state. The consequences of malnutrition are well documented and include impaired physical and cognitive development. Furthermore, adults who have survived malnutrition as children are less physically and intellectually productive and suffer from higher levels of chronic illness and disability (Smith & Haddad, 2000). Thus it is important to prevent and treat malnutrition because of the long term effects it may have on the individual.

One of the objectives of the ICDS is to enhance the capabilities of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education. However, for mothers to be receptive to the programme they need to have a good understanding of the programme including the consequences of malnutrition. In addition to the beneficiaries' understanding, the implementers (i.e. Anganwadi workers) need to be knowledgeable about the programme as they are the ones who interact with mothers.

Currently, there is a paucity of literature on Anganwadi workers' knowledge, perceptions and understanding about child nutrition and its long term impact. Bhagwat (2014) brings to light the gap between AWWs' knowledge and their ability to apply this in formal settings with caregivers. One of the reasons for not providing efficient services may be Anganwadi workers' unsatisfactory understanding of the impact of childhood malnutrition (Forsyth, 2004). Thus gaining insights on the understanding and perceptions of mothers and Anganwadi workers about the long term impact of malnutrition is important as it will assist in identifying gaps in service provision especially health and nutrition education.

## 1.6 Purpose of the study

The purpose of the study was to explore whether Anganwadi workers and mothers have the necessary conceptual understanding regarding physical and cognitive development in early childhood affected by under-nutrition among children. The study will assist in gaining insights on the knowledge gaps of mothers and AWWs and thus assist in creating materials that will meet their needs. Furthermore it is assumed that if mothers understand the impact of childhood malnutrition during the first three years of life then they will understand the importance of services offered by the Anganwadi workers.

On the other hand if Anganwadi workers (because they are often also mothers) have an understanding of the services they offer, as well as an understanding of why there is poor adherence to the programme, then she will be in a better position to counsel, assist and build the capacities of mothers with the appropriate knowledge and skills to care for their children. The study will further assist in identifying the knowledge and training requirements of AWW in managing childhood malnutrition. If the Anganwadi workers have the required knowledge and reasons behind the services they are delivering, it is expected that they will become teachers (counsellors in this case) to mothers.

## 1.7 Outline of the report

The mini-thesis report is comprised of the following 6 chapters:

Chapter 1 introduces the study, giving a brief outline of the problem in question, of the study setting and the importance of the study from a public health perspective.

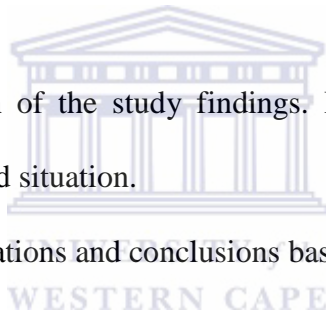
Chapter 2 gives a review of the literature related to the problem and various studies that have tried to address aspects related to the topic of study.

Chapter 3 deals with the research methodology and design of the study. This chapter discusses the justification for choosing particular research methods, related theory and the tools for study, as well as its rigour and limitations.

Chapter 4 deals with the findings of the study. The data that were collected during the study were analysed and explained.

Chapter 5 reports the discussion of the study findings. In this chapter the findings were discussed based on the context and situation.

Chapter 6 reports the recommendations and conclusions based on the study findings.



## CHAPTER 2: LITERATURE REVIEW

### 2.1 Defining malnutrition

As discussed in Chapter 1, the definition of malnutrition given by the WFP mainly encompasses under-nutrition. It is important to note that in developing countries, under-nutrition is generally the main issue of concern. However, through industrialization and changes in eating habits, the prevalence of over-nutrition has increased, thus the definition of malnutrition involves both over and under-nutrition. Nonetheless, within the context of the World Food Programme (WFP) and assessments, malnutrition refers to ‘under-nutrition unless otherwise specified’ (CDC, 2005).

### 2.2 Malnutrition and its magnitude

#### 2.2.1 Global scenario

Globally approximately 6.6 million children under the age of five years die every year of various causes (WHO, 2013). Malnutrition is the underlying contributing factor in about 35% of all child deaths, making children more vulnerable to severe diseases (WHO, 2013). The World Bank, UNICEF and WHO estimates of malnutrition in different countries give a very clear picture that the prevalence of malnutrition is largely limited to the global South (WHO, 2013). Malnutrition has thus been identified as an issue of international public health concern, especially for the developing nations of the world.

About 70 million children are currently suffering from severe malnutrition in developing countries, and the majority of these reside in South Asia. Although the prevalence of child malnutrition is decreasing in Asia, South Asian countries still have the highest rates of malnutrition. Indeed, prevalence rates of malnutrition in India, Bangladesh, Afghanistan and Pakistan are much higher (38 to 51 %) than in Sub-Saharan Africa (26%) (Rodríguez, Cervantes & Ortiz, 2012; UNICEF, 2008). Malnutrition results in underweight, stunted

growth and wasting. According to a joint study conducted by UNICEF, WHO and World Bank, 165 million children are estimated to be stunted. Around 90% of these children are in Asia and Africa (UNICEF, WHO & WB, 2012). Globally the magnitude of malnutrition problem is illustrated in figure 1, 2 and 3. Ironically, India scores highest in stunting, wasting and under-nutrition amongst the countries.

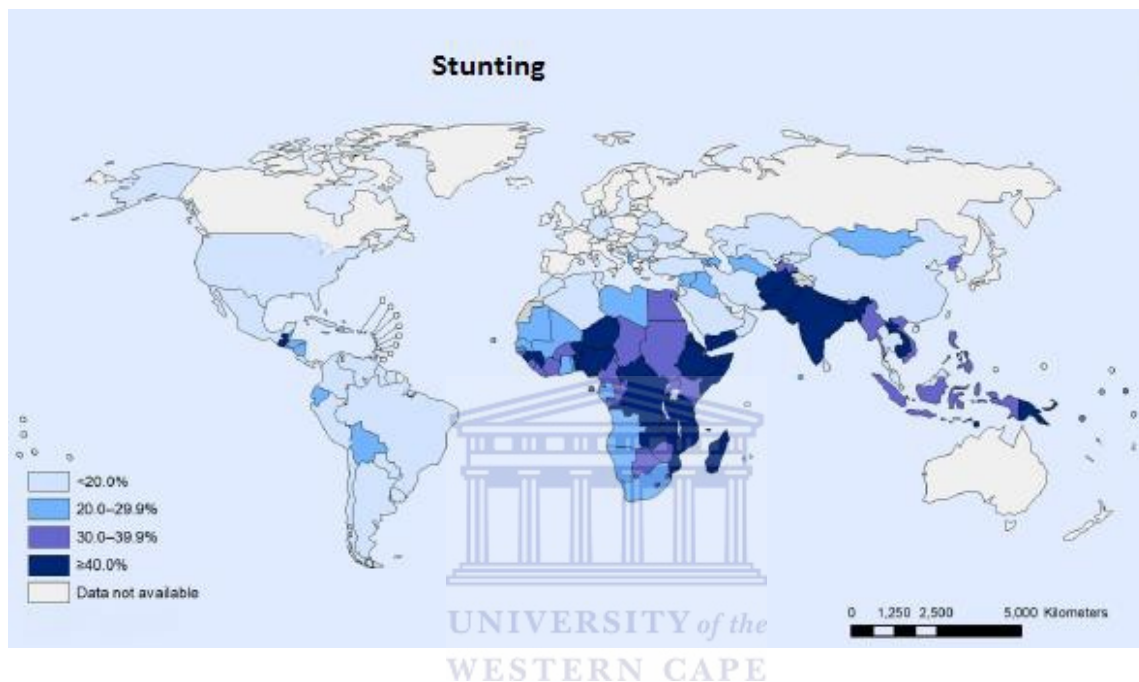


Figure 1: Country wise prevalence estimates for stunting, among children under-five years of age (UNICEF, WHO & WB, 2012)

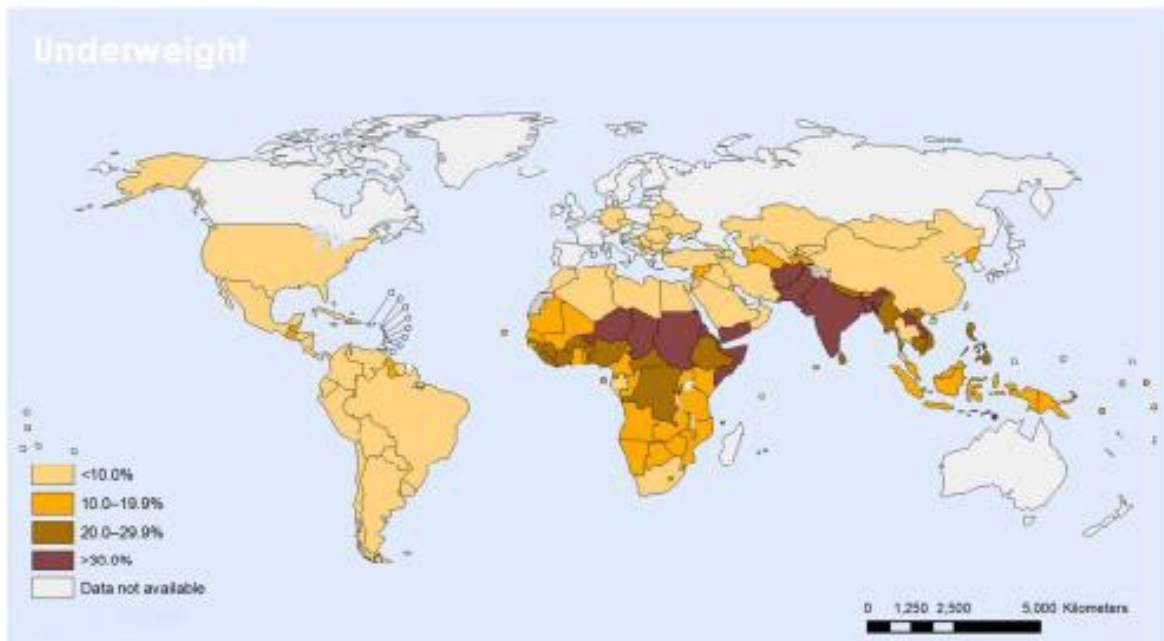


Figure 2: Latest country prevalence estimates for underweight among children under-five years of age (UNICEF, WHO & WB, 2012)

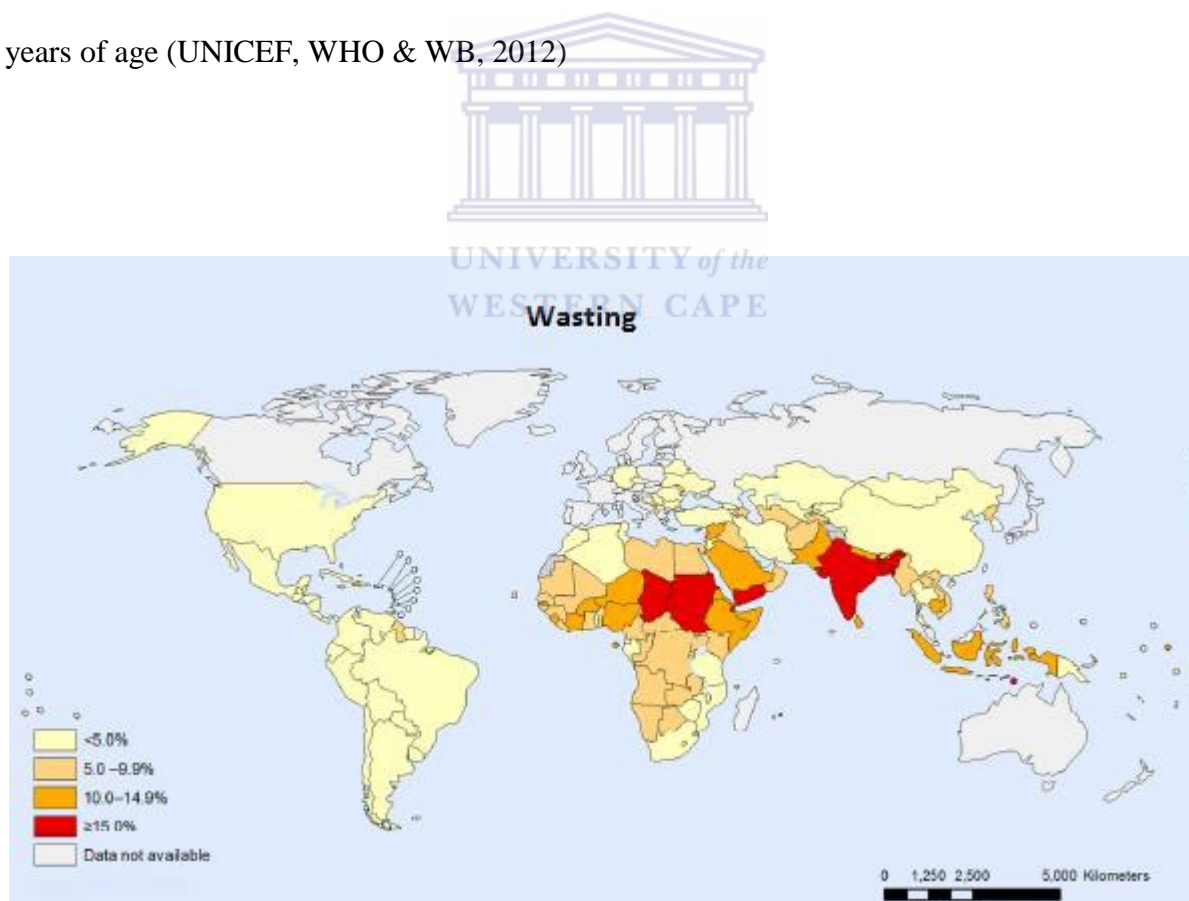


Figure 3: Latest country prevalence estimates for wasting among children under-five years of age (UNICEF, WHO & WB, 2012)

**Table 1: Global statistics for underweight, stunting, wasting and infants with LBW**

<b>Region</b>	<b>Under-weight</b>	<b>Stunted</b>	<b>Wasting</b>	<b>% of Infants with Low Birth-weight (1998-2004)</b>
South Asia	46	44	15	31
Sub-Saharan Africa	28	38	9	14
Eastern/Southern Africa	29	41	7	14
West/Central Africa	28	35	10	15
Middle East/North Africa	17	23	8	15
East Asia/Pacific	15	19	-	7
Latin America/Caribbean	7	16	2	9
CEE/CIS	5	14	3	9
Developing Countries	27	31	10	17
<b>World</b>	<b>26</b>	<b>30</b>	<b>10</b>	<b>16</b>

Source: UNICEF, 2006

Importance and relevance of child malnutrition issues in developing countries largely contributes to the high mortality of children associated with it and the long-term consequences on the survivors. Table 1 show that almost 35% of the neonatal deaths are directly or indirectly related to the factors associated with malnutrition (UNICEF, 2006). The table also indicates that the nutritional status of the mothers and children have direct linkages with prematurity, low birth weight and deaths due to diarrheal diseases (Ibid).



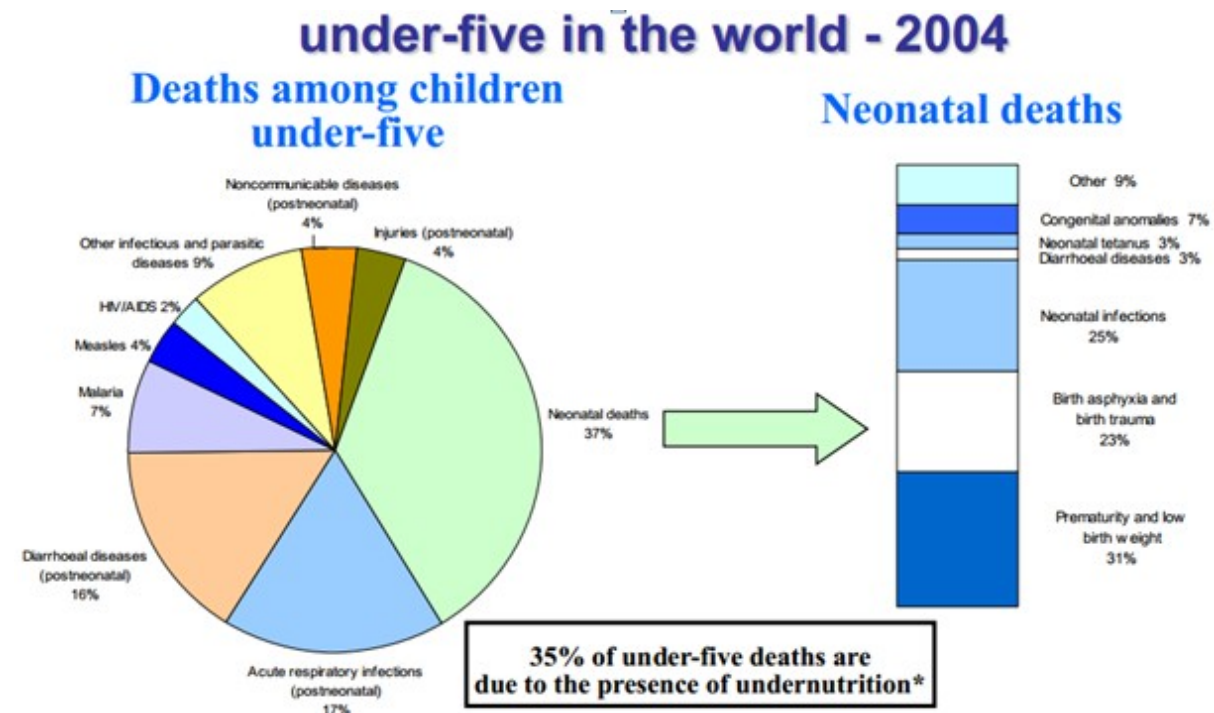
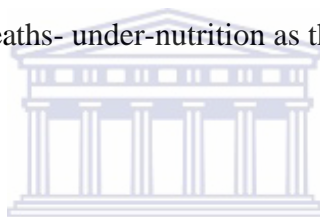


Figure 4: Major causes of child deaths- under-nutrition as the major contributing factor (WHO, 2008:14)



Studies conducted in developing countries found that an estimated 178 million (32 %) children under the age of five years are stunted (low height for age) and 55 million (10 %) are wasted (Black et al., 2008). Condition is far worse amongst the poor than among the non-poor in these countries (Figure 3 and table 1). Caulfield and colleagues (2004) found that children underweight, stunted or wasting problem are more susceptible to death from common infectious diseases which otherwise do not affect better-nourished children. Malnutrition also delays growth and development that affects children's cognitive development and productive potential as adults. Maternal and child under-nutrition are estimated to be the underlying cause of 3.5 million annual deaths (Black et al., 2008).

Thus consequences of malnutrition are manifold and include increased susceptibility and incidence of infections, impaired mental development, increased case fatality, and a huge loss on national productivity. The biggest challenge is not only to cure the malnourished children

but also to promote the preventive practices, provide education to communities especially mothers and empower them to take right decisions to reduce malnutrition with special focus on developing countries.

### **2.2.2 Scenario in India and Jharkhand**

The prevalence of child under-nutrition in India is the highest in the world (nearly double to that of Sub-Saharan Africa) with dire consequences for morbidity and mortality, thereby reducing productivity and economic growth of India (Gragnotati et al., 2005).

The National Family Health Survey- 3 reported that 48% of children under-five years of age are stunted (IIPS, 2007), which indicates that half of the country's children are chronically malnourished. It is said that one in every three of the world's malnourished children live in India (UNICEF, 2009a). About 19.8% of children under-five years of age in the country are wasted, indicating that out of every five children in India one is wasted and around 43% of children under-five years of age are underweight for their age (Social Statistics Division, GOI, 2012). The situation is more serious in rural India with higher percentage of stunted, wasted and underweight children as compared to urban areas (IIPS, 2007). In terms of wealth, the percentage of underweight children in the lowest wealth index category (56.6%) is nearly 3 times higher than that in the highest wealth index category where it is only 19.7% (Social Statistics Division, GOI, 2012).

Since malnutrition is directly proportional to mother's education and health, malnutrition of all types are more prevalent in children of illiterate mothers and mothers having education of less than 5 years, while malnutrition cases are highest among children of underweight mothers (NFHS-3). Jharkhand ranks second with 56.5% children as underweight amongst the three

poorest ranking states of India with more than half of the children as underweight. The other two states are Madhya Pradesh with 60% children and Bihar with 55.9% children as underweight (Ibid).

This illustrates the heavy burden of malnutrition borne by India. A recent study by Save the Children conducted in 2012 show that India has fallen in child development rankings, falling behind even poorer countries such as neighbouring Bangladesh or the Democratic Republic of Congo (Save the Children, 2012). In economic terms, the loss due to malnutrition and its associated effect is estimated at 3% of India's Gross Domestic Product (IIPS, 2007).

Multidimensional Poverty Index (MPI) and Human development Index (HDI) used to show the nutritional and development scenarios of the countries also provide the similar picture of India. India scores low in both the indices. In global HDI, India scores very low at 0.554, just above Cambodia, ranking India at 136<sup>th</sup> among the 186 countries for 2013. HDI score for Jharkhand is 0.376 which is not only far below the national average of India but also lags behind the HDI scores of Republic of Congo (0.534), Bangladesh (0.515), Angola (0.508), Lesotho, Haiti and even below than Rwanda, Sudan, Afghanistan and Ethiopia (0.396) (UNDP, 2013). Similarly MPI Value of Jharkhand and particularly for the Scheduled Tribe and Rural Scheduled Tribe at (0.463), (0.482) and (0.510) respectively ranks them even lower than Rwanda, Angola, Central African Republic, Somalia and Mozambique (Alkire & Santos, 2011).

Not only the magnitude of the problem is big but also the efforts to reduce malnutrition are slow in India (Gagnolati et al., 2005) especially in Jharkhand. In the last 20 years, the

percentage of malnourished children has fallen only at an average rate of 0.65% per year since 1990 (Save the Children, 2012).

### 2.3 Causes of malnutrition

Malnutrition is caused by numerous factors (Smith & Haddad, 2000); the UNICEF conceptual framework (Figure-5) for under-nutrition assists in analysing the underlying causes of malnutrition. The conceptual framework highlights the vicious cycle of ill health and malnutrition (Gillespie, McLachlan & Shrimpton, 2003).

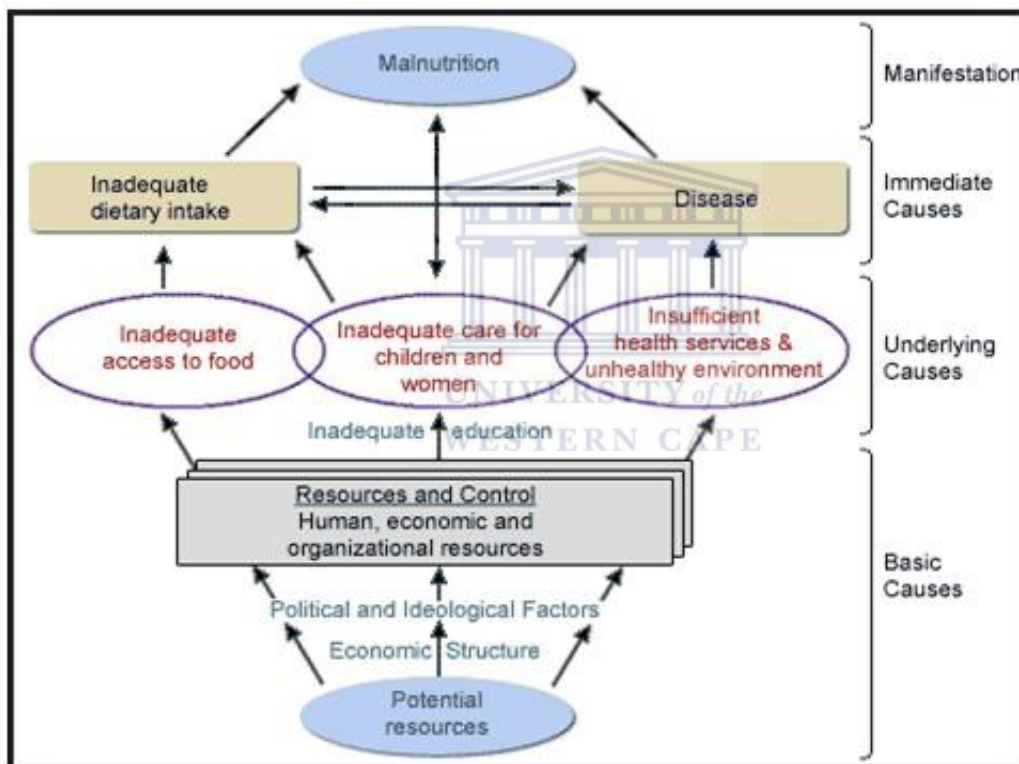
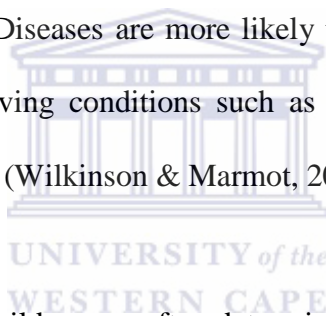


Figure 5: Conceptual Framework of Causes of Malnutrition (UNICEF)

It depicts the basic, underlying and the immediate causes of malnutrition. The problem begins with the economic structure of the country leading to inadequate care, services and food security. This leads to inadequate diet and diseases further manifesting itself in malnutrition in the mother and hence in the child.

Chronic poor diet, which means improper inadequate and non-nutritious food intake over a long period of time, leads to malnutrition in children. The poor diet might not only be due to unavailability of sufficient food or a lack of varieties of food in meals but also because of low concentrations of energy and nutrients in meals, infrequent meals, insufficient breast milk in initial period and early weaning (Müller & Krawinkel, 2005). Diseases, especially infectious diseases cause malnutrition. Sick child may not eat or absorb enough nutrients, may lose nutrients from the body due to vomiting or diarrhoea, or have increased nutrient needs which are not met (Weingärtner, 2005). Not only diseases causes malnutrition but malnutrition also increases susceptibility to many diseases. The diseases most likely to result due to under-nutrition include measles, diarrhoea, respiratory infections, malaria and intestinal worms (Katona & Katona-Apte, 2008). Diseases are more likely to occur, especially among young children, when there are poor living conditions such as overcrowding, low immunization coverage and poor health services (Wilkinson & Marmot, 2003).



Nutrition and health care of the children are often determined by the amount of care which is received by the women and the children at the house hold level. The local culture, status of women in family and in the society, level of education among the women, their access to social, political and economic decision making, resources and workload have a direct relation to the general nutritional status and access to food by women and children in the society (Engle, Menon & Haddad, 1999). If the mother is busy, she might not have enough time to breastfeed and take care for her child. Similarly knowledge on feeding, childcare and hygiene is very limited among the mothers who are uneducated. They also have limited access to an income of their own (Kabeer, 2012). Thus, they do not have adequate awareness and resources to provide for appropriate child care. These women often do not have access to clinics or women's group

where they could learn skills to improve their lives and that of their families by participating in the economic activities in society.

Though the effects of malnutrition in early stages of life, and its repercussions on inter-generational life cycles have been substantially dealt within a wide array of scientific literature and development reports, together they point towards the need for linking information with agency – of connecting knowledge, perceptions and behaviours at the individual and community levels (Maccini & Yang, 2009).

#### **2.4 Effect of malnutrition on children's wellbeing, development and mortality**

The consequences of this nutrition crisis are enormous and include both physical and emotional suffering. The association of malnutrition to long-term poor cognitive development, disability, and poor educational and development outcomes is well established (Elwan, 1999; Grantham & Ani, 2001, Alderman Hoddinott & Kinsey, 2006). Under-nutrition can affect cognitive development by causing direct structural damage to the brain and by impairing infant motor development (Quadir & Bhutta, 2008) and exploratory behaviour (Brown & Pollitt, 1996). Victoria and colleagues (2008) summarize the long-term impacts of under-nutrition and report that poor foetal growth or stunting in the first 2 years of life leads to irreversible damage, including shorter adult height, lower attained schooling, reduces adult income and decreases offspring birth weight. It has been shown that adults who survive malnutrition as children are less physically and intellectually productive and suffer from higher levels of chronic illnesses and disability (Smith & Haddad, 2000). Thus malnutrition literally is a violation of human rights (Oshaug, Eide & Eide, 1994).

Barker and others (2005) in their study have shown that there is a direct association between growth in infancy and adult life. Reynolds and others (2001) have shown that the participation [active child] in the early childhood was associated with better educational and social outcomes up to the age of 20 years. Similarly studies from various countries such as Guatemala (Li et al., 2003; Hack, 1998) and Zimbabwe (Alderman, Hoddinott & Kinsey, 2006) show the long-term associations between early child growth and education attainment.

Studies have also shown that there is an association between height and head circumference at 2 years with the educational achievements in adult women. Stunting at 2 years of age has a direct relation with delayed school entry, greater grade repetition, dropout rates, decreased graduation rates from primary and secondary school and lower school performance (Daniels & Adair, 2004). Similarly, early childhood food supplementation has positive consequences in women's performance in school by years and test score outcomes (Maluccio et al., 2009).

Looking at the literature it is clear that under-nutrition has a negative impact on cognitive development. Thus, prevention of maternal and child under-nutrition is a long term investment that will benefit the present generation and their children.

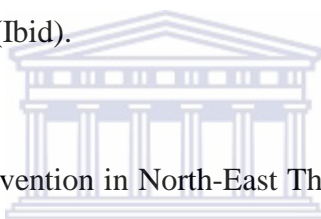
## **2.5 Nutrition management**

Nutrition management at community level has been implemented in many developing countries and has shown succeed. Earlier community level programmes like, the Integrated Nutritional Project of Bangladesh(BINP), launched in 1996 through Community Nutrition Centres in a population of 1000 to 1500 was mainly directed at counselling of pregnant women and Child Growth Monitoring (ACC/SCN, 2001). Cambodia's Community Action for Social Development (CASD), initiated by UNICEF focused on Village Development Committees to



develop Village Action Plan. It has the potential for good result in nutrition management in the community (ACC/SCN, 2001).

China's area based approach has made significant changes for good in the recent pasts to nutritional problems through its community based nutrition programme at schools, known as the Child Nutrition Surveillance and Intervention Programme (CNSIP) (ACC/SCN, 2001). Different interventions in different communities have different results. Sri Lanka's community level nutrition programme, known as Participatory Nutrition Improvement Project (PNIP), focuses more on capacity building through household level interventions, whereas, in Vietnam, there is no direct intervention for nutrition. Rather they focus on the food security and income generation at the household level (Ibid).



Community Based Nutrition Intervention in North-East Thailand describes home visits to the house of child at risk, as one of the most successful aspects wherein special problems referring to the child at risk or the child already undernourished are discussed with mothers to salvage the situation. It argues that since the reasons for under-nutrition are manifold, the family approach is the most appropriate way to implement intervention measures (Freiberg, Homel, & Lamb, 2007:11).

So, the evidence shows that nutrition management at community level has the potential to improve nutrition status and furthermore such programmes are effective and affordable. Recent community based interventions in the field [undocumented] have shown positive co-relation between community nutrition programme and improved nutrition status amongst women and children to a varied degree.



## **2.6 Providers perspective on nutrition services: Indian context**

Service provider's role is very crucial and has an impact on the quality nutrition services provided (Heskett, 1987; Heskett et al., 1994; Mattson, 1994; Tansuhajm et al., 1988; Chodzaza & Bultemeier, 2010). Anganwadi workers are providers of health services to communities and thus their perspective of nutrition and health is essential. A Hungama Report, published in 2011, describes Anganwadis' knowledge on malnutrition as being poor, with only 42% being able to define malnutrition correctly. This indicates that Anganwadi workers were merely conducting their duties without the adequately understanding of cause and effect relationships that guides nutrition interventions. In addition, the report also highlighted that most of the service providers' attention was diverted towards routine activities, such as, immunization and take home ration distribution etc. (Nandi Foundation, 2011). In another study conducted by Parikh and Sharma (2011), it was found that Anganwadi workers' knowledge on reasons for breastfeeding and complementary feeding was very poor. Their study also suggests that knowledge and perception of Anganwadi workers on malnutrition and its long-term impact in child's future life needs to be further explored. Besides nutrition related knowledge that is necessary for providers to deliver appropriate services, other factors that may hinder the community programmes have been identified.

Sinha (2006) pointed out the absence of empathy between service providers and beneficiaries as a hindrance to services provision. The same study mentioned the reasons for the collapsing integrated child development scheme and failure in reducing malnutrition and these included the absence of proper human and managerial resources and training including orientation to the community.

## **2.7 Limitations of Community Based Health Workers to address nutrition-specific outcomes**

The AWWs say that their payment is not enough for the work they render. And most of the times it is not received on time. The issue in lack of regular training, monitoring and supervision has been a challenge that the system is yet to address. Lack of infrastructure and timely provision of funds and supply of logistic has been an issue that is expressed by the AWWs. There is no space for displaying the posters for non-formal preschool education and also does have much space for the children at the Anganwadi centres to play out door (Tripathy, M., et al., 2014) (Thakare Meenal, M., et al., 2011) The AWW's also are overloaded with the other works of the other programs that are run by the government which in turn reduces the quality of the work (Tulenko, K., et al., 2013). There has always been mistrust by the community towards the government run programs. Similarly, lack of parental participation and there is poor involvement of the community in planning and execution of nutrition programs. Limited resource allocation has also been identified as one of the major challenges (Planning Commission, 2010). Examples for community distrust can be seen in Bolivia where rumors were spread by the community that the 'manzaneras' were eating the food provided for the children instead of giving the children (Tulenko, K., et al .,2013).

## **2.7 Community role in nutrition management among malnourished children**

Parikh and Sharma (2011) stated that perceptions of the community on malnutrition need to be understood. Similarly, Jadhav (2012) suggested the need to give more emphasis on nutritional status of women during antenatal and post-natal period. He focused on the implementation of nutrition scheme and concluded that the Anganwadi workers were less educated. He further suggested that if Anganwadi workers were well trained, integrated child development scheme

will be implemented very effectively to reduce the problems of health and nutrition among the children and women (Jadhav, 2012).

### **I Community participation in strengthening Integrated Child Development Services**

Dongre and colleagues (2008) in their study on perception on operational constraints described Anganwadi workers' perceptions on the operational constraints in reducing child malnutrition and mothers' perceptions on the supplementary nutrition given to beneficiaries. The study found that Anganwadi workers indicated four *major groups of operational constraints* in reducing malnutrition which are as follows:

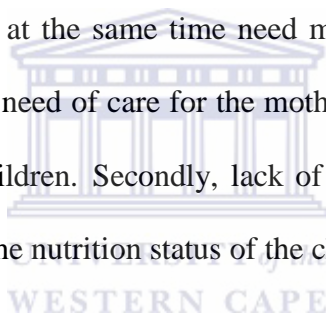
- Poor cooperation from villagers and parents as well as irregular and poor health check-up activity,
- Maternal issues such as failure of mothers to follow medical and dietary advice as they remained busy in their seasonal agricultural work,
- Poverty, and
- Poor sanitation.



Hsieh and others (2010) in their study on the perceptions of service providers and community on nutrition and its positive impact on nutritional counselling found that there was a difference in providers understanding of the definition of malnutrition and its prevalence. The UNICEF's Dular Strategy, which focused on nutrition counselling also showed an 8% decline in the prevalence of underweight children under the age of three years (UNICEF, 2009b). However, another study by UNICEF suggests that the dominant focus on food supplementation has become detrimental to other very important services of counselling on child care and nutrition and health education. It also revealed that many parents looked up to the AWC only as a site of pre-schooling for children, and not as a place to access nutrition or counselling services (UNICEF, 2009a).

## **II Community level health behaviour and practices**

It is important to understand the community's health behaviour and practices associated with health and nutrition to get a more detailed knowledge of malnutrition. Insufficient care, environment and food have been identified as few of the reasons given by the community as the root cause of malnutrition (Goudet et al., 2011). In India the maternal factor affect the nutritional status of children in two ways. Firstly, most of the women from rural and semi-urban areas are malnourished themselves and suffers from anaemia. Thus children born to them generally have lower birth weight, putting both, the mothers and their children in danger. This has a direct relation to the availability of care and nutrition to the children, as mothers take longer to recover while the baby at the same time need more nutrition (Black et al., 2008). Insufficient resources to meet the need of care for the mother and child at the household level lead to severe malnutrition in children. Secondly, lack of education and literacy, especially amongst mothers, directly affect the nutrition status of the children.



However, studies show that the nutritional needs of children can be addressed at household level if knowledge and information of proper nutrition requirements, feeding practices are available at the households and community level (Girard et al., 2012). Improper feeding practices and lack of knowledge of nutrition requirement lead to malnutrition and the children may not get the basic micronutrient requirements in food (WHO, 2013). Mothers and communities have little or no clear idea of the long-term impacts of childhood malnutrition in adult life, especially in intellectual development (Brown & Pollitt, 1996). Lokshin and others (2005) in this regard have described that presence of a nutrition centre alone has no significant effect in tackling under-nutrition.

There are overwhelming indications from global and national literature on how; sheer knowledge and awareness of nutrition affect both the delivery and uptake of nutritional services. In this context, it becomes an appropriate and significant point of enquiry to understand the point of view and perceptions of AWWs as well as that of mothers with respect to the long term impact of under nutrition.



## **CHAPTER 3: METHODOLOGY**

This chapter describes the methodological approach used in the study including aspects related to rigour, data analysis and ethical considerations.

### **3.1 Aim of the study**

The aim of the study was to describe Anganwadi workers' and mothers' knowledge and perceptions about the long-term impacts of under-nutrition among children during the first three years of life.

### **3.2 Objectives**

**The objectives of the study were**

1. To describe the perception of Anganwadi workers and mothers about the impact of malnutrition during 0-3 years on long term physical and cognitive development of children.
2. To describe the systemic reasons for the lack of Anganwadi workers' understanding on importance and impacts of malnutrition during 0-3 years.

### **3.3 Methodology**

#### **3.3.1 Study design**

The study was descriptive in nature and used qualitative research methodology to describe Anganwadi workers and mothers' knowledge and perceptions of the long-term impacts of under-nutrition among children during the first three years of life.

#### **3.3.2 Selection of the study design and the approach**

Numerous studies have looked at knowledge and perceptions of Anganwadi workers in the nutrition programme (Kant et al., 1984; Patil, 2013; Sondankar et al., 2014; Parmar et al., 2015). Many of these studies sought to quantify knowledge, meaning that knowledge was based on what was preconceived by the researchers. Furthermore some of these studies suggest

deficits in the knowledge of Anganwadi workers related to certain aspects of malnutrition and the programme (Kant et al., 1984; Sondankar et al., 2014; Parmar et al., 2015). All of these studies did not allow the Anganwadi workers to freely discuss and explain their perspective. Qualitative research methods approach was best suited to this study as it described understanding, perceptions and experiences of the Anganwadi workers and mothers on issues that were considered by the researcher as sensitive; and required further exploration to seek answers (Mack et al., 2005). In addition, the study attempted to understand a social phenomenon (role of community) in a natural setting (rather than experimental), giving due emphasis to the meanings, experiences and views of all the participants (Pope & Mays, 1995) and to avoid any inhibition due to power dynamics perception, hierarchy and job security (Genzuk, 2003; Green & Thorogood, 2004). The study was conducted in places that were convenient for the participants. Qualitative research was ideal for this study as it was able to answer a number of questions related to the process, and interactions which quantitative research cannot adequately capture (Green & Britten, 1998). For the purpose of exploring issues or topics in detail, , focus group discussions that was most flexible and best suited (Mack et al., 2005) was used for the study. Literature reviews for similar knowledge and perception studies, provided evidences that the methodology used in the current study provides high validity of data (Parikh & Sharma, 2011).

Focus group discussion are said to provide a unique technique for examining interventions (Brotherson, 1994). Therefore, focus group discussions were the most practical method to use in a village since one-on-one interviews were difficult to conduct due to several reasons. Furthermore, focus groups offer better understanding of attitudes, behaviours, and contexts from various points of views (Patton, 1990). Firstly, it allowed one to gain multiple perspectives in one go. Secondly, it was easier to meet and discuss issues with women in a

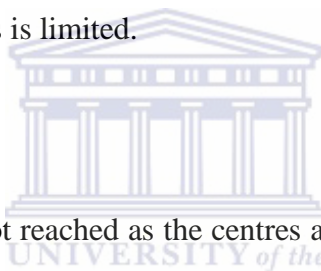
group setting since they were not allowed to interact with outsiders due to social barriers. Previously researchers have tried to interact with a few participants but they did not open up due to their shyness. However, later after interacting with them in a village Anganwadi meeting, the researcher experienced that women were interacting freely. Considering this experience, the researcher decided to conduct focus group discussion with mothers instead of individual interviews. Thus concurring with another study where focus group interviews were effective in exploring and gaining insight into the feeding and weaning practices, knowledge and attitudes towards nutrition in a rural area (Kruger & Gericke, 2003). This shows that qualitative inquiry can be used to gain insight about people's knowledge.

### **3.3.3 Study setting**

The study was conducted in Jharkhand state of India which is amongst the lowest ranking states of the country in terms of health and nutrition indicators (NFHS-3). It has a total geographical area of 79,714 km<sup>2</sup> divided into 24 districts, 38 Sub divisions, 260 blocks and 32620 villages. Jharkhand has a population of 32.96 million, of which 16.93 million are males and 16.03 million are females. As per the 2011 census conducted by Government of India, the official literacy rate for the state was 67.63% with male and female literacy rates of 78.45% and 56.21% respectively. Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR) in the state is 38 and 267 (SRS, 2013; MoHA, 2012) respectively. Human Development Index (HDI) of Jharkhand is 0.376 and the HDI Rank of Jharkhand is 24 out of 28 states in India (UNDP, 2013). This shows that the overall development situation of Jharkhand is not very impressive and the human development opportunity is very limited. However, Jharkhand, known as 'the land of forests' is rich in natural resources and it accounts for more than 40% of the mineral resources of India.



The current study was conducted in Nagri-Ratu, one of the 14 community development blocks of Ranchi district in the Jharkhand state. The study district has a total population of 2.91 million with a total child population of 401,214 with 207,029 male and 194,185 female populations. A Nutritional Treatment Centre was established in the selected block considering a high number of undernourished children in it and its surrounding blocks. Data is lacking in the Ranchi district and its blocks and the only available official source of data on malnutrition is from the National Family Health Survey carried out in 2005-2006. The estimates of higher percentage of malnourished children in the selected block could be attributed largely to high concentration of tribal population and limited resources for livelihoods options. The block is rural in nature with no urban sections. Nutrition services through ICDS are available in almost every village but its reach to smaller habitations is limited.



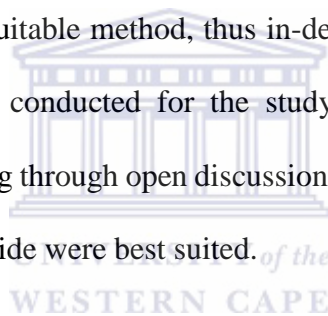
A large number of children are not reached as the centres are located in the main villages and are away from the reach of small children of the small hamlets. Hamlets are staggered due to its undulating terrain and surrounded by small forests that separate each village and hamlet. Its geographical location has been a major constraint for frequent and regular monitoring and supervision of Anganwadi centres by the supervisors and child development project officer. Further, only two supervisors are deployed against five required to look after the 103 centres and have no regular CDPO for the entire administrative block.

The survey, [unpublished] conducted by NGO X<sup>1</sup> in 2012 reports that, many of the hamlets do not have any AWCs and many children are beyond the services. In a survey conducted by the

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<sup>1</sup> NGO X is the pseudo name of organization 'Public Health Resource Society', working in the selected block that has done the survey works for the organizational field work. They organization has the list of villages and hamlet wise records of Anganwadi Centers.

NGO X in 29 hamlets, only 8 AWCs were in 8 hamlets which were part of the main village and 21 hamlets had no Anganwadi centres. However, Anganwadi centres ensure that the health services reach to every child of each hamlet on VHNDs, mainly immunization. Pregnant women and lactating mothers also benefit from the services provided in AWCs. Immunization and other health services are accessible because of a coordinated effort between health and ICDS which involves communities with strong monitoring and review systems. Nutritional Rehabilitation Centre (NRC) data [records obtained from the NRCs] for the selected block indicates that more than 90% of the SAM children admitted are below 3 years of age. The researcher's close association with the NGO X and its support and familiarity with area prompted him to select it for the field study. To know the views of Anganwadi workers one-to-one interaction was the most suitable method, thus in-depth interviews (IDI) using a semi-structured interview guide were conducted for the study. For mothers, their views were captured best in an informal setting through open discussions for which the qualitative methods using Focus Group Discussion guide were best suited.



### **3.3.4 Study population**

The study population was Anganwadi workers and mothers belonging to the mother's group as well as supervisors and child development project officers.

### **3.3.5 Sample size**

A sample size of 12 Anganwadi workers were selected from the study area for in-depth interviews (IDI). A list of Anganwadi centres and workers in the Ratu- Nagari block was collected and AWWs who had an experience of minimum 3 years were shortlisted from the list. Following this, a meeting was conducted with the CDPO at the block level. Based on her recommendations, AWWs who were performing well were further shortlisted. Participants who were willing to give consent for the study were recruited. Six mother committees

consisting of 42 mothers were included in the study. Mothers who had children below the age of 3 years were selected for the study. The child development officer of the block level and two lady supervisors supervising the 12 AWW from the mid-level staff were also included. The total sample size is summarized below:

**Table 2: Respondent wise Sample Size**

Sl. No.	Respondents	IDIs	FGD	Total
1.	Anganwadi worker	12		12
2.	Mothers Committee*		6 groups (7 participants /group)	42
3.	Supervisors (Key informant)	2		2
4.	CDPO (Block level Officer) (Key informant)	1		1
<b>Total</b>		<b>15</b>	<b>42</b>	<b>57</b>

\*Total participating Mothers Committee members = 42



### **3.3.6 Sampling procedure**

Anganwadi workers were selected through purposive sampling from Nagri-Ratu block from a list of 103 functional Anganwadi centres. Participants were recruited based upon 3 years minimum service experience criteria for the AWW. Once AWWs were selected, mothers groups from the centres of selected AWWs were invited to participate in the study. Mothers who were willing to partake at a convenient time were included in the FGD. Each group had seven members and the mothers who had children below 3 years of age were selected for the FGD. In addition all the three key informants namely Child Development Project Officer and 2 Lady Supervisors were purposely selected based on their knowledge of the ICDS programme.

### **3.3.7 Data collection**

The data collection methods used in this study was in-depth interviews and focus group discussions. These methods were the most appropriate to understand the knowledge and perceptions of Anganwadi workers and mothers. The nature of work of respondents and the system do not allow them to share information as they feel threatened and sometimes their education level also inhibits the administration of any quantitative survey tools to extract information. In-depth interviews in this study allowed the researcher to conduct interviews in a natural setting at their work place and required flexibility which was important in understanding the problem or practices of the respondents and encouraged respondents speak freely about the topic of interest (Liamputtong & Ezzy, 2005:54-74). On the other hand FGDs were appropriate to describe the depth and nuances of opinions regarding malnutrition, understand differences in perspectives, and to understand what factors influence opinions or behaviour. It also captured opinions and perspectives of the program's target audience and also helped in observing them during discussion. This method of data collection helped in understanding their level of knowledge and perception in an informal manner. Although the planned sample size was 12 for AWWs in-depth interviews, saturation was reached after 10

interviews as no new information was coming out, while for FGDs saturation was reached after conducting 5 group discussions.

The tools used for data collection were focus group discussions (FGDs) and key informant interviews. These tools helped in judging the sensitivity of respondents about the importance of early phase nutritional requirements of children and its impact on children's physical and cognitive development in future life; which is linked with [Anganwadi worker] individual and community perspective (Guion, Diehl & McDonald, 2011:1). The interviews and FGDs were facilitated by the researcher, while the notes were taken by the co-researcher. Some of the observations were noted by the researcher himself.

All the interviews and FGDs were audio recorded and then transcribed verbatim in the local language Hindi. All Hindi transcriptions were then translated into English. In addition, field notes were taken during the whole process. The expressions of the respondents were observed during the focus group discussions.

### **3.5 Data analysis**

Once the primary data was collected, the data was transcribed verbatim in Hindi and subsequently translated into English. The data was coded and manually analysed for the keywords and language based connection to understand the perception which reflects in the answers. The information was analysed using thematic content analysis. The same procedure was used for the key informant interview and also for the FGDs.

### 3.4 Rigor

Rigor was maintained through triangulation of data collection methods and data sources. Different methods of data collection; namely focus group discussions and in-depth individual interviews and cross checking the collected data from each source were applied during the data collection process for method's triangulation and validation. At the end of each IDI and FGD, the researcher, co-researcher and community workers cross checked and verified the



2. Jharkhand state is also experiencing internal struggles and conflicts; therefore finding functioning AWCs was a difficult task. In addition finding willing respondents was another challenge throughout the study.

3. The findings of the study cannot be generalised to the other states in India due to the nature of the study. However, the study begins to illustrate some of the challenges experienced in the AWCs.

### **3.6 Ethical considerations**

Ethical approval was obtained from the Research and Ethics committee at the University of the Western Cape. Prior to the study permission was sought from the District Welfare Officer to visit the AWCs in order to conduct the necessary interviews. All participants were given the study information sheet prior to participating in the study. The participant information sheet was explained in detail to the participants, they were informed about the proposed study, its objectives, and then requested to participate. Participants were notified that participation was voluntarily and confidentiality was assured. However, all participants of FGDs were further informed about the importance of keeping the group discussions confidential. In an effort to maintain confidentiality, a confidentiality binding form was provided to the members of FGDs (*Annexure-5*). Interviews were conducted only after participants had signed the consent forms. For focus group discussions a verbal consent was taken after explaining the details of the research and purpose of the study as explained during in-depth interviews. The study did not have any major constraints from either side due to a good rapport and frequent interaction of the researcher with the administration from where a verbal permission was taken followed by telephonic calls to all the participants.

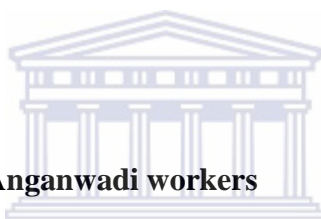
## CHAPTER 4: FINDINGS OF THE STUDY

For the purpose of the study, in-depth interviews were conducted with 12 Anganwadi workers. The data obtained from them was triangulated and validated through interview with key informants and focus group discussion with Mother Committee members. The data analysis yielded findings that explained the issues pertaining to malnutrition and the work of Anganwadi Worker, which were at times disturbing.

### 4.1 Respondent Profile

#### 4.1.1 Anganwadi Worker

The in depth interviews were conducted with 12 Anganwadi workers who had diverse backgrounds as shown in table 3.



**Table 3: Characteristics of the Anganwadi workers**

Sl. No.	Age (years)	Education	Marital status	Work experience
<b>AWW 1</b>	43	Senior Secondary	Married	15-20 years
<b>AWW2</b>	49	Secondary	Married	20+
<b>AWW3</b>	36	Senior Secondary	Married	15-20 years
<b>AWW4</b>	65	Primary	Widowed	20+ years
<b>AWW5</b>	33	Secondary	Married	< 5 years
<b>AWW6</b>	48	Secondary	Single	20+ years
<b>AWW7</b>	33	Senior Secondary	Married	15-20 years
<b>AWW8</b>	40	Primary	Married	20+ years
<b>AWW9</b>	39	Under Graduate	Married	15-20 years
<b>AWW10</b>	36	Secondary	Married	15-20 years
<b>AWW11</b>	43	Senior Secondary	Widowed	15-20 years
<b>AWW12</b>	47	Secondary	Married	20+ years



Table 3 shows that all the respondents were literate with more than 10 years of education. Only two of the AWWs had primary level education. Of the 12 AWWs interviewed, only 5 of them had completed more than 20 years of work in the Anganwadi, whereas six of the respondents had work experience between 15 to 20 years. Only one respondent had less than five years of work experience. All respondents were older than thirty years; nine were married while two were widowed and one was unmarried. It was assumed that AWWs who were more educated and had more experience will have a better understanding and thereby better service delivery, however the same was not found in the study.

#### 4.1.2. Characteristics of Child Development Project Officer and Supervisors

**Table 4: Characteristics of CDPO and Supervisors**

Key Informant	Age	Marital status	Education	Duration of employment
CDPO	37	Married	MA <sup>2</sup>	13 years
Supervisor 1	45	Married	MA, Bed <sup>3</sup>	23 years
Supervisor 2	53	Married	MA	30 years

All the three key informants had post graduate qualifications with at least a Master's degree. The duration of employment for all key-informants was more than 10 years; however, the CDPO was new as compared to the supervisors. She [CDPO] also had less work experience than the supervisors. Average work experience of all of them was 22 years.

<sup>2</sup>MA relates to

<sup>3</sup>MA, Bed relates to

### **4.1.3. Mothers committee members**

All members of the mothers committee who participated in the focus group discussion were mothers of children attending the Anganwadi centre. The members came from the catchment area of the Anganwadi centre. There are rules that Government has devised for the selection of the mother committee members (e.g. they must be the mothers of children attending the Anganwadi centre , must be elected people's representative and the Anganwadi worker is likely to become executive secretary of that committee) . The mother's committee group had mixed aged group mothers. Some of them were literate and some were not.

## **4.2 Perception and understanding of AWWs and mothers about ICDS programme components**

ICDS is the flagship programme for nutrition supplementation for infants, young children and pregnant mothers in India. The backbone of ICDS programme are the thousands of frontline workers (Anganwadi workers) who work with a certain population group. Therefore, the success of this programme rests on the efficiency and effectiveness of frontline workers in delivering the services. It has been observed that the perception of the importance of the services plays a major role in delivering the services. The frontline worker give more importance to the services which she perceives as more important than the services which she may not perceive as important and interestingly this may not be in line with the programme priority of ICDS. The study tries to describe and understand how the perception of the Anganwadi workers' and mothers' play a bigger role in service delivery and altering nutrition status of children. The study also tries to find out systemic programmatic issues on the service delivery and programme implementation.

#### 4.2.1 Anganwadis' understanding of the services provided at the centres

All the Anganwadi workers interviewed were able to recall the services provided in the programme. However the respondents did not have a clear idea about the target group for these services and the purpose of these services. Most of Anganwadi workers identified pre-school education, immunization, nutrition- both supplementary & take home ration, health check-up of children, mothers and adolescent girls and referral services as the main components of the service delivery package. Out of the 12 Anganwadi workers who were interviewed, only one mentioned growth monitoring of infants and children as a service component of the service package.

Although Anganwadi workers knew the service package, majority were unsure about why these services were important. They only mentioned that the services will improve health and nutrition; however they could not explain how these services will improve health. Seemingly their inability to explain the purpose of their services is linked to training quality and the insufficiency of trainers. In this case, the trainers were the supervisors who failed to impart adequate knowledge to Anganwadi workers. The following comment illustrates why Anganwadi workers have a poor understanding of the purpose of the services they provide:

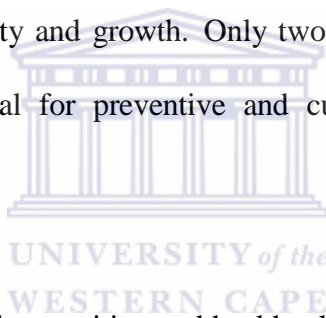
*“When I [we] asked some questions to the supervisor she says do what has been told only. It is not important to know why this is important. [You] focus on your duties. In one of the trainings in Itki, one of my colleagues [Anganwadi worker] from Hetha [nearby village] asked [question to the trainer] about why we are providing these services? He [the trainer] said – do what is told now, what will happen if you know the reason. We will see it later. Again training will take place”.*

Majority of the respondents linked nutrition services with poverty. The AWWs viewed the

services provided as strategies to combat hunger because of poverty, as commented by one of the Anganwadi workers:

*“There is a high level of hunger in my AWC area. People do not have sufficient food and women get very little to eat as they think the man needs to eat whatever is available as he goes out and work. Most of the women do not get proper meal every day”.*

Most of the AWW mentioned that immunization protects children from life threatening diseases. Eight respondents mentioned that immunization helps in the growth of children, while four respondents could only name the types of immunization done at the Anganwadi centre but could not link immunization to morbidity and growth. Only two respondents were able to link the health check up with the referral for preventive and curative services and for nutrition rehabilitation.



Most of the respondents reported that nutrition and health education were provided as and when required. Four respondents stated that health and nutrition education and counselling services help the mothers to take good care of their children. Only three respondents could name the different education and counselling services that are supposed to be provided in the AWC.

*“The mothers do not have knowledge and time to take care of children. Also they do not know how to educate them [children]. I [we] provide them counselling on health and counselling during pregnancy”*

This gives a proxy idea of the level of functioning of the centre and the general understanding of the AWW etc.

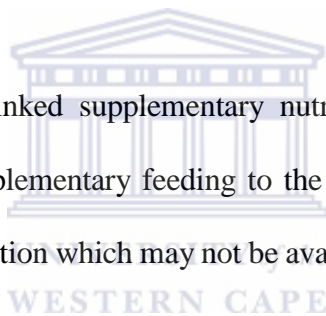
## 4.2.2 Understanding of the link between malnutrition, growth and development

### Anganwadi workers

Most of the respondents could not link the services with the growth and development of the children. Only one respondent mentioned a link between nutrition and mental growth of the children. She commented as:

*“If the infants do not get enough food, then they become weak and fall sick all the time. When they come to the AWC the weak children keep crying and cannot grasp things like other children. I think not getting enough food and weakness makes them slow learners”*

Only two Anganwadi workers linked supplementary nutrition with physical and mental growth and saw it as supplementary feeding to the main food intake of the children to provide additional nutrition which may not be available in children's diet.



### Mothers

#### *Type of services provided*

Most of the mother's committee members reported receiving only three services namely immunization, take home ration and health check-up regularly from the basket of six services. Mothers further stated that health education was only delivered during village health and nutrition days and take home ration days. Furthermore, the content was generally confined to exclusive breastfeeding and immunization; while education on the nutritional requirements of the children was not included.

Despite the gaps in service provision, mothers thought that the functioning of Anganwadi centre was satisfactory as it provided private space for women to communicate with each one in the village setting along with providing few services.

*“In villages we do not have any private space to discuss separately. We get that space of Anganwadi to talk freely to each other apart from getting the services. The space is our own space on the day”.*

Mothers see Anganwadi as a platform to discuss women’s issues in a protected environment, which otherwise they do not have in their villages.

#### *Concerns about the services provided*

All focus group discussions (FGDs) with the mothers raised a concern that none of them had any information about the financial and supply status of food grains of the AWCs. They mentioned that Anganwadi workers generally do not share such information with the mothers or mothers’ committee. The mothers’ committee in all the FGDs showed concern about the quality of the services provided in the Anganwadi centres. The discussion with the mothers’ committee revealed members expectations about the frequency of services such as pre-school education, immunization and supplementary nutrition and take home ration etc.; they mentioned that such services should be provided in the Anganwadi centres regularly. They also expect that the supplementary nutrition and take home ration should be of better quality compared to what is presently supplied. However, mothers could not comment about the quality of service and service package as they were not aware of the minimum standards for service delivery as prescribed under the ICDS. The mothers group were not aware about their entitlements and what was expected from them and therefore they were not interested in participating and coming to the centres.

As one responded put forward,

*'She (AWW) just tells us, do this, do that etc.? She does not explain anything to us. She gets money but we don't get anything, it is just a waste of time for us'.*

Most mothers thought that Anganwadi workers use the Anganwadi centres as their personal possession and do not show enough concern about the needs of the mothers. This was identified as one of the deterrents in accessing the services.

#### **4.2.3 Perceptions about the ICDS programme and importance of nutrition in 0-3 years and its long term impact**



*“In villages there is not enough food at home due to poverty and women do not get adequate nutrition. Also women do not want to go the hospital for antenatal and health check-up during pregnancy. These services are available from the Anganwadi centre on monthly basis during the immunisation day and village health and nutrition day. So targeting actually helps in improving their situation”.*

All the respondents said that the long term impact of the services offered on development and growth of child is not known to them.

All the respondents were aware that the services for the children were categorized into 0-3 and 3-6 years age group, but were not aware about the logic behind this categorization. Most of the respondent said that it is not possible for the AWW to take care of children of 0-3 year's age group at the AWC. They believed that children between the ages of 0-3 years should be with the mother and the AWW should only assist the mothers to better take care of the children. Only one respondent spoke about the importance of growth monitoring for the 0-3 years age group. However, majority were unable to link growth monitoring in the age group of 0-3 years and its long term effect on malnutrition; physical, mental and cognitive development of children. In fact most of the respondents could not foresee how malnutrition in the 0-3 year's period can affect adult life. Eight respondents thought that nutrition deficiency in 0-3 year age group may lead to physical disability and even polio. In the case of mental and cognitive development most of the respondents thought that malnutrition may lead to mental retardation. Only one respondent was able to explicitly link malnutrition to slow mental and cognitive development. She said that,



*“If the child is malnourished, he will become weak and will be less intelligent. In his studies he will be weak. He will not be able to think properly and rationalise things.”*

#### **4.2.4 Perception of mothers on malnutrition in infants and its long term impact**

The members of Mother’s Committee had a basic idea about malnutrition and its impact on physical development of children. They were aware that if the children did not get adequate food then they will be physically weak and will not show signs of cognitive development. They also knew that by providing nutritious food to children some of this can be managed, however, they could not sufficiently foresee the long term impacts of the nutrition that is required to accomplish the childhood milestones at appropriate time. Seemingly their lack of understanding could be attributed to AWW who do not provide them with information about nutrition and one of the participants commented as follows:

*“Nobody tell us anything. Only on village health and nutrition day they tell us something in brief as AWW is always very busy with paper work. We keep wondering why our children keep falling sick and do not have good health. They just give us pulses, sugar, oil and send us home without saying anything”.*

Despite not being informed by AWW, mothers’ group identified the Sahiyya’s [ASHA’s] as the front line community health worker accredited by health department to provide basic health and maternity services to the community. They saw Sahiyya as the link between health facility and community, as well as the main source of information for the mother’s group.

### 4.3 Programming and supervision of the scheme

Understanding the program and supervision mechanism of the scheme is important as the scheme integrated the hands on training of the grassroots workers in its monitoring mechanism. The supervisors are supposed to provide supportive supervision and on-job training to the AWW so that they can perform better in the job, maintain programme quality and programme efficiency. Therefore it is important to understand the present state of the monitoring and supervision and how it shapes the perception of the frontline workers on the programme objective, quality and programme delivery.

#### *Child Development Project Officer and Supervisors*

CDPO's and Supervisors were very clear about their roles and responsibility regarding the programme. They saw themselves as the authority which oversees the operations of the entire programme in a specific geographic area. They mentioned that their role is to ensure that the norms are followed, prescribed activities take place and that there is convergence of service providers at the Anganwadi level. In addition, the CDPO is also said to organize regular monthly cluster and sectoral meetings with different level of programme staff. She also conducts routine monitoring of the schemes. They provided information about how the programme is being implemented and managed and how the Anganwadi worker interacts with the target groups.

The supervisors saw themselves in a supervisory role [mostly] and as a mentor for the Anganwadi workers. They saw themselves as people who provide day to day monitoring and guidance to the Anganwadi workers in managing various components of the schemes. They also viewed themselves as the link between the CDPO and the Anganawadi worker.

#### 4.4 Training gaps and programme implementation

Almost all Anganwadi workers reported that they do require more knowledge and training. Poor quality of trainings was reported by almost all the Anganwadi workers. Many Anganwadi workers reported that they were not answered when they asked some basic questions during the training. One of the Anganwadi workers said:

*“Perhaps the trainers were not fully equipped as trainers”.*

Some AWW reported that even basic concepts of child health and nutrition were not covered during the training. They mentioned that the training entirely puts emphasis on the provision of services and management of the centre. As one of the Anganwadi worker narrated her experience as:

*“We were trained [only] in the services that are to be provided from the centre. We were told to do only things [services or activities] they taught to us in training. When some of us wanted to know the reason of providing these services, we were told that we will be trained later on these”.*

## CHAPTER 5: DISCUSSION

This mini-thesis was intended to assess and understand the perceptive knowledge of Anganwadi workers, the members of the mother's committee and the supervisors, who altogether have been entrusted the task to ensure nutritional security of children in villages. The main finding of this study is that the AWWs hardly have knowledge on long term impacts of malnutrition as well as conceptual/scientific reason behind the importance of different AWC services and skills of the Anganwadi workers in implementing the ICDS programme, which could be attributed to poor training.

Anganwadi workers are the first interface between the mothers and child health related services. Therefore, it is not only important but also necessary that the Anganwadi workers are able to give appropriate and accurate information regarding the package of care offered in the ICDS programme. The services provided in the centres were known by AWWs suggesting that they were familiar with the different components of the service package. However, many could not explain why these services were important. These findings are in accordance with several studies which reported that Anganwadi workers were aware of nutritional services but were unable to explain it in terms of its importance (Manhas, Dogra & Devi, 2012; Parmar et al., 2015). This is an illustration of knowledge gaps that exist in the programme. Poor understanding on why services are important could be attributed to how they were trained and what was covered in the training.

Despite their knowledge about services, Anganwadi workers (AWW) are expected to provide appropriate and accurate information to the mothers about growth and development of the children. Interestingly findings of this study suggest that AWWs lacked knowledge and skill to implement the ICDS programme. Anganwadi workers in this study lacked the basic

understanding of the principles and the guiding values governing the programme and were merely following the programme manuals and officials' instructions while carrying out the programme. The poor implementation of the programme could be attributed to poor training and lack of refresher courses or in-service training to further re-enforce the messages regarding the programme. Curtale and colleagues have suggested that initial training should be followed by "in-service training"; they further stated that a minimum of three days refresher training in a year would result in improved quality of services (Curtale et al., 1995).

The lack of knowledge around critical issues regarding growth and development of the child could be detrimental. AWWs in this study struggled to link growth and development to long-term impacts in future life of a child. This inability to link the programme components (Haines et al., 2007) with the nutrition programme objectives has major implications for the target group in terms of nutritional status outcome. Firstly the target group may not receive quality services as envisaged to ensure that the children and mother get proper nutrition as prescribed. Secondly, the mothers and community may receive insufficient knowledge which may further aggravate the problem of malnutrition. Studies have shown that nutrition plays a vital role in physical, emotional and mental growth of children (Elwan, 1999; Grantham & Ani, 2001).

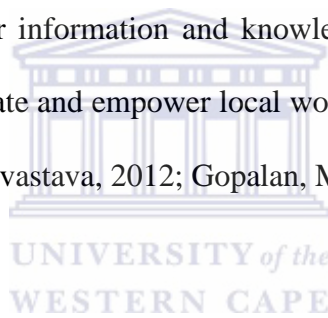
Interestingly, Anganwadi workers' knowledge about the immunization and preschool was clear. The differential understanding can be attributed to the shift in program indicators which are measurable and therefore can be easily administered. In addition, their understanding can be due to the supervisors giving more emphasis on managing the centre, preschool education, immunization and giving out supplementary nutrition and take home ration. This therefore shows that there is a need for defined roles and tasks so that the AWWs work is better

organised. ASHA workers study in Rajasthan reported a similar finding where in child immunisation programme the immunisation prevalence improved because the tasks were shifted to ASHA workers with clearly defined role and task (Rao, 2014).

Poor training was identified as one of the factors that contribute to lack of knowledge among Anganwadi workers. This then poses questions related to Anganwadi worker's training and the organizational training structure of ICDS. Over the years ICDS training programme has failed to prioritize the training schedules, training structure and training methods for the Anganwadi workers. The training was done in large batches with limited individual attention to trainees. The duration of the trainings was very limited and proper assessment of knowledge was not done. The trainings mostly focused on managing the Anganwadi centre and provision of certain services though they receive a total of 47 days Induction, Refresher and Job Training for 8 days, 7 days and 32 days respectively (MoWCD, 2009). This could have an impact on the quality of service delivery as the Anganwadi worker will give more focus to the services emphasized during the training, thus neglecting other services which may also be crucial.

The ICDS programme designers have envisaged and included the concept of counselling and health education in the programme. However this study shows that the service providers failed to provide these afore mentioned services adequately. The Anganwadi workers were not able to give proper information to the mothers about the long term effects of malnutrition or nutrition deficiency on children's physical, emotional and mental development. But interestingly the mothers have a better understanding of the issues than the Anganwadi workers. This relatively higher level of knowledge can be attributed to the more eagerness and receptiveness for the information which may have resulted in giving a better life to their children. Mothers are more eager to learn and share information from various sources which

they think are important than solely rely on the information provided by the Anganwadi worker. In addition the work of the Sahiyya [ASHA] may have contributed to mothers' understand of maternal and child issues relating to nutrition. Sahiyya's were trained by health department on basic health and nutrition issues. As a community level worker she spent more time with the mother than AWW. This is very interesting as health education is not Sahiyya's main domain of work. They were trained to identify malnourished children, refer and link them to the nutrition rehabilitation centre run by the health department (MoHFW, 2006). This implies that although it is the duty of Anganwadi worker to address nutritional awareness, similar messages have been passed on by ASHA workers. Therefore a comparative analysis of the information source and sharing process for the mother may help ICDS to adopt and use a more concrete and mass transmission model for information and knowledge; the way potential shown by ASHA workers who could motivate and empower local women on community health strategy (Shrivastava & Shrivastava & Shrivastava, 2012; Gopalan, Mohanty & Das, 2012).



Health education was one of the services provided in the AWC. However, education sessions occurred on certain days when there was an event. This illustrates poor scheduling of education sessions and that these sessions are limited, thus may only reach fewer women. Such an approach towards education sessions could be attributed to numerous factors, such as, work overload or lack of confidence to provide education or counselling sessions. In a study by Patil (2013) that sought to assess knowledge of AWWs and problems faced by them while working it came up that work overload, insufficient honorarium and inadequate supervision were some of the problems that were faced by Anganwadi workers.

Although services provided were deemed satisfactory by mothers, they also raised concerns. The quality of services, the inability of Anganwadi workers to clarify their roles issues raised

by mother and lack of transparency about their activities within the centre, such as, the financial and supply status of grains within the centres were some of the concerns. The mothers committees are required to meet at least once in a month and discuss issues such as health, nutrition and pregnancy etc. so that a common and correct understanding develops amongst them which can be spread through the peer learning. It was never seen or envisaged under the programme that mothers can have any monitoring and supervisory role in a government scheme and they can monitor functioning of government official. This shows that the community has an interest and could play a role in the ICDS programme.





## CHAPTER 6: RECOMMENDATIONS AND CONCLUSION

### 6.1 Recommendations

1. Training should be provided to Anganwadi workers placing proper emphasis on areas that have been identified as gaps. Training could include the philosophy and rationale behind the design of the programme and service package. In addition, basic scientific rationale behind why components such as nutrition are important and their impact on later life should also be included.

There should be special training camps for the AWWs at regular intervals to reinforce the ICDS programme goals and also to build scientific knowledge about each programme component of the schemes. This orientation can be done at a cluster level so that optimum number of AWW can attend the orientation. The course curriculum and the messages should be easy to understand, in local language and well as easy to implement.

2. Community level Orientation and Behaviour Change Communication (BCC) programmes should be given more emphasis. Community level BCC can help in reducing various malpractices related to nutrition and food behavior and can help building communities and individual knowledge about the proper nutritional practices amongst mothers and other community stakeholders. It can also help in increasing the community nutrition standards by changing the perception of the mothers.
3. Apart from the initial training, the ICDS programme should incorporate frequent refresher training to Anganwadi workers to re-enforce good practices and appropriate knowledge on developing counseling skills and capacities so that the Anganwadi worker can provide basic

counseling services to mothers. Furthermore, counseling as a key component for training should be made regular feature in the refresher trainings.

4. The ICDS should ensure that Growth monitoring and counseling services are provided at each Anganwadi center. The Women and Child Development Department should ensure that each Anganwadi center has all the necessary resources to implement the services such as weighing machines and growth monitoring charts. In addition the Anganwadi workers need to be trained in growth monitoring
5. Community participation, ownership and monitoring of ICDS programme should be ensured through effective involvement of Panchayats (panchayats are the local level governance institutions for which members or representatives of panchayats are elected by the community in every five year). Mechanisms that will facilitate community participation need to be devised and communities through organized structures should be provided with some power to allow them to take necessary action for better service delivery and better management of Anganwadi centers. Community monitoring committees can be formed with members from different stakeholders for regular management, monitoring and advocacy about the programme.
6. Supervisors and communities should ensure that Anganwadi workers are actually providing nutrition services at the community level. In addition supervisors of the programme should ensure that services being provided are also used properly by the target groups. Community should also ensure that all the committees like mothers committees are formed within the institutional structure are present and members are aware about their roles and

responsibilities. They should also ensure that the front line service delivery facilities works in synchronization and have good working relationship amongst them.

## **6.2 Conclusion**

From the findings of this study it can be concluded that there is a general lack of knowledge about programme components amongst the Anganwadi workers and mothers. The ICDS programme has failed to develop an understanding about the service components, its importance and consequences for malnutrition. Nutrition education, health and family counselling, and community discussion are not taking place in the Anganwadi centre as expected thus showing that there are missed opportunities. In addition this has resulted in mothers and other stakeholders being deprived of important information which may have improved children's lives, thus leading to improved child survival and cognitive development.

There is an urgent need to evaluate ICDS training provided to Anganwadi workers as well as constant retraining to reinforce critical messages. Furthermore the study has highlighted a need to develop soft skills and knowledge, such as counselling skills and conceptual understanding on malnutrition among Anganwadi workers. Such inputs to the ICDS programme in the context of the Jharkhand state is crucial as almost half of the population is undernourished and its developmental milestone depends upon such interventions.

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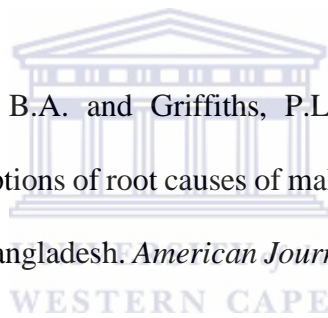
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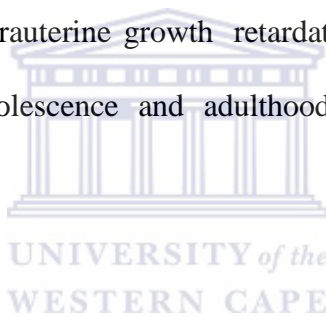
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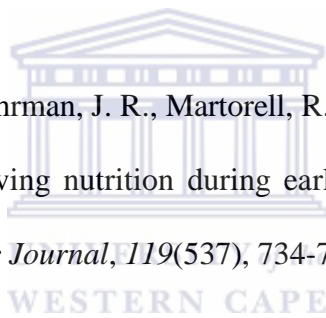
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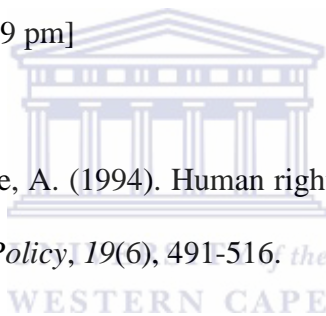
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## **Annexure 1: Participant Information Sheet**

**TITLE OF RESEARCH:** : Exploring the knowledge and practices of Anganwadi workers and mothers on importance of nutritional care of a child during the first 3 years of life, India.

Dear Participant,

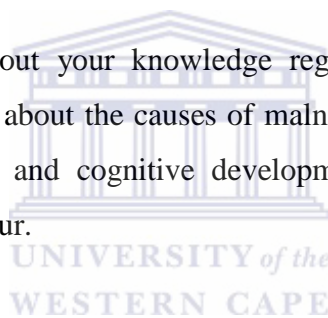
I am a Masters student in Public Health at the University of the Western Cape. As part of our curriculum requirement, we are supposed to conduct a mini-thesis. I request you to kindly take part by giving your valuable suggestions as answers to the research project.

### **What is this study about?**

This is a study about the services rendered at the Anganwadi centres and the perceptions and knowledge of the Anganwadi sevika to tackle the problem of malnutrition. The outcomes of the study would be integrated in to the current training curriculum and devise appropriate message that would convey the impact of malnutrition during 0-3 years in the entire life span of a child.

### **What will I be asked to do if I agree to participate?**

You will be asked question about your knowledge regarding the services given at the anganwadi centre and perception about the causes of malnutrition and its impact in a child's life on her/his physical, mental and cognitive development. The interview will last for approximately 45 minutes to 1 hour.



### **Would my participation in this study be kept confidential?**

We will do our best to keep your personal information confidential. To help protect your confidentiality, your name will not appear with your viewpoints. In case of verbatim recording a proxy name shall be used. I will keep away all the documents, voice recorder etc. from outside source and shall destroy the evidence after the research is completed.

I shall keep all records and tapes of your participation, including a signed consent form which I will need from you should you agree to participate in this research study, locked away at all times and will destroy them after the research is completed.

### **What are the risks of this research?**

There are no known risks associated with participating in this research project. There are also no costs involved in participating in the study except for the time you will be spending in the group discussion or interview.

**What are the benefits of this research?**

As a participant to the research you will not get any direct benefits in terms of cash or kind from the study but the information you provide will help the research study which will give an insight to new dimensions to address causes of malnutrition. There are no cost repercussions from your end; all you have to spend is your valuable time and information. The interview will be done at the location which is most suitable for you, thus not incurring any extra costs for transportation.

**Do I have to be in this research and may I stop participating at any time?**

Your participation in this research is completely voluntary. At any point in time you are free to withdraw from the study. Untimely withdrawal from the study will not involve any penalty or financial loss apart from loss of valuable information which you would have otherwise provided for the study.

On the other hand once you decide to participate in the study, you will be required to sign a consent form. But you are given the freedom to withdraw from the study at any point in time and choose which questions not to answer. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify

**What if I have questions?**

This research is being conducted by Mahto Haldhar from the School of Public Health at the University of the Western Cape. If you have any questions about the research study itself, please contact Mahto Haldhar, Cell phone: +91 9431391342, Telephone at work: +91 651 2245114.

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

**Director:**

Prof Helene Schneider  
School of Public Health

University of the Western Cape

Private Bag X17

Bellville 7535

[hschneider@uwc.ac.za](mailto:hschneider@uwc.ac.za)

**Dean of the Faculty of Community and Health Sciences:**

Prof Jose Frantz

University of the Western Cape

Private Bag X17

Bellville 7535

[jfrantz@uwc.ac.za](mailto:jfrantz@uwc.ac.za)



**Annexure 2: Informed Consent Form- Individual Interviews**  
**(Anganwadi workers and key Informants)**

**Title of Research Project:** : Exploring the knowledge and practices of Anganwadi workers and mothers on importance of nutritional care of a child during the first 3 years of life, India.

The study has been described to me in language that I understand and I freely and voluntarily agree to participate.

My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.



Participant's name.....

Participant's signature.....

Witness.....

Date.....

### Annexure 3: In-Depth Interview Guide -AWW

<b>A :Interview Schedule for Anganwadi Worker</b>			
<b>General Profiling of the AWW District:</b>		<b>Block:</b>	
<b>AWC<sup>4</sup>:</b>		<b>HSC<sup>5</sup>:</b>	
<b>Identification No:</b>			
<b>Demographic details of Anganwadi Centre</b>			
<b>Total No. of Households</b>		<b>Total Population</b>	
<b>No. of children below 3 years: _____</b>		<b>No. of Pregnant Women :</b>	
Male:	Female:	No. of Lactating Women	
<b>No. of children -3 to 6 years: _____</b>		No. of Adolescent Girls	
Male:	Female:		
<b>A01</b>	What is your age?	<25/.....1 25-30/.....2 30-40/.....3 >40 years.....4	
<b>A02</b>	How long are you in service as an AWW?	<5/.....1 5-10/.....2 10-20/.....3 >20 years.....4	
<b>A03</b>	What is your current marital status?	Single/.....1 Married/.....2 Widowed/.....3 Divorced or /.....4 Separated.....5	

<sup>4</sup> AWC- Anganwadi Centre

<sup>5</sup> HSC- Health Sub-Centre

<b>A04</b>	Do you have a child less than 5 years?	Yes.....1 No.....2	
<b>A05</b>	What is your religion?  <i>Circle only one</i>	Hindu.....1 Muslim .....2 Sikhs.....3 Christian .....4 Others .....5 Specify _____	
<b>A06</b>	What is your caste/tribe?  <i>Circle only one</i>	Scheduled caste.....1 Scheduled tribe.....2 backward classes( specify).....3 Others (specify).....4 Do not know. 5	
<b>A07</b>	What is the highest level of education you have completed?	Class 12/ Diploma/Degree/Any other (Specify)	
<b>A08</b>	Distance of AWC from your residence		

### B. About works

B1. What are the services being offered by your Anganwadi Centre?

.....

B2. Why do you think these services are important for mothers and children?

.....

B3. How these services help in the growth and development of children (with special reference to children below 3 years?)

Services	Responses
1 Supplementary Nutrition	
2 Immunization	

3	Health Check-up	
4	Referral Services	
5	Pre-School Education	
6	Nutrition & Health Education	

B4. Why do you think that the services are categorized in to 0-3 years and 3 to 6 years?

.....

B5. What are the effects on the future life of a child if she/he has been malnourished during first three years of childhood?

1. On physical health:
2. On mental and cognitive development:

B6. What do you think are the reasons for including pregnant woman in the program?



.....

B7. What are some of the challenges in running the services?

.....

**C. Supports received from Community**

C1. Describe your relationship with the mother's committees? (Support, supervision etc.)

.....

**D. Support from the system**

D1. Describe your relationship with the immediate supervisor? (Support, supervision, etc.)

.....

D2. Describe the kinds of support that you receive from other stakeholders? ASHA and ANM, other government departments

.....



**E. Trainings**

E1. Describe the kind of training that you have received since you started working as an AWW?

.....

E2. Were the trainings useful and why?

.....

E3. What other trainings you think will be needed to help you deliver services effectively?

.....



## Annexure 4: In-Depth Interview Guide- CDPO and Supervisors

### A. General profile

Name:

Age:

Sex:

Marital Status:

Education:

No. of years in Service

### B. Roles and Responsibilities- with reference to providing support to AWWs in delivering services.

B1. What is your overall role to ensure that the Anganwadi worker delivers services including counselling to fulfil the objectives of ICDS? Would you please elaborate it?

-----

B2. How do you interact with the Anganwadi workers?

-----

B3. How knowledgeable are AWW about their role in child's future development? Describe the processes that are taken to ensure that AWW's knowledge and skills are up to date?

-----

B4. How have AWW transferred their knowledge to mothers regarding care of children 0-3 years of Age?

-----

B5. How can knowledge of nutrition and its importance during the critical years (0-3 years) could be strengthened amongst AWWs in your block?

## Annexure 4: Focus Group Confidentiality Binding Form

**Title of Research Project:** Exploring the knowledge and practices of Anganwadi workers and mothers on importance of nutritional care of a child during the first 3 years of life, India.

The study has been described to me in language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way. I agree to be audio-taped during my participation in the study.

I also agree not to disclose any information that was discussed during the group discussion.

Participant's name.....

Participant's signature.....

Witness's name.....

Witness's signature.....

Date.....



## Annexure 5: Focus Group Discussion Guide-Mothers Committee

### A. General Profiling of the Committee

A1. Committee formed in .....(year)

A2. No. of present members

### B. Role of the committee

B1. According to your knowledge, could you say that why the committee was constituted?

B2. How does each one of you see your role as a committee member?

-----

B3. Describe the general issues discussed in the mothers committee meeting? Who from the system are normally present in the meetings and how often?

### C. Knowledge of the committee members

C1. Describe what do you understand by malnutrition?

-----

C2. What do you think is the impact of malnutrition on children 0-3 years?

C3. What are the long-term physical and cognitive effects of malnutrition on children?

-----

C4. Describe how feeding is done for children 0-6months and 6 months and older?

-----

### D. Services

D1. What services do you avail from the ICDS and has the programme been useful?

-----

D2. What do you think about the functioning of the ICDS?

-----

D3. Do you think that ICDS is helpful in children's development and in what ways?

---

D4. Describe the kind of counselling services you receive from the Anganwadi worker and how often?

---

D5. Are there any constraints in running the services at Anganwadi centre?

---



## ANNEXURE 6: Study APPROVAL



OFFICE OF THE DEAN  
DEPARTMENT OF RESEARCH DEVELOPMENT

31 October 2013

### To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by:  
Mr H Mahto (School of Public Health)

Research Project: Exploring the knowledge and practices of Anganwadi workers and mothers on importance of nutritional care of a child during the first 3 years of life, India.

Registration no: 13/9/24

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study.

UNIVERSITY of the  
WESTERN CAPE

A handwritten signature in black ink, appearing to read 'P. Josias'.

*Ms Patricia Josias  
Research Ethics Committee Officer  
University of the Western Cape*

Private Bag X17, Bellville 7535, South Africa  
T: +27 21 959 2988/2948 . F: +27 21 959 3170  
E: [pjosias@uwc.ac.za](mailto:pjosias@uwc.ac.za)  
[www.uwc.ac.za](http://www.uwc.ac.za)

A place of quality,  
a place to grow, from hope  
to action through knowledge