COMPLEMENTARY FEEDING PRACTICES AMONG MOTHERS HAVING 6-24 MONTHS CHILDREN IN POKHARI VDC OF DOTI DISTRICT

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Letter of Recommendation

This is to certify that **Mr. Vikash Deuja** has completed this dissertation entitled "Complementary Feeding Practices Among Mothers Having 6-24 Months Children in Pokhari VDC of Doti District" under my supervision for partial fulfillment of the requirement for Master of Art in Anthropology. I therefore recommend this dissertation for final approval.

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LETTER OF APPROVAL

The thesis entitled **"Complementary feeding practices among mothers having 6-24 months children in Pokhari VDC of Doti district"** submitted to the Department of Anthropology, Prithvi Narayan Campus, Pokhara by Mr. Vikash Deuja has been approved for the partial fulfillment of the requirement for Master's Degree of Arts in Anthropology.

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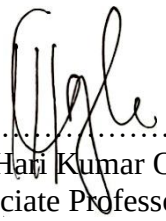

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Vikash Deuja

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LIST OF ABBREVIATIONS

CBS	:	Central Bureau of Statistics
CCFP	:	Commercial Complementary Feeding Practice.
DHS	:	Demographic Health Survey.
DOHS	:	Department of Health Service.
FGD	:	Focus Group Discussion.
HDI	:	Human Development Index.
KII	:	Key Informants Interview.
MDG	:	Millennium Development Goals
NDHS	:	Nepal Demographic Health Survey
SD	:	Standard Deviation.
SDG	:	Sustainable Development Goals
SHAS	:	School of Health & Allied Sciences
UNICEF	:	United Nations International Children Emergency Fund.
VDC	:	Village Development Committee.
WFP	:	World Food Program
WHO	:	World Health Organization.

ABSTRACT

This descriptive study was carried out as a partial fulfillment of the degree of Masters of Anthropology. The objective of the study was to find out the level of knowledge & practice of complementary feeding practices. Semi-structured interview questionnaire was used to collect data from total 105 mothers. The study findings revealed that four out of ten (38.09%) respondent mothers were of 25-30 years' age group.Half of respondents belong to Chhettri (59.2%) by ethnicity, majority (97.1%) were Hindu by religion, nuclear family six out of ten (60.9%) by family type.

Majority of respondents (81.91%) of the mothers were aware about the necessity of giving additional food to the child and two out of ten (20%) knew it differs according to the age of the child. Majority of the mothers (80%) weren't aware that 6 months was the right period of time to start additional food. Only few 20% of the mothers said correctly the amount of food that can be given to the 6 months' child. Complementary feeding practices like amount of food given correctly to the child, frequency,& preparation of sarbottampitho by respondent mothers in Pokhari VDC were 20 percent, 32.38 percent & 16.19 percent respectively. Three fourth (74.29%) of respondents were found continuing breast feeding during the study.

Uses of boil water during preparation of food were very few (8.57%) and hand washing practices before feeding were found 21.91 percent only. Similarly, the study revealed that majority (84.76%) of respondent mothers were married before the age of 20 and most (80.95%) became pregnant for the first time before the age of 20 years in Pokhari VDC. Family type (p-value=0.001) and correct level of knowledge of mothers about preparing sarbottampithokolito also showed positive relationship whereas family type (p-value=0.001) too showed positive relation with correct level of practice of mothers about food quantity given at main meal the day before. It was also found in this study that family type (p-value=0.001) with correct level of practice of mothers about hand washing with soap water before preparation of food showed positive relationship.

This study may not reflect the scenario of the country but several such researches carried out in different social and cultural contest in Nepal can reflect the scenario of problem. Wrong knowledge regarding complementary feeding practices among

mothers still persist and awareness level to various crucial factors important during complementary feeding was found to be unsatisfactory. It highlights the need of targeted interventions to raise awareness and provision of Health and Nutrition education package to most mothers. Poor Nutritional status arising due to lack of proper knowledge on complementary feeding is an issue that needs to be addressed at all level.

CHAPTER I

INTRODUCTION

1.1 Background of the study

When breast milk is no longer enough to meet the nutritional needs of the infant, complementary foods should be added to the diet of the child. The transition from exclusive breastfeeding to family foods, referred to as complementary feeding, typically covers the period from 6 to 18-24 months of age, and is a very vulnerable period. It is the time when malnutrition starts in many infants, contributing significantly to the high prevalence of malnutrition in children less than five years of age world-wide. World Health Organization (WHO) estimates that 2 out of 5 children are stunted in low-income countries (WHO 2010).

The problems are more serious in developing countries. About 120 million infants were born, the great majority of whom (85%) live in developing countries. Ten percent of these children died before their first birthday and another 4 percent died before they were five. Nepal falls under least developed country having low HDI and malnutrition is aggravating it. Magnitude of the malnutrition problems is very high in Nepal. Child nutrition problem is widely observed in many parts of the country. Faulty feeding practice among the young children was the one of the major cause of malnutrition in Nepal. Complementary feeding practices among the young children also have been found very critical in the urban cities of the country. Nutritionally unbalanced complementary food may cause nutrition deficiency disease. Timely initiation of complementary feeding practices among young children helps to promote their Nutritional status minimizing the chances of nutritional deficiency disease. Nutrition has a great impact in child's life and feeding practices has direct impact on the nutritional status and well-being of a child. It was indicated that nutrition has direct impact in social educational, mental and physical development of young children. Feeding practices like other forms of behavior is reset of complex personal, social cultural and economic influences, which is one of the determinants of the nutritional status of the children (UNICEF; 2010 and NDHS 2011).

Low-quality complementary foods combined with inappropriate feeding practices put under-two years' children in developing countries at high risk for under nutrition and

its associated outcomes. Too often, solid, semi-solid and soft foods are introduced too soon or too late. The frequency and amount of food offered may be less than required for normal child growth, or their consistency or nutrient density may be inappropriate in relation to the child's needs. Too much of a poor complementary food could displace the more nutritive breast milk in the child's diet (UNICEF; 1997).

Nepal is least developing country where 83 percent population lies in a rural area with numerous problems that is a scarce health facility. Nepal has low economic condition which is proved by per capita income. It is estimated to be less than US $ 383. Economic condition and health related activities are directly inter-related. Population of Nepal is 26.6 billion and annual growth rate is 1.40 percent. Female literacy rate is only 42.8 percent. About 81 percent populations depend upon agriculture but most of the land is unfertile as well as fallowed traditional system in production (CBS, Nepal; 2011).

Education for improved feeding practices is another essential component. Evidence shows that mothers are willing to prepare enriched complementary foods if they are culturally acceptable, and that improving maternal knowledge and feeding practices can lead to increased dietary intake and growth of infants. Good counseling and negotiation with the mother in health system and community health care settings is crucial to ensuring optimal complementary feeding practices (UNICEF; 2004).

1.2. Statement of the problem

The nutritional status of the child can be influenced by complementary feeding. Inappropriate infant feeding practices results in feeding difficulties and malnutrition ultimately leading to increased morbidity and mortality in children. Complementary feeding practices greatly depend on cultural habits and ethnicity (WHO, 2010).

In global context, figures from different European countries indicate a wide variation in the age at introduction of complementary foods, with several showing marked departures from the current WHO recommendation to introduce complementary feeding only from the seventh month onward. For example, 34 percent of mothers in Italy reported introducing complementary foods before 4 months, in Germany, 16 percent had done so by 3 months, whereas in the UK 2005 Infant Feeding Survey, 51

percent of infants were reported to have received complementary foods before 4 months. Mothers in some countries may be delaying the introduction of complementary feedings for too long. One study showed that about 20 percent of German mothers thought exclusive breast-feeding should continue for >6 months. It is likely that cultural and economic factors and also maternal and infant caretaker's responsible for variations in practice between and within countries (ESPGHAN 2008).

In developing country's context, childhood under nutrition remains a major health problem in resource-poor settings. Approximately one-third of children less than five years of age in developing countries are stunted (low height-for-age), and large proportions are also deficient in one or more micronutrients. Recent data shows that just over half of 6-9-monthold are breastfed and given complementary foods and only 39 percent of 20-23-month-old are provided with continued breastfeeding. It is well recognized that the period from birth to two years of age is the "critical window" for the promotion of optimal growth, health, and development. Insufficient quantities and inadequate quality of complementary foods, poor child-feeding practices and high rates of infections have a detrimental impact on health and growth in these important years. Even with optimum breastfeeding children will become stunted if they do not receive sufficient quantities of quality complementary foods after six months of age. An estimated six per cent or six hundred thousand under-five deaths can be prevented by ensuring optimal complementary feeding (UNICEF 2006).

In National Context, child health in developing countries including Nepal is a matter of serious concern as the prevalence of malnutrition among children continues to be high with 48.6 percent of children under two in Nepal being underweight. Since infant feeding practices adopted by mothers play a major role in influencing health of these children, there is a need to study the infant feeding practices prevalent in different areas to have pragmatic approaches to solve this problem (KUMJ 2007).

In Nepal, it is estimated that 50 percent of under two years' children are malnourished (DoHS 2006/07). NDHS Report of 2011 show that 41% of children under 5 are severely stunted, 29% of all children under 5 are underweight, and 11% are severely underweight (NDHS,2011) which has been highly associated with Mothers knowledge and practice of complementary feeding practices. Although Malnutrition

related research and studies have identified inappropriate complementary feeding practices and poor level of knowledge of mothers on complementary feeding as the root cause very less studies have been done to find out status of knowledge and practice of mothers on complementary feeding and there have no study been conducted for finding association of knowledge and practice of mothers on complementary feeding with socio-demographic factors.

To the best of author's knowledge, there is considerably less research and lack of data regarding status of Knowledge and Practice of complementary feeding of mothers having children 6-24 months which is a huge gapand no study suggest about the association of complementary feeding practices with socio-demographic factors. Also,we can't find any data of Far-west Doti district specifically in area of Nutrition.

Thus, thisstudy seeks the answer of the following questions:

1. What is the status ofknowledge on complementary feeding practices among mothers?
2. What is the status of current practices on complementary feeding among mothers?
3. Is there any association of socio-demographic factors with complementary feeding knowledge & practice of mothers?

1.3 Objective of this study

1.3.1 General objective

The general objective of this study is to find out the status of level of knowledge and practice of complementary feeding practices among mothers having 6-24 months' children in Pokhari VDC of Doti district.

1.3.2 Specific objectives.

1. To assess the knowledge on complementary feeding practices among mothers.
2. To assess the practices on complementary feeding among mothers.
3. To identify the association of socio-demographic factors with complementary feeding knowledge & practice among mothers.

1.4. Rationale of the study

Various research was conducted in past by different researchers and numerous International nongovernmental organizations (INGOs), National governmental organizations (NGOs) and Government agencies which concludes that one of the most important cause behind high prevalence of malnutrition in Nepal and other developing countries are mothers low level of knowledge and faulty practice. Still there is huge gap in data to know the current status of mother's knowledge and practiceThus, this research objective is to find out the status and its associated factors i.e. socioeconomic status, education level religion and culture behind low level of knowledge and faulty practice of complementary feeding practice among mothers in one of the rural VDC of far western region i.e. Pokhari VDC of Doti district. This research result reveals the status and associated factors behind low level of knowledge and faulty practice of complementary feeding practice among mothers having children 6-24 months and is hoped to be useful to all agencies and government bodies including policy makers and health planners to combat malnutrition problem in Nepal and be fruitful for planning appropriate health plans to conquer Millennium Development Goal& SDG (MDG 4 i.e. reduce child mortality).

1.5. Limitation of the study

The study was conducted on estimated target number of children six months to two years of Pokhari VDC, Doti provided by District Health office, Doti. The samples of study were only those mothers who had children of 6 months to two years old. The study site was chosen in one of the rural VDC of far western Nepal i.e. Pokhari VDC of Doti district purposively so the results may differ with other parts of the country so it can't be generalized to all.

1.6. Operational definitions

Knowledge of complementary feeding: It is defined as the correct facts or information of mothers that deals with the type of complementary food, preparation of complementary food and frequency of feeding.

Complementary feeding: The transition from exclusive breastfeeding to family foods, referred to as complementary feeding, typically covers the period from 6-24 months of age.

Correct level of knowledge and practice about amount, frequency, density of food to be given to child of 6-24 months were decided per WHO standard guideline which is attached in reference as annex.

Sociodemographic factorsinclude age, education, ethnicity, religion and family type of respondents.

1.7 Organization of the Study

This study has been divided into nine chapters followed by bibliographies and annexes and it has been presented study areas wise order so that the research study could lead to achieve the objectives precisely. The first chapter deals with the introductory part of the Complementary feeding practices containing statement and objectives of the study, second is about the concerned literature, third with the research methodology applied, fourth about the study area, fifth about the socio-demographic characteristics of the respondents, sixth and seventh and eighth about the knowledge, practice of Complementary Feeding Practices with association with sociodemographic factors followed by the concluding ninth chapter, which contains the summary, findings and conclusion of the study.

CHAPTER II
LITERATURE REVIEW

This chapter deals with conceptual and theoretical overview related with the complementary feeding practices among mothers which has shaped the thesis topic to provide conceptual and theoretical support.

2.1 Conceptual /Theoretical Overview

Malnutrition is a multifaceted issue in developing countries like Nepal. Still half of the population under 5 years are suffering from serious form of malnutrition in Nepal. Various research and scientific journals like Lancet series has placed their strong recommendation to focus on first 1000 days from pregnancy to children reach their 2nd year of age. As this is regarded as Golden period of intervention where good care of women and children under 2 years can make a huge contribution in reducing various forms of malnutrition in all over the world. Moreover, small but doable things related to hygiene, health seeking behavior and correct level knowledge on complementary feeding and correct level of practices is crucial for promoting nutritional status of women and children in Nepal.

The study will be based on different approaches to study about complementary feeding practices- the socio-cultural, socio-demographic approaches etc. studies characterizing variables from each approach were reviewed. None of the above approaches alone can provide details about Complementary feeding. All the approaches combined in total provide the overall picture of the knowledge and practice regarding Complementary feeding.

An interpretative medical anthropological perspective will be used in this study since the subject is mothers' perceptions and ideas. This perspective helps to understand the meaning behind people' perceptions, ideas, attitudes towards illness and treatment seeking behavior (Good 1994). Perceptions and attitudes are influenced by the culture and society they live in. In the current study knowledge about complementary feeding practices among mothers with children under 2 years and how it works will be looked at through the lens of interpretative medical anthropology. A critical medical anthropological perspective with a feminist view will also be used in this study. One of the aspects of critical medical anthropology is that it analyses societal or structural power relation practices at various levels and the impact of social inequality on health (Good 1994). Along with other core assumptions of a feminist perspective this view

provides “an acute state of awareness of the injustice women suffer from because of their sex” and tries to improve womens lives (Acker 1994: 57). Therefore, to understand the knowledge about complementary feeding practices among mothers with children under 2 years was explored using a critical medical anthropological perspective with a feminist view. Some other theory like health belief model and social cognitive theory will also be linked with this study for further validation of this study.

Health Belief Model

The health belief model is a psychological health behavior change model developed to explain and predict health-related behaviors, particularly in regard to the uptake of health services. The Health Belief Model (HBM) is a psychological model that attempts to explain and predict health behaviors. This is done by focusing on the attitudes and beliefs of individuals. The health belief model was developed in the 1950s by social psychologists at the U.S. Public Health Service and remains one of the best known and most widely used theories in health behavior research. The health belief model suggests that people's beliefs about health problems, perceived benefits of action and barriers to action, and self-efficacy explain engagement (or lack of engagement) in health-promoting behavior. A stimulus, or cue to action, must also be present in order to trigger the health-promoting behavior.

The following constructs of the health belief model are proposed to vary between individuals and predict engagement in health-related behaviors.

Perceived Severity

Perceived severity refers to subjective assessment of the severity of a health problem and its potential consequences. The health belief model proposes that individuals who perceive a given health problem as serious are more likely to engage in behaviors to prevent the health problem from occurring (or reduce its severity). Perceived seriousness encompasses beliefs about the disease itself (e.g., whether it is life-threatening or may cause disability or pain) as well as broader impacts of the disease on functioning in work and social roles. For instance, an individual may perceive that influenza is not medically serious, but if he or she perceives that there would be serious financial consequences as a result of being absent from work for several days, then he or she may perceive influenza to be a particularly serious condition.

Perceived Susceptibility

Perceived susceptibility refers to subjective assessment of risk of developing a health problem. The health belief model predicts that individuals who perceive that they are susceptible to a particular health problem will engage in behaviors to reduce their risk of developing the health problem. Individuals with low perceived susceptibility may deny that they are at risk for contracting a particular illness. Others may acknowledge the possibility that they could develop the illness, but believe it is unlikely. Individuals who believe they are at low risk of developing an illness are more likely to engage in unhealthy, or risky, behaviors. Individuals who perceive a high risk that they will be personally affected by a particular health problem are more likely to engage in behaviors to decrease their risk of developing the condition.

The combination of perceived seriousness and perceived susceptibility is referred to as perceived threat. Perceived seriousness and perceived susceptibility to a given health condition depend on knowledge about the condition. The health belief model predicts that higher perceived threat leads to higher likelihood of engagement in health-promoting behaviors.

Perceived Benefits

Health-related behaviors are also influenced by the perceived benefits of taking action. Perceived benefits refer to an individual's assessment of the value or efficacy of engaging in a health-promoting behavior to decrease risk of disease. If an individual believes that a particular action will reduce susceptibility to a health problem or decrease its seriousness, then he or she is likely to engage in that behavior regardless of objective facts regarding the effectiveness of the action. For example, individuals who believe that wearing sunscreen prevents skin cancer are more likely to wear sunscreen than individuals who believe that wearing sunscreen will not prevent the occurrence of skin cancer.

Perceived Barriers

Health-related behaviors are also a function of perceived barriers to taking action. Perceived barriers refer to an individual's assessment of the obstacles to behavior change. Even if an individual perceives a health condition as threatening and believes that a particular action will effectively reduce the threat, barriers may prevent

engagement in the health-promoting behavior. In other words, the perceived benefits must outweigh the perceived barriers in order for behavior change to occur. Perceived barriers to taking action include the perceived inconvenience, expense, danger (e.g., side effects of a medical procedure) and discomfort (e.g., pain, emotional upset) involved in engaging in the behavior. For instance, lack of access to affordable health care and the perception that a flu vaccine shot will cause significant pain may act as barriers to receiving the flu vaccine.

Modifying Variables

Individual characteristics, including demographic, psychosocial, and structural variables, can affect perceptions (i.e., perceived seriousness, susceptibility, benefits, and barriers) of health-related behaviors. Demographic variables include age, sex, race, ethnicity, and education, among others. Psychosocial variables include personality, social class, and peer and reference group pressure, among others. Structural variables include knowledge about a given disease and prior contact with the disease, among other factors. The health belief model suggests that modifying variables affect health-related behaviors indirectly by affecting perceived seriousness, susceptibility, benefits, and barriers.

Cues to Action

The health belief model posits that a cue, or trigger, is necessary for prompting engagement in health-promoting behaviors. Cues to action can be internal or external. Physiological cues (e.g., pain, symptoms) are an example of internal cues to action. External cues include events or information from close others, the media, or health care providers promoting engagement in health-related behaviors. Examples of cues to action include a reminder postcard from a dentist, the illness of a friend or family member, and product health warning labels. The intensity of cues needed to prompt action varies between individuals by perceived susceptibility, seriousness, benefits, and barriers. For example, individuals who believe they are at high risk for a serious illness and who have an established relationship with a primary care doctor may be easily persuaded to get screened for the illness after seeing a public service announcement, whereas individuals who believe they are at low risk for the same illness and also do not have reliable access to health care may require more intense external cues in order to get screened.

Self-Efficacy

Self-efficacy was added to the four components of the health belief model (i.e., perceived susceptibility, seriousness, benefits, and barriers) in 1988. Self-efficacy refers to an individual's perception of his or her competence to successfully perform a behavior. Self-efficacy was added to the health belief model in an attempt to better explain individual differences in health behaviors. The model was originally developed in order to explain engagement in one-time health-related behaviors such as being screened for cancer or receiving an immunization. Eventually, the health belief model was applied to more substantial, long-term behavior change such as diet modification, exercise, and smoking. Developers of the model recognized that confidence in one's ability to effect change in outcomes (i.e., self-efficacy) was a key component of health behavior change.

In this study, socio-demographic factors act as modifying factors for perceived seriousness of dysmenorrhea and education, symptoms and source of information aid in cues to action. The symptoms and perception associated with dysmenorrhea is more of a social construction than biomedical reality.

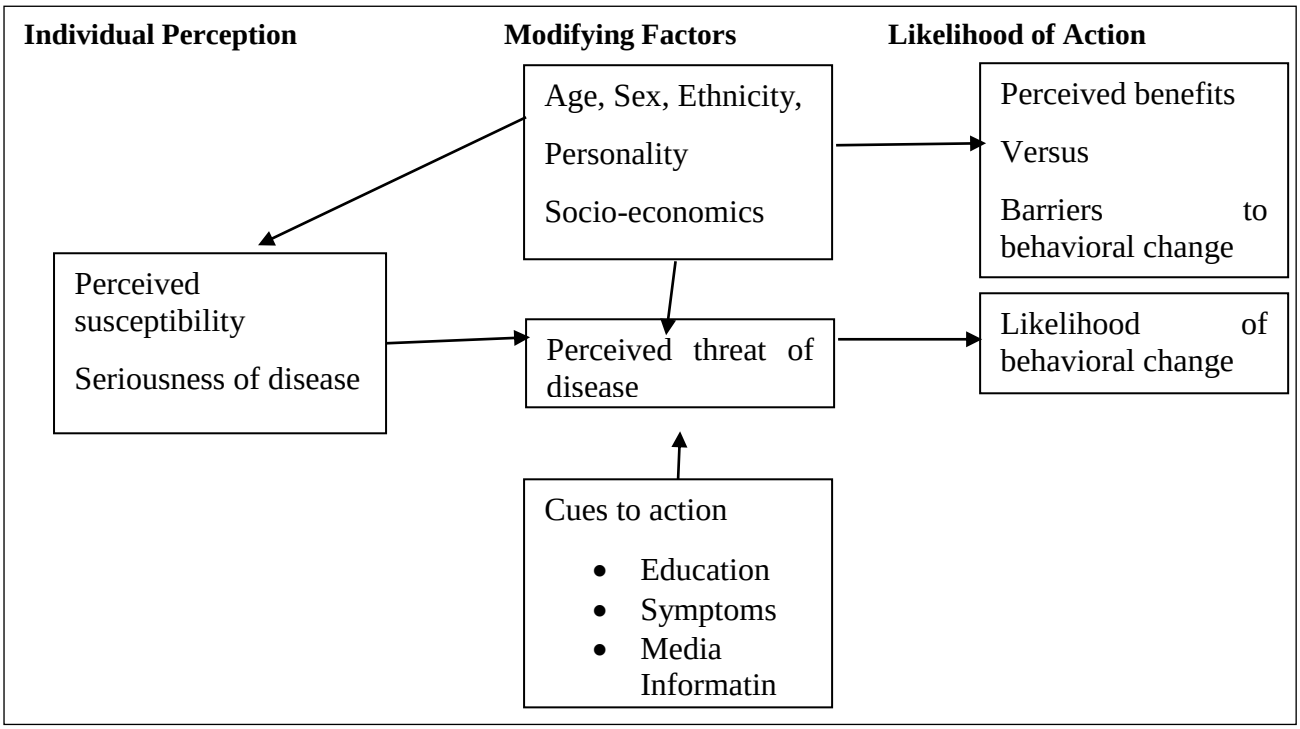


Figure 2.1: Conceptual Framework of Health model theory

Theory of Social Suffering

Likewise, "Social suffering" takes in the human consequences of war, famine, depression, disease, torture—the whole assemblage of human problems that result from what political, economic, and institutional power does to people—and also human responses to social problems as they are influenced by those forms of power (Kleinman, 1997). Humans spend much of life suffering or trying to avoid suffering, yet there is little precision or consistency in the definition of 'suffering'. To rectify that, a classification scheme or taxonomy is outlined that distinguishes mental, physical, and social suffering, and then offers sub-categories. For example, depression, anxiety, grief, and existential suffering are all types of mental suffering. Suffering is defined as Distress resulting from threat or damage to one's body or self-identity. Next, to capture the principal, dominant cultural meanings of suffering, eight frames (essentially, major points of view) for suffering are summarized. These frames are suffering as punishment, suffering as reward, suffering as craving, suffering as sacrifice, suffering as natural destiny, suffering as man- age able, relief of suffering as human purpose, and lastly, relief of suffering as progress in quality of life. Suffering and negative quality of life have a lot in common. Understanding perceptions of peoples' desired relief of suffering requires that we distinguish their own suffering from suffering of others important to them. Thus, in measuring subjective quality of life, it may be necessary to distinguish a person's perception of their own quality of life from that of others who are important to them (Anderson, 2013).

Theory of Planned Behavior

The theory of planned behavior (abbreviated TPB) is a theory that links beliefs and behavior. It has been applied to studies of the relations among beliefs, attitudes, behavioral intentions and behaviors in various fields such as advertising, public relations, advertising campaigns and healthcare. The theory states that attitude toward behavior, subjective norms, and perceived behavioral control, together shape an individual's behavioral intentions and behaviors. It distinguishes between three types of beliefs - behavioral, normative, and control. The TPB is comprised of six constructs that collectively represent a person's actual control over the behavior.

1. Attitudes - This refers to the degree to which a person has a favorable or unfavorable evaluation of the behavior of interest. It entails a consideration of the outcomes of performing the behavior.
2. Behavioral intention - This refers to the motivational factors that influence a given behavior where the stronger the intention to perform the behavior, the more likely the behavior will be performed.
3. Subjective norms - This refers to the belief about whether most people approve or disapprove of the behavior. It relates to a person's beliefs about whether peers and people of importance to the person think he or she should engage in the behavior.
4. Social norms - This refers to the customary codes of behavior in a group or people or larger cultural context. Social norms are considered normative, or standard, in a group of people.
5. Perceived power - This refers to the perceived presence of factors that may facilitate or impede performance of a behavior. Perceived power contributes to a person's perceived behavioral control over each of those factors.
6. Perceived behavioral control - This refers to a person's perception of the ease or difficulty of performing the behavior of interest. Perceived behavioral control varies across situations and actions, which results in a person having varying perceptions of behavioral control depending on the situation. This construct of the theory was added later, and created the shift from the Theory of Reasoned Action to the Theory of Planned Behavior.

The attitude toward behavior, subjective norms, and perceived behavioral control, together shape an individual's behavioral intentions and behaviors regarding complementary feeding practices among mothers having children from 6 months to 2 years.

2.2 Review of Previous Research Works

Many scholars and organizations have conducted studies on knowledge of complementary feeding among mothers with children less than five year. Some important literatures relevant to this study are presented here globally, regionally and in local/national context.

Global Context

Childhood under nutrition remains a major health problem in resource-poor settings. Approximately one-third of children less than five years of age in developing countries are stunted (low height-for-age), and large proportions are also deficient in one or more micronutrients. Recent data shows that just over half of 6-9-monthold are breastfed and given complementary foods and only 39 percent of 20-23-month-old are provided with continued breastfeeding. It is well recognized that the period from birth to two years of age is the "critical window" for the promotion of optimal growth, health, and development. Insufficient quantities and inadequate quality of complementary foods, poor child-feeding practices and high rates of infections have a detrimental impact on health and growth in these important years. Even with optimum breastfeeding children will become stunted if they do not receive sufficient quantities of quality complementary foods after six months of age. An estimated six per cent or six hundred thousand under-five deaths can be prevented by ensuring optimal complementary feeding (UNICEF 2006).

Figures from different European countries indicate a wide variation in the age at introduction of complementary foods, with several showing marked departures from the current WHO recommendation to introduce complementary feeding only from the seventh month onward. For example, 34 percent of mothers in Italy reported introducing complementary foods before 4 months, in Germany, 16 percent had done so by 3 months, whereas in the UK 2005 Infant Feeding Survey, 51 percent of infants were reported to have received complementary foods before 4 months. Mothers in some countries may be delaying the introduction of complementary feedings for too long. One study showed that about 20 percent of German mothers thought exclusive breast-feeding should continue for >6 months. It is likely that cultural and economic factors and also maternal and infant caretaker's responsible for variations in practice between and within countries (ESPGHAN 2008).

The weaning process may be gradual, lasting for months until the infant is finally introduced to the family diet. On the other hand, in abrupt weaning, the infant is introduced straight into the family menu. This latter option creates a problem, as the child may not be able to eat enough of the adult diet to meet his or her nutritional needs. According to the 1987 Ghanaian National Survey, 58 percent of the children

were below 80 percent of the National Center for Health Statistics (NCHS) weight-for-age, 8 percent suffered from severe malnutrition, 40 percent were wasted, and 52 percent were stunted. Amar-Klemesu and Wheeler observed that 30 percent of the infants who were fed cereal porridge and adult foods as weaning foods were malnourished. They attributed this to inadequate complementation with breast milk. In Nigeria, Akinele and Omotola investigated the energy and protein intake of infants and children of the low-income group. They reported that about one-third to one-half of the infants suffered varying degrees of malnutrition and 10 percent were wasted and stunted. A more recent Nigerian National Survey conducted by the Demographic and Health Survey (DHS) in 1990 placed the proportion of underweight children under two years of age (those below –2 SD weight-for-age) at 36 percent, including 12 percent severely underweight (below –3 SD). The prevalence of stunting (below –2 SD height-for-ages) was 43 percent, including 22 percent severe stunting (below –3 SD), while the levels of wasting and severe wasting were 9 percent and 2 percent, respectively. An earlier 1986 DHS survey of children aged 6 to 36 months in Ondo State, Nigeria, found 28 percent prevalence for underweight, 32 percent for stunting, and 7 percent for wasting (NCHS Report, Nigeria, 2008).

It is therefore clear that during the period of weaning, children in West Africa are very vulnerable to malnutrition and one of the major factors that causes stunting or what makes some children appear stunted can be traced to inadequate food intake. Children in West Africa are at high risk of infection during weaning. Malnutrition increases susceptibility to infectious diseases and affects child mortality from diseases such as diarrhea, whooping cough, and acute respiratory infection. It reduces the capacity of the host to resist the consequences of such infection, making death inevitable for some. As solid foods are introduced, infection with germs that causes diarrhea or other diseases is more likely to occur. The food is often contaminated because of poor handling, use of dirty water and utensils, and poor storage by rural and poor urban mothers. The story is similar for working mothers, who leave infants in the care of maids who are usually ignorant and inexperienced, and sometimes very unhygienic. Because of its poor nutritional status, the infant can hardly resist these infections. The frequent occurrence of such infections leads to malnutrition because of increased energy and nutrient requirements coupled with poor absorptive capacity. This in turn affects the nutritional status of the child and further lowers resistance to infection.

According to the available statistics from Nigeria, infant mortality is responsible for almost 50 percent of all deaths in children up to 14 years of age, and under two mortality accounts for 93 percent of these deaths, 70 percent of which are attributed to preventable diseases (NCHS Report, Nigeria 2008).

World Gebrial (2002) concluded that in Ethiopia 92 percent 25 of them consider human milk as the best milk for good child growth compare to cow's milk or formula milk. A higher proportion i.e. 80 percent 25 of mothers considered breast milk alone is sufficient enough to feed a baby up to the age of 6 months. The majority 97 percent 25 suggest not to breast feed when a mother gets pregnant. Three quarters of mothers prefer not to breast feed when the mother gets sick. The majority 91 percent 25 of mothers suggested not to breast feed when the child get sick.

Nutrition education can easily be incorporated into primary health care programs. Health workers and nutritionists can educate rural mothers about the importance of adequate weaning foods and practices, infant health, host defense systems, home-scale drying, processing, and so on. The importance of varying the baby's diet and practicing good hygiene when handling and storing the baby's food can be included as well. The teaching and training of rural mothers can have a long-term impact on weaning practices and nutritional status of West African children. In the Philippines a weaning education program led to a reduction in the prevalence of malnutrition from 64 percent to 42 percent. In Nigeria the Africare Child Survival Program yielded similar results (UN 1998).

Regional/ South-East Asia Context

A study in Pakistan among the 500 mothers having infants attending pediatric outpatient department showed that a positive relationship was found between the nutritional status of infants and educational status of mothers ($P < 0.001$). The study revealed that the majority of infants with evidence of malnutrition belonged to the mothers with virtually no school education. A similar relationship was observed between the educational status of respondents and the introduction of complementary foods at an appropriate age (6 months) of infants ($P < 0.001$). In Conclusion Mother's education plays a vital role in increased receptivity to knowledge and awareness related to nutritional requirements of their infant (Liaqat P, Rizvi 2007).

This cross-sectional study was conducted in Warsak colony, Peshawar during June and July 2005. Sampling method was purposive. Thirty housewives having children were given a questionnaire and their responses recorded. Result showed that the mothers studied had a mean age of 28.5 years. 76.67 percent of the mothers were illiterate. Regarding parity, 60 percent had less than 5 live children, 16.6 percent had 5 and 23.3 percent more than 5 children. 76.19 percent infants received Gutti as first feed while colostrum was given to 23.80 percent. 93.3 percent mothers did breast feeding, 33.3 percent gave cow's milk along with breast milk and 36.6 percent formula milk along with breast milk. Early weaning was noted in 11.4 percent infants. 39 percent infants were weaned in 4-6 months and delayed weaning was noted in 49.5 percent infants. Boiled water was used by 46.6 percent mothers and filtered water by 13.3 percent while 40 percent mothers used tap water. Food was purchased by husbands in 100 percent cases on demand of housewives. 60 percent women have done child spacing. In conclusion it can be said that awareness of mothers regarding nutrition of their children exists but it can be further improved with basic health education, awareness and proper counseling by the health workers (Aziz MK 2007).

National Context

A study conducted on Knowledge Practice Coverage Survey on Doti, Dadeldhura, Bajhang and Kanchanpur showed that the practice of giving complementary food within four months has decreased in all the districts. This could be due to the increase knowledge and practice of mothers for exclusive breastfeeding. Knowledge of *"sarbottam pitho"* (Super Flour) by the respondent mothers has increased in all districts compared to baseline survey. However, only 48.1 percent mothers of Kanchanpur and 26.4 percent mothers of other districts had knowledge about the availability of *sarbottam pitho* in local market, which clearly shows that there is a need to continuously educate mothers about the knowledge and availability of *sarbottam pitho* in the local market (CARE Nepal. Knowledge & Practice coverage survey2007).

A cross sectional study was conducted among mothers who attended the immunization clinics of 18 wards of Pokhara municipality area. They were interviewed with a semi-structured questionnaire on various aspects of infant feeding. With the result a total of 168 mothers were interviewed and prevalence of

breastfeeding was 99.4 percent (167). Only 43.5 percent of the mothers initiated breastfeeding within one hour of birth and 60.5 percent were practicing exclusive breastfeeding at 5 months. Almost 40 percent of the mothers started complementary feeding before the recommended age of 6 months and 22.5 percent delayed introduction of complementary feeding beyond the recommended age. In conclusion Breast feeding practices adopted by mothers of Pokhara urban area are still lacking in terms of late initiation of and early starting of complementary feeding. There is a need to educate the mothers regarding proper infant feeding practices (DoHS, 2006/07).

The study done in complementary feeding practices and its impact on nutritional status of less than two years old children in urban areas of the Kathmandu, Nepal indicated that traditional about 92 percent households were found practicing traditionally complementary feeding practices (TCFP) were 8 percent households were found practicing commercial Complementary Feeding Practicing (CCFP). Traditional complementary foods given to the children was found lacking in macronutrient carbohydrate and protein severely not fulfilling the nutritional requirement of the children. Among traditional complementary food fed children, 63 percent of children were found suffering from mild to severe form of malnutrition whereas among commercial food fed, only 41 percent of children were found suffering from such form of malnutrition. About 33 percent of the children suffering from severe malnutrition were come from the household of employees. Children from Newar ethnicity of Lalitpur district were found more suffering from severe type of malnutrition compared to other ethnic groups. In addition, baby boys were found suffering more from severe type of malnutrition compared to baby girls. In conclusion Nutritional status of children from Kathmandu district found better compared to young children from another district. Children from Lalitpur district were found more severely malnourished. Surprisingly baby boys found more severely malnourished compared to baby girls. Traditional foods fed children were found more severely malnourished compared to commercial complementary food fed. Finding of this study clearly indicated that complementary feeding practices have direct impact on nutritional status of young children (Malla S Shrestha, 2004).

A study in two castes in a village of Kathmandu mentioned that the most common method of treating the child sickness was domestic magic or *'Jhar Phuk'*. People did

not consult doctors. People used common home remedies to treat their children in case of fever, cough, diarrhea and measles etc. Diarrhea was the common illness among the children. She also found that the majority of Newar women breast feed their children for a long duration that is 2 to 3 years, unless there is another pregnancy or illness. Chhetri women also breast fed their children up to 1 to 2 years (Thapaliya 1987).

The study done in Knowledge Regarding Health Promotion of Infants among Mothers Attending Lumbini Zonal Hospital showed the result where 44 percent mothers answered that they provided complementary feeding at the age of 9-11 months, only 10 percent mothers were providing complementary feeding at the age of 12 months. 28 percent respondents responded that they were providing mix *jaulo* and only 10 percent respondents were providing plain *jaulo* to their infants. Most of the mother 62 percent responded that they were providing complementary feeding only one times and 8 percent mothers providing at 4-6 times to their infants. The majority of the respondent 80 percent responded that they were satisfied with their infants feeding (Bhattarai, 2008).

Pantha (2005) concluded that mothers' age, income, education, and number of children plays a vital role on complementary feeding to their children. Majority of the mothers had not knowledge on complementary feeding. Only a few mothers were giving adequate amount and frequency of complementary feeding (Pantha, 2005). By 6 months, the child's teeth begin to erupt and the biting movement begins. Thus, at six months, the child is ready to eat soft and starchy foods and this is called complementary feeding. Complementary foods too late are also risky as it leads to non-fulfillment of nutritional gap leading to malnutrition and anemia (Ghai OP, 2004).

Bharati (2003) concluded that Mothers had not proper knowledge regarding weaning practice. Even though higher percentage was practicing *sarbottam pitho* but only 11.2 percent 25 had proper knowledge about preparation and correctly practicing it. So increasing education training and making aware about preparation of *sarbottam pitho* seems too important because it is ideal weaning food for children. Breast feeding practice was seeming good but time of introducing weaning food is below five

months. All of them were giving egg, meat, vegetable, as whether available and mostly after one year (Bharati 2003).

Mahgoub et. al. (2002) concluded that in Pakistan 34.5 percent 25 women started pregnancy as the reason for stopping breast feeding. The second and third most common reason were milk dried up and child refuse for 19.1 percent 25 and 12.1 percent 25 of women respectively. Some less common reason for stopping breast feeding were the child reached weaning age, the mother become ill or the child become ill.

Lohani et al., (2002) reveals that children have right to receive food care and attention. These are also essential to the all- round development of the child both physical and intellectual in Nepal, almost half of all young children are malnourished and are starting their lives at a disadvantage. In addition to a lack of qualitative food intake and, the quality of other diet is also lacking, particularly in essential micronutrient like vitamin A, Iron, Iodine etc.

In summary, the review of literature revealed that complementary feeding practices greatly influences the nutritional status of the children. Whatever it is found in the literature review part related to the proposed topic shows that good nutrition is necessary for good health and it helps to children for proper growth and development. Likewise, after 6 months of life a child needs extra food along with breast milk. The period between six months and three years is known as complementary feeding period. Ideally during this period, a gradual change from breast milk to family diet takes place. Further the complementary feeding period is very critical for the young child.

The literature reveals that children have right to receive food, care and attention. These are also essential to the all-round development of both physical and intellectual. Breast feed babies have a lower incidence of infection particularly respiratory and gastrointestinal infection. The late introduction of complementary food to child and infrequent and improper complementary feeding lead to malnutrition in young children and to prevent this condition mother’s education about complementary feeding plays a great role. Traditionally complementary feeding begins with rice feeding ceremony where children receive their first solid meal. The ceremony is

performed at 5 months of age for a girl and 6 months for a boy. Thus, the main cause of malnutrition is inappropriate feeding practice after the rice feeding ceremony. To overcome such problems mothers, play an important role in preparing and serving food to child so, they must know which foods are necessary for the child and how to give, when to give extra food.

From the above studies, it is known that the studies have been done without much sociological inputs in the context of Knowledge and Practice of Complementary feeding practices. There is study gap between regional and local level. Although the study has been conducted in regional level it has not been conducted in local level especially in rural areas of far west of Nepal where there is high prevalence of Malnutrition. It is not given high priority and often overlooked. So, the study about Knowledge and Practice of Complementary feeding practices in districts like Doti is must among this country. Therefore, this study is being carried out.

2.3 Conceptual and Theoretical Framework of the Study

A theoretical structure of assumptions, factors that holds together the ideas comprising a broad concept of Knowledge and Practice of Complementary feeding practices is as follow.

2.3.1 Conceptual Framework

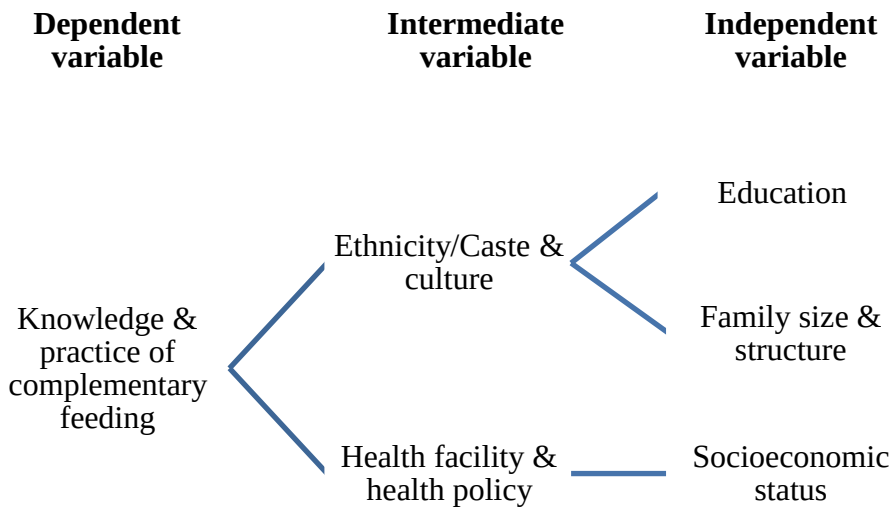


Figure 2.3.1: Conceptual framework

The conceptual framework for this study is based on the available literatures on knowledge and practice regarding Complementary Feeding. This framework assumes that knowledge and practice regarding Complementary Feeding is influenced by various domains such as demographic and socioeconomic characteristics of respondents, social and cultural variables related with Complementary Feeding.

Demographic and socioeconomic variables such as age, ethnicity, religion, family type, educational status will be studied first to find out the characteristics of the respondents. Similarly, the study intends to find out the social and cultural factors which are found to be associated with knowledge and practice regarding Complementary Feeding Practices, association of sociodemographic variable with knowledge on necessity to give additional food after six months, knowledge of mothers about correct amount of food to be given to their child, knowledge of mothers about frequency of times to feed their child, correct level of knowledge of mothers about density of food, knowledge of mothers about preparing "Sarbottam pitho ko lito", correct level of practice of mothers about food quantity given at main meal and with correct level of practice of mothers with about hand washing with soap water.

2.3.2 Theoretical Framework

Different theories have different viewpoint regarding Complementary Feeding. Hence, three theories like1. Theory of Social Suffering which explains mothers' response to social restriction along with 2. Theory of Health Belief Model where behaviors are set through Perceived Severity, Perceived Susceptibility, Perceived Benefits, Perceived Barriers, Modifying Variables and cues to action and lastly 3. Theory of planned behavior which includes behavior are set by attitudes, behavioral intention, subjective norms, perceived power and perceived behavioral control have explained associated factors, perception and attitude about Complementary Feeding which has combinely supported this thesis for various level of study.

CHAPTER III

RESEARCH METHODS

This chapter presents the research methodology that is used to collect and analyze qualitative as well as quantitative data for the study. The chapter is further sub divided into many sub-titles such as Research Design, Universe and Sampling, Nature and Sources of data, Pretesting, Data collection technique Data collection tool and Data Processing and Analysis.

3.1 Rationale of Selection of Study Area

Malnutrition is major issue in countries like Nepal and has been contributed a substantial number of Global deaths annually mostly in children. The reason behind this is found to be incorrect level of knowledge and inappropriate practices about complementary feeding. Very few studies have been done about Complementary Feeding. Yet many children can be saved from various preventable deaths like diarrhea and other infectious disease related to malnutrition and poor complementary feeding practices in Nepal by finding the current knowledge and practices related to complementary feeding and providing massive awareness messages through various Health promoting programs. The study was conducted among mothers with children six months to two years in Pokhari VDC of Doti district. The reason behind choosing this site for study is its remoteness, low socioeconomic condition of people, declared food in secured VDC by WFP and researchers' interest and due to less research in this area (i.e. unexplored area).

3.2 Research Design

The design of the research study was descriptive cum exploratory. The study attempt to describe and document the socio-demographic characteristics of mothers of Study area and explore status of knowledge and practice associated with complementary feeding. It is expected that this research design could meet the research objectives.

3.3 Nature and Sources of Data

The study was based solely upon the primary data collected by the researcher to provide the possible clear picture on study objectives. The primary data was collected from the field using interview schedule. The mothers having 6-24 months' children residing in Pokhari VDC of Doti District were the only source of primary data.

3.4 Population and Sample

Here Purposive Non-Probability Sampling technique is used because of small study area and small study size with all list available from Health post of Pokhari VDC. Thus, all the mothers having children 6-24 months were the sample population of this study.

The population of the study were mothers having children 6-24 months of the rural VDC of far western Nepal i.e. Pokhari VDC of Doti district. Those participants available and willing to participate were only included in the study.

Sampling frame

In this study sampling frame was estimated target population of children 6-24 months of Pokhari VDC for Fiscal Year 2015/16 provided by District Health Office, Doti which was 144.

Unit of analysis

Individual mothers having children 6-24 months of Pokhari VDC of Doti district were the unit of analysis of this study.

Sample size

First, estimated target population of children 6-24 months of Pokhari VDC provided by District Health Office, Doti was taken as total sample population then Sample size was calculated by using the formula,

Sample Population (N) = 144

Sample size n = $\frac{NZ^2p(1-p)}{d^2(N-1)+Z^2p(1-p)}$

Where,

n= sample size

N= Population size

Z= Z statistic for level of confidence

p= Expected proportion

d= Precision.

Therefore, Sample size (n) = 105

Inclusion Criteria:

- Mothers' Age group of reproductive age i.e.15-45 years.
- Mothers having children of 6-23 months
- The mothers residing of Pokhari VDC.

Exclusion Criteria:

- The mothers who have children below 6 months and over 2 years.
- The participant who were unwilling to participate in this study
- The mothers who were absent at the time of data collection

Pretesting of the Tools

Pretesting was conducted in at least 10% of sample size in similar characterized groups/area. Pretesting was conducted at Pokhara MCH Clinic of DPHO Kaski. Twelve mothers attending MCH clinic at DPHO Kaski were selected for interview.
After analyzing the response slight modification of questions were made because some questions were not clear to the respondents.

3.5 Data Collection Technique

In this study, data was collected by interview schedule. An interview schedule written in the English language was used to collect the general information. For the study purpose, the raw data were collected interacting with the respondents. Also, WHO recommended Complementary Feeding wheel card was used for correct response to be recorded on complementary feeding. A tireless effort was done to extract more and more facts from the respondents assuring them about the confidentiality.

3.6 Data Collection Tool

Interview guideline was developed to interview the mothers.

3.7 Ethical Considerations

The following ethical considerations were taken for this study:

- Formal permission was taken from Prithvi Narayan Campus, Department of Sociology;
- Permission was taken from DPHO Doti and VDC office of Pokhari;

- Informed consent was taken from the respondents prior to recording of questionnaire;
- The collected information was completely confidential and the name of the respondents was not associated with their answers;
- The data was not personalized and confidentiality of the data was maintained and used for this study only;
- Respondents were not influenced by any means to participate in the survey.

3.8 Method of Data Presentation and Analysis

This study is designed and modulated as a descriptive study based on qualitative and quantitative data originating from primary source. All the data and information collected from the field through questionnaires were systematically arranged, summarized, processed and presented in tabular as well as diagrammatical forms such as tables, graphs and pie chart. Data entry and analysis was carried out through SPSS. The processed data and information with analysis is presented and described in a separate chapter.

CHAPTER IV
INTRODUCTION OF THE STUDY SITE

This chapter introduces about the study area Doti district particularly Pokhari VDC and the inhabitants. In addition, physical and cultural setting of this place have been discussed.

4.1 Profile of Doti District

Doti District, a part of Seti Zone, is one of the seventy-five districts of Nepal, a landlocked country of SouthAsia.It was founded by Niranjan Malla Dev, the last son of the Katyuri dynasty and younger brother of Abhay Pal of Askot. Previously, the area between Ramganga in the west and the Karnali River in the east was under the control of the Raikas (rulers of the Doti kingdom, alternately Kumaun or Rainka Maharaj). It is in the far west part of Nepal.

The district, with Silgadi as its district headquarters, covers an area of 2,025 km² and had a population in 2011 of 211,746.Doti district comprises 50 Village Development Committees (VDCs), one Municipality, 11 Ilakas1 and two electoral constituencies. Doti lies at the elevation 600-4,000m above sea level. The Far West Regional Headquarters, Rajpur, is also situated in Doti.

All rivers in Doti are part of the Karnali River system, however, the district is divided into three main watersheds as per the catchment areas of the Sanigadh, Seti and Thuligadh rivers. The district is also rich in cultural and religious sites and temples, with potential for religious tourism because it is a gateway to Khaptad National Park and Ramaroshan (located in Achham).

The K. I. Singh Road runs for 65km from Syaule, Dadeldhura to Silgudhi, Doti and connects to the rest of the districts in the Far West. The total length of roads in the district is 338km, but only 118km are paved.2 Thirty of Doti's 50 VDCs relate to dirt roads, which are not usable during the monsoon (June to September). There is one airport in the Regional HQ, Rajpur, which has not operated for about eight years, though Yeti Air held a successful test flight in 2011.

Sociodemographic features

Doti's population numbered 211,764 in 2011.4 This figure includes 30,602 children under five, 26,861 adolescent girls (aged 10-19), 52,429 women of reproductive age (aged 15-49), and 16,070 seniors (aged 60 years and above, see also annexed age pyramid). Most people in Doti (99%) are Hindu, 1% Buddhist, and smaller shares of other religions.5 Over half of the population are Chhetri (57%), 10% Brahmin and 13% Dalits, and Nepali is the most commonly spoken language in the district (by 95% of the population), though Magar, Tamang and other languages are also used.6 The share of the population who are over 10years old and economically active is 73% in Doti, and the main occupation (71% of these people) is agriculture.(CBS,2012)

Education Status

The literacy rate of those five years old and above in Doti is 56%, ten percentage points below the national rate. The discrepancy is much more pronounced among women – 42% can read and write in Doti, against 57% in all Nepal – than for men (73% and 75%, respectively). Of those aged 20 and above, 29% of men and 13% of women completed basic education, and 11% of men and only 4% of women attained School Leaving Certificate.(CBS,2012)

Health Facility Status

Doti district has two hospitals (one government and one private), two Primary Health Centres, 10 *Ilaka* Health Posts and 38 Health Posts.58 The District Health Office provides health care services through these institutions with predetermined outreach activities, and its main challenge is an acute shortage of health professionals and paramedics; 66 positions, including medical doctors', are vacant across the district now. Despite many vacancies, the District Health Office does its best to place enough health professionals where needed, for example by temporary local hiring through VDC grants. Regular outreach and vaccination programs continue. 59 Maternal and child health care services, supported by 40 birthing centres are established across the district in addition to the other institutions and supported by GIZ and Care, are considered satisfactory now. (DoHS Annual Report 2011/12)

Epidemics and diarrhoeal diseases are common in Doti. Institutional preparedness mechanisms are in place to control such epidemics, and the District Health Office

strives to maintain the required stocks of medicines in all health institutions and undertakes regular awareness programs in the community. District and local Rapid Response Teams also meet and interact regularly.

Doti has one of the lowest contraceptive prevalence rates (24%) of all districts in Nepal, and less than a third (31%) of women deliver their children with assistance from a skilled.The sanitation coverage in Doti is 42%; the rest of the population does not have access to public or private toilets.Doti is among the districts with a high prevalence of stunting, Global and Moderate Acute Malnutrition, and anaemia in children under 5 years of age. Nearly a third of women of reproductive age are anaemic, and over a fifth of them are underweight. Only 43% of households use adequately iodised salt.(DoHS Annual Report 2011/12)

4.2 Cultural Settings

The study area of Doti district has a mixed community. The population comprises of casts like- Brahmin, Chhetri, Newar, Dalit etc. the above population mostly belongs to Hinduism. There are different temples for the people to get involved in religious activities.

4.3 Background of Pokhari VDC

Pokhari VDC is one of the remotely located VDC of Doti district with no black topped pitch roads. It is the last VDC and lies in border of Accham District. At the time of the 2011 Nepal census it had a population of 3321 residing in 848 individual households mostly belonging to Hindu religion.

There are one Healthpost and one High school and 2 secondary school and 6 primary schools in this VDC. Strong religious belief and traditional Chaupadi practice is visibally found here which is eliminating slowly. Water resource is minimum and mostly weather is cold and dry. Sanitation status is also very poor here with only 35% of HHs having toilet in their homes. During rainy season rough roads are blocked and transportation is much difficult. (CBS,2012)

CHAPTER V
SOCIO DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

This chapter is devoted to presentation of socio demographic results. Therefore, this chapter presents the analysis and interpretation of data obtained from mothers after taking personal interview with them by using semi-structured questionnaire. Inorderto facilitate the interpretations, the analyzed data were organized and presented in tables and figures according to the objectives of the study.

Analysis and interpretation of data have been organized in the following five parts. Section 4.1 describes about information related to socio demographic characteristics. Section 4.2 gives details about general Information related to Breastfeeding.

5.1 Socio-demographic Characteristics of Respondents

This section provides information about socio demographic characteristics of the respondents. It includes age, education, ethnicity, religion and family type which is a crucial characteristic of Respondent for this study to identify real problems.

5.1.1 Age background of the respondents

Age is an important background variable as it can affect mother's knowledge about complementary feeding practices which ultimately determine nutritional status of women and children in household.

Table 5.1.1: Age Group of Respondents

Age	**Number**	**Percentage**
Below 20	26	24.76
20-25	33	31.42
25-30	40	38.09
Above 30	6	5.71
Total	**105**	**100.0**

Source: Field Survey, 2012

The study reveals that one third of the respondent mothers (38.09%) were of 25-30 years' age group. About one fourth (24.76%) of respondent mothers are below 20 years as trend of early marriage and early age of delivery was found there due to low level of awareness and acceptance on demerits of early age at marriagewhereas only fewer (5.71%) of mothers were above 30 years of age which shows declining status of conceiving child after 30 due to most men of every household were found to migrate to India for labor work.

5.1.2 Education background of the respondents

Education is an important background variable as it can affect mother's knowledge about complementary feeding practices which ultimately determine nutritional status of women and children in household.

Table 5.1.2 Education group of respondents

Education	Number	Percentage
Informal education	6	5.71
Primary education	90	85.73
Secondary education	7	6.66
Higher education	2	1.9

Source: Field Survey, 2012

The study reveals that most (85.73%) of respondent mothers have completed primary level of education whereas fewer (1.9 %) have done higher education. The reason behind only few mothers have done higher studies supports the high trend of early marriage and less preference of parents on Girl education of that region.

5.1.3 Ethnicity of Respondent

Ethnicity is an important background variable due to cultural practices and differences associated with it and can affect mother's knowledge about complementary feeding practices which ultimately determine nutritional status of women and children in household.

Table 5.1.3 Ethnicity of respondents

Ethnicity	Number	Percentage
Brahmin	3	2.8
Chhetri	62	59.2
Dalit	37	35.2
Janajati	3	2.8
Total	105	100

Source: Field Survey, 2012

This study reveals that more than half (59.2%) belong to Chhetri and more than quarter (35.2%) belong to Dalit whereas fewer (2.8%) belong to janajati among respondent mothers. This data shows that Chhetri were the dominant caste in that region from early age.

5.1.4 Religion of Respondent

Religion is an important background variable due to cultural beliefs associated with it and can affect mother's knowledge about complementary feeding practices which ultimately determine nutritional status of women and children in household.

Table 5.1.4 Religion of respondents

Religion	Number	Percentage
Hindu	102	97.1
Others	3	2.9
Total	105	100

Source: Field Survey, 2012

This study reveals that most (97.1%) belong to Hindu whereas fewer (2.9%) belong to Other religion i.e. Christian among respondent mothers. Chaupadi Pratha (Menstruation Prohibition) is also visibly found among Hindu religion of the region.

5.1.5 Family Type of Respondent

Family type is also an important background variable due to shared responsibility and can affect mother's knowledge about complementary feeding practices which ultimately determine nutritional status of women and children in household.

Table 5.1.5 Family Type of respondents

Type of family	Frequency	Percentage
Nuclear family	64	60.9
Joint family	41	39.1
Total	105	100

Source: Field Survey, 2012

Respondents family type is very much important as it shapes the knowledge and practice of complementary feeding practices of mothers. Most respondent live innuclear family (60.9%) whereas 39.1 % live in Joint familyby family type which shows increasing trend of Nuclear family which reveals want of freedom after marriage to start own life in most households.

CHAPTER VI

MOTHERS KNOWLEDGEON COMPLEMENTARY FEEDING

This chapter deals with knowledge level of respondent mothers on various variables of complementary feeding practices. Correct level of knowledge has been regarded to WHO guideline onfrequency and amount of food to offer children 6–23 months of age who are breastfed on demand which is attached in annex.

6.1 Knowledge of mothers about necessity to give additional food after six months

Complementary food to children after six months is very crucial for promoting nutritional status of children as breastfeeding will not be enough for daily nutritional requirement and thus this study intends to measure knowledge of mothers about necessity to give additional food after six months.

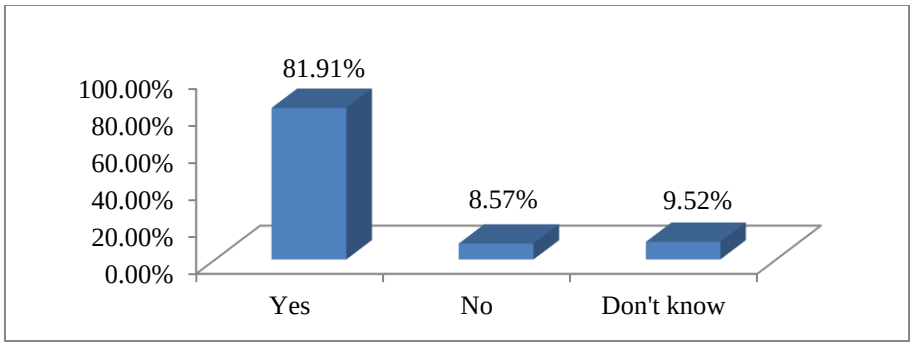


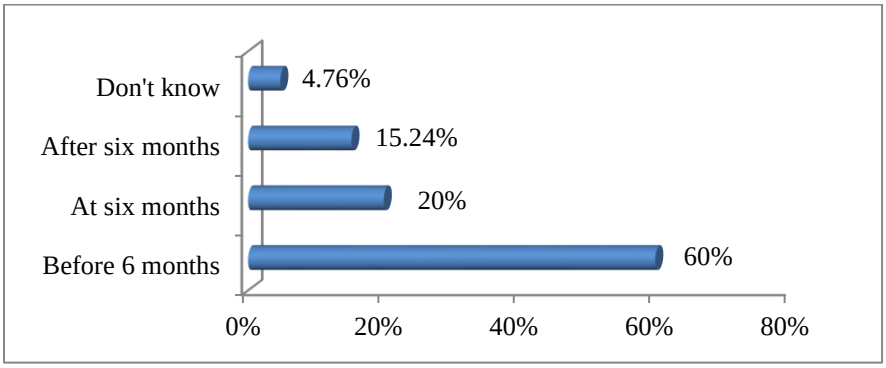
Figure 6.1: Necessity to give additional food after six months

Source: Field Survey, 2012

The study indicates the status of knowledge of mothers about necessity to give additional food to breast feeding child after the age of six months. Majority (81.91%) of mothers are aware that additional food is necessary to breast feeding children. This data reveals that there is cultural acceptance on necessity to give additional food after six months but also still 18 % respondents are not sure of it. This might be due to low literacy rate among girls in this region.

6.2 Knowledge of mother about proper age of initiation of complementary feeding

Proper age of initiation of complementary feeding is also very important for childrens' proper growth and development. Hence this study measures respondents knowledge on proper age for initiation of complementary feeding practices.



6.2 Knowledge of mother about proper age of initiation of complementary feeding

Source: Field Survey, 2012

The study suggests that the awareness level of mothers of Pokhari VDC about proper age of initiation of complementary feeding is poor. The result indicated that only 20% knew that six months is the proper age to start additional food other than breast milk. But also among all sample respondents still majority (80%) didn't knew the proper age of initiation of complementary food other than breast milk which is not a good indicator. This shows there is low literacy among girls of that region and most girl child are started feeding complementary food after five months which is found to be cultural taboo in that region. Usually in Girl child, complementary feeding starts in five months and boy child after six which shows high Gender discrimination among girl and boy at the early stage of life in this region.

6.3 Knowledge about amount of food to be given to child

Knowledge about right amount of food to be given to child is very important for growth and development of children which determine nutritional status of children. According to WHO's Practical guidance on the quality, frequency and amount of food to offer children 6–23 months of age who are breastfed on demand,½ to ¾ of a 250-ml cup/bowl should be given to 6-23 month per meal. Details is explained in annex. Thus this study has captured repondent mothers knowledge about amount of food to be given to child.

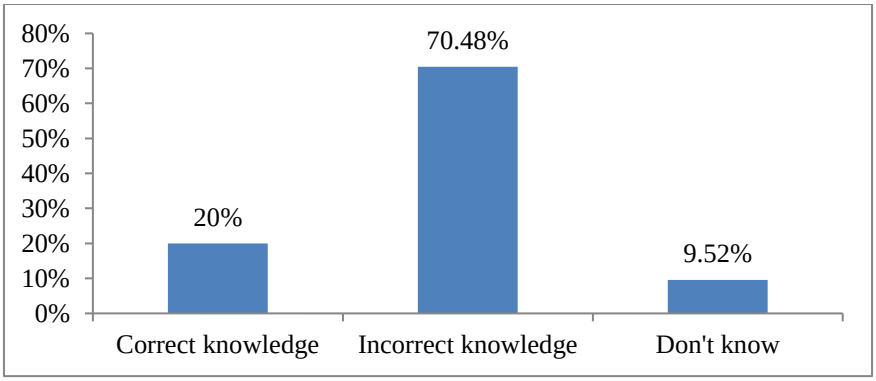


Figure 6.3: Knowledge about amount of food to be given to child

Source: Field Survey, 2012

Above bar chart shows the percentage of mothers having correct level of knowledge about amount of food to be given to child.The study showed that seven in every ten (70.48%) had incorrect knowledge about what amount of food to be given for child at six months. Also feeding the child has widely dependent on child rearers free time after work and until the child demands. Moreover most mothers were found to fed their child heavily in morning lunch and evening dinner so that child stomach will be full for whole day and night due to busy household and farm works of women mostly in nuclear family. This habit of feeding is irrationale to child's health and nutritional status.This might be the reason that the child in this area children suffer a lot from malnutrition.

6.4 Knowledge about frequency of feeding the child

Frequency about feeding the child is also important variable to measure mothers knowledge. According to WHO's Practical guidance on the quality, frequency and amount of food to offer children 6–23 months of age who are breastfed on demand,3 to 4 times at least frequently meals should be given to 6-23 months child to meet nutritional demand of children. Thus this study has included knowledge of repondent mothers about frequency of feeding the child.

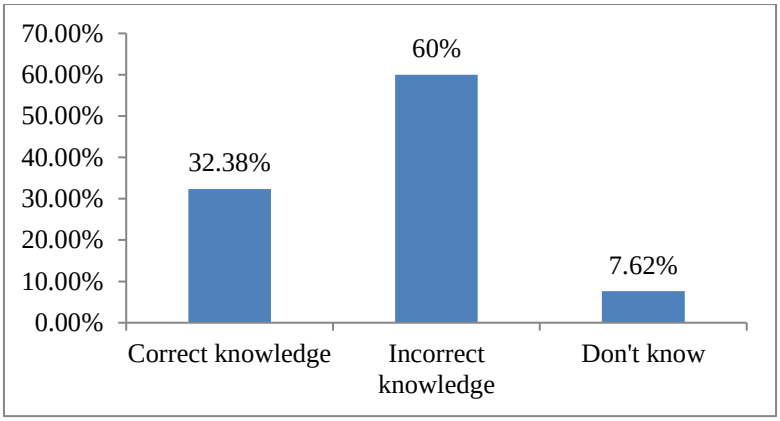


Figure 6.4: Knowledge about frequency of feeding the child

Source: Field Survey, 2012

Above bar chart shows the correct level of knowledge about frequency of feeding their child at study area.The study shows six in every ten (60%) of respondents had incorrect knowledge about frequency of feeding their children. This data reveals the low literacy of womens of the region and low level of awareness on frequency of diet of children.

6.5 Heard about Sarbottam pitho

Sarbottam pitho is a reference diet for children as complete complementary food and valued as reference diet which can meet the nutritional necessities of growing child of 6-23 months and this study includes mothers knowledge about Sarbottam pitho.

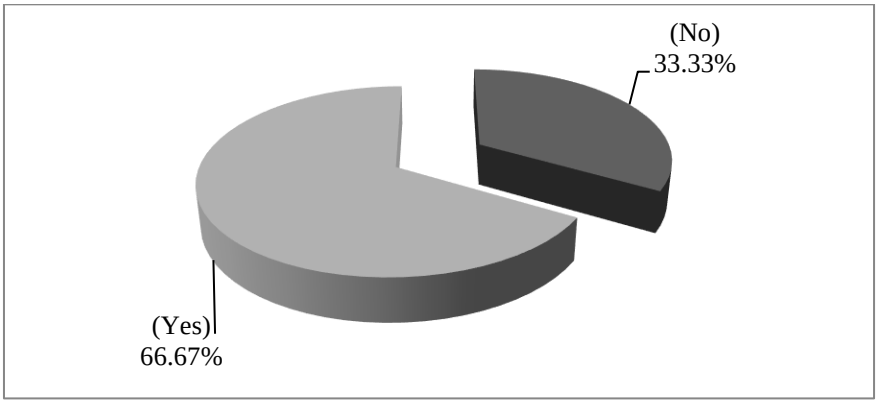


Figure 6.5: Heard about sarbottam pitho

Source: Field Survey, 2012

Above pie chart shows about percentage of mothers who have heard about Sarbottam Pitho at study area. Result from study reveals that six out of ten (66.67%) of

respondent mother knew about the preparation of *sarbottam pitho* and about 33.33 % didn't knew. This might be due to recently conducted Training on mothers of that region by Health facility to make Sarbottam Pitho.

6.6 Knowledge of necessity of hand washing before preparing food

Handwashing before preparing food to child is a crucial knowledge and practice behavior to promote nutrion status of children. Many children suffer from diarrheal diseases due to poor hygiene of mothers and food prepares. Thus this study has collected respondent mothers knowledge on necessity of handwashing before preparing food.

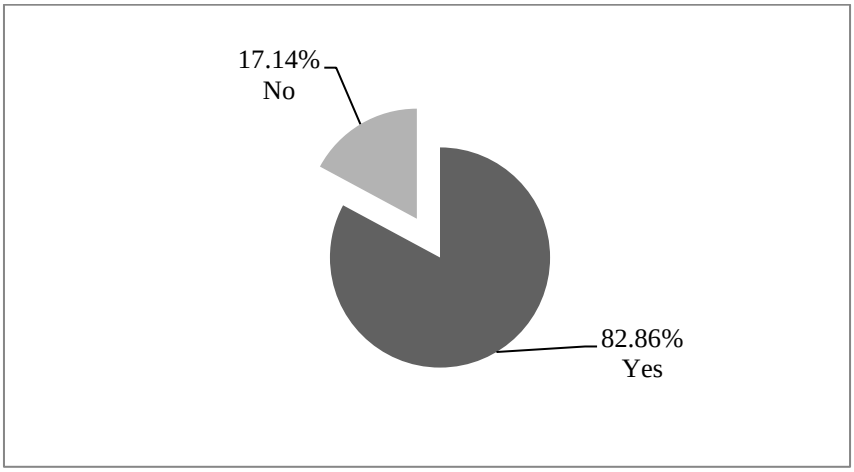


Figure 6.6: Knowledge of necessity of hand washing before preparing food

Source: Field Survey, 2012

Above pie chart describes about the knowledge of mothers about necessity of handwashing before preparing food for their children. The study indicated about the necessity of handwashing before preparing food to child that majority (82.86%) of respondent mothers knew the necessity of handwashing before preparing food to their children. Majority of mothers knew due to Water Sanitation and Hygiene related Open Defecation Campaign been running in that VDC.

6.7 Knowledge on child health problem due to carelessness during complementary feeding

It is also very crucial to know about knowledge on child health problem due to carelessness during complementary feeding amon repondent mothers. Thus this information is computed here.

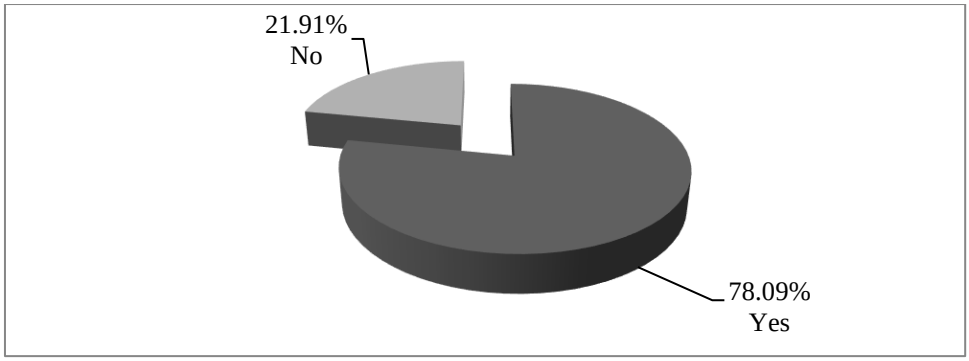


Figure 6.7: Knowledge on child health problem due to carelessness during complementary feeding

Source: Field Survey, 2012

Above pie chart reveals about the knowledge of mothers on child health problem due to carelessness during complementary feeding. About knowledge on child health problem due to carelessness during complementary feeding the study result showed that most (78.09%) of mothers were aware about the consequences. It's still surprising that 21.91 % still don't know about the health problems due to carelessness during complementary feeding. This might be due to low level of Litreacy among womens of this region.

6.8 Knowledge about kinds of health problems arising from careless feeding

Knowledge about kinds of health problems arising from careless feeding is one of the vital variable in this study. So this variable is included here in this section.

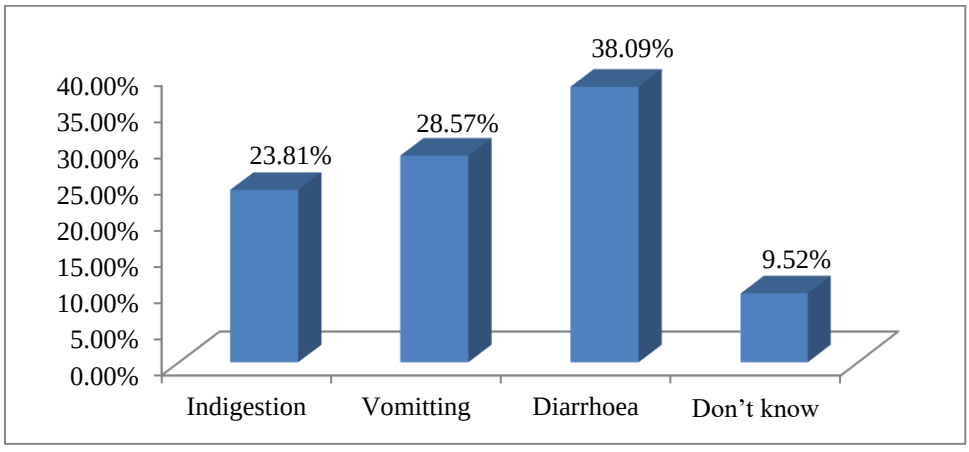


Figure 6.8: Knowledge about kinds of health problems arising from careless feeding

Source: Field Survey, 2012

Above barchart explains about mothers knowledge on kinds of health problems arising from careless feeding at study area. Among the mothers who had knowledge about child facing problems if mother is not careful about additional food given to child at proper time every four out of ten (38.09%) were aware that the consequences would be diarrhoea. Still very few (9.52 %) didn't knew about the consequences. This is due to the high prevalence of diarrhea that mothers has experienced on their own child.

6.9 Knowledge about preventing health problems arising from carelessness of mothers

Mothers having knowledge about ways of preventing health problems from carelessness of mothers is also crucial variable in this study and is computed here.

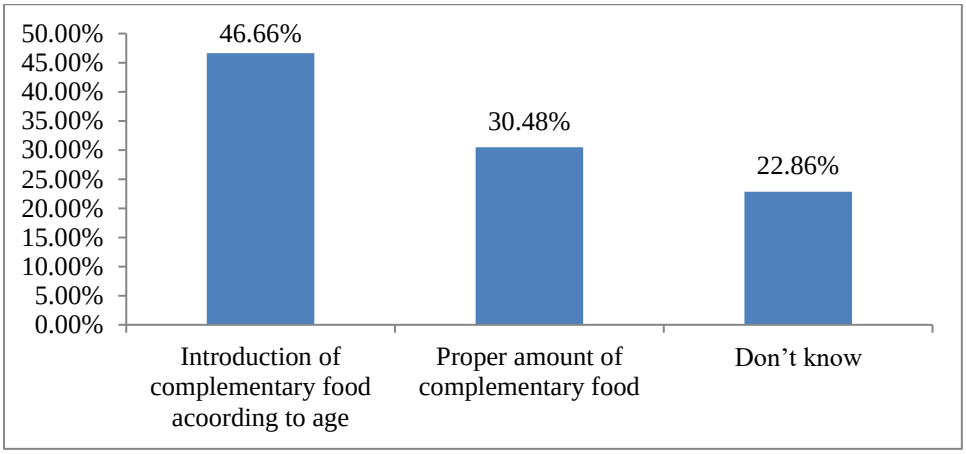


Figure 6.9: Knowledge about preventing health problems arising from carelessness of mothers

Source: Field Survey, 2012

Above bar chart shows about knowledge of study population about preventing health problems arising from carelessness of mothers at study area. About the knowledge level of mothers who knew about the consequences of not giving complementary food to their children in time to prevent such problem the study showed half (46.66%) of respondent answered that introduction of complementary food at appropriate age and according to age would be preventive method.Still 22.86 % of mothers donot know about preventing health problems arising from carelessness of mothers which indicates low level of educational status among mothers.

6.10 Knowledge about management of child health problem

Knowledge about management of child health problems is also vital information to compute in this study which is presented in above figure.

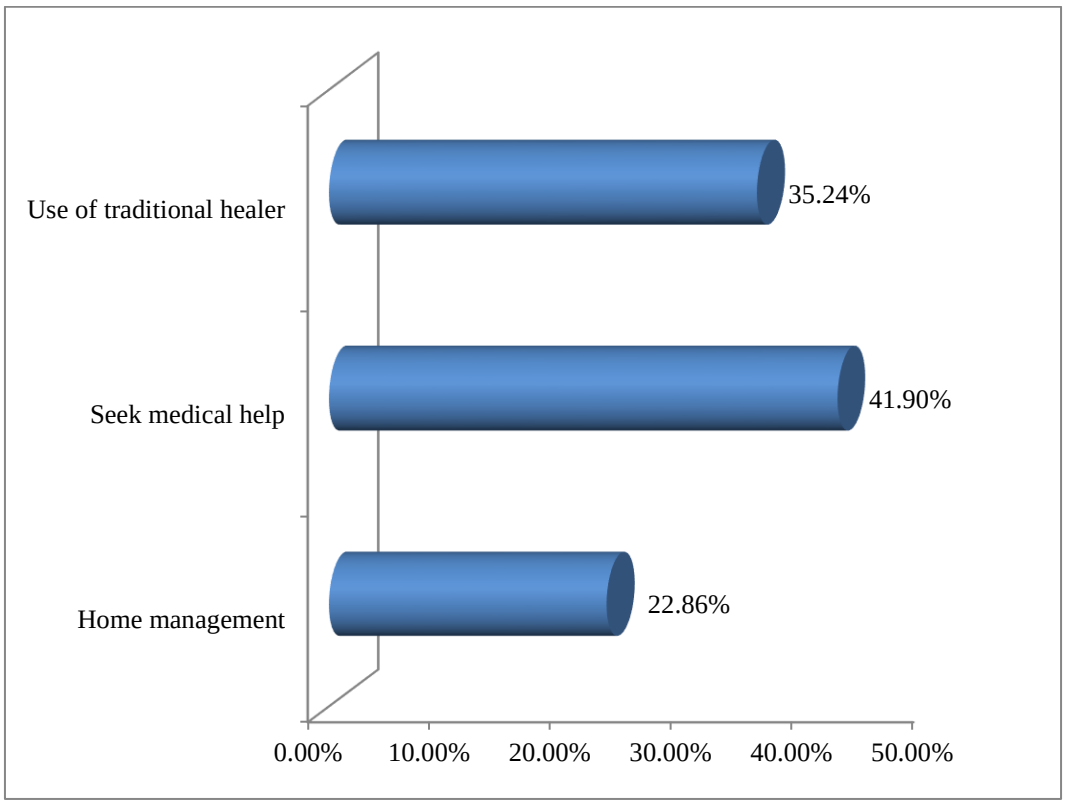


Figure 6.10: Knowledge about management of child health problem

Source: Field Survey, 2012

Above bar chart reveals the knowledge of mothers about management of child health problems among the study populations at Pokhari VDC. The study revealed that about management of such problems and four out of ten (41.90%) said they would seek medical help but also 3 out of ten (35.24%) still use traditional healer and two out of ten (22.86%) do home management. In this VDC due to geographical constraints and remoteness there is only one Sub-Health Post which is also poor in infrastructure and most people have to travel half an hour to more than 3 hours to reach there and also due to low literacy rate in this area, still people believe in traditional healer and witch practice.

6.11 Knowledge about benefits of complementary feeding

Benefits of complementary feeding is high and computation of knowledge level on this study is a must which is presented here.

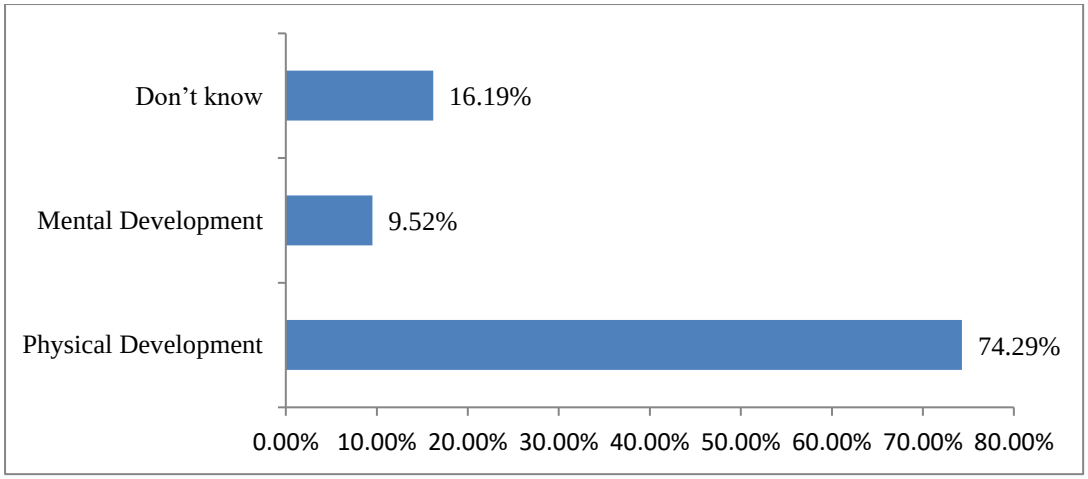


Figure 6.11: Knowledge about benefits of complementary feeding

Source: Field Survey, 2012

Above bar chart explains about the knowledge of mothers about benefits of complementary feeding at study area. About benefits of complementary feeding practices of respondents the study showed that 3/4th (74.29%) thought that it promotes physical development ,very few (9.52%) thought it also promotes mental development but still few (16.19%) did't knew about the benefit of complementary feeding practices. This shows women in this region mostly don't know several benefits of complementary feeding and thus not feeding their child correctly.

6.12 Knowledge about problems that can occur if complementary food is not initiated at proper age

Mothers knowledge on problems that can occur if complementary food is not initiated at proper age is also one of the vital variable for this study.

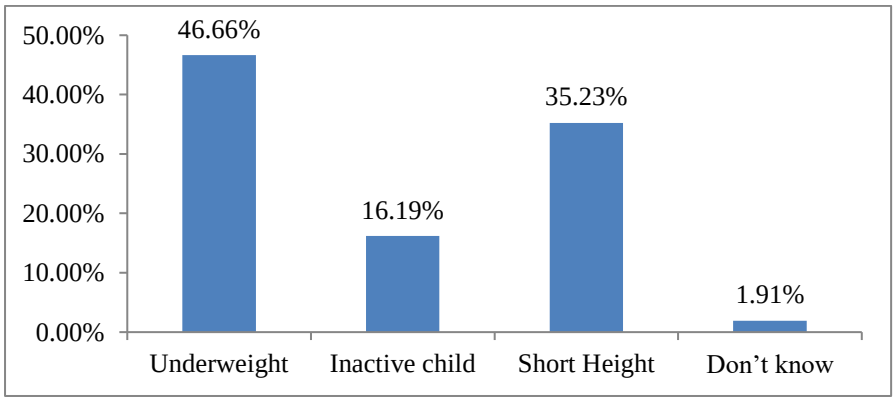


Figure 6.12: Knowledge about problems that can occur if complementary food is not initiated at proper age

Source: Field Survey, 2012

Above bar chart describes about knowledge of mothers about problems that can occur if complementary food is not initated at proper age. About knowledge level of mothers about problems that can occur if complementary food is not started at proper age half of respondents (46.66%) knew child would be underweight, four out of ten (35.23%) knew child would be short in height, few (16.19%) knew child would be inactive and still very few (1.91%) had no idea at all. Most mothers knew from their experience and seeing within the society that problems like underweight, inactive child and short height will occur if complementary food is not initiated in time.

6.13 Source of Information about complementary food

Source of information about complementary food is also one vital information in this study so is presented here.

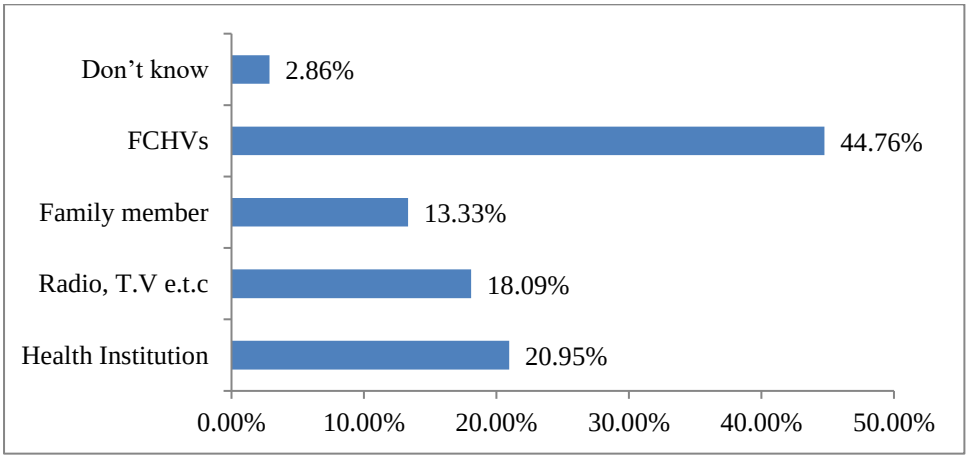


Figure 6.13: Source of Information about complementary food

Source: Field Survey, 2012

Above bar chart reveals about the source of information study population received about complementary food. The study revealed that half of mothers(44.76%) got information about complementary food from FCHVs, two out of ten (20.95%) from Health Institution, few (18.09%) from radio,tv and very few (13.33%) from family member. FCHVs are trained community volunteers who pass the various knowledge to mothers. Thus among mothers who are in touch of FCHV are found to have most informations through FCHVs.

CHAPTER VII

MOTHERS PRACTICES ON COMPLEMENTARY FEEDING

This chapter deals with presentation of findings about practices of respondent mothers about complementary feeding practices and its associated variables.Insufficient quantities and inadequate quality of complementary foods, poor child-feeding practices and high rates of infections have a detrimental impact on health and growth in these important years.Therefore, various important variables have been presented in this chapter related to complementary feeding practices.For correct level of practice, WHO's Practical guideline onfrequency and amount of food to offer children 6–23 months of age who are breastfed on demand has been followed as correct level of practicein this chapter which is attached in annex. Also 24 hours has been recalled minimizing recall bias error to record correct response of mothers.

7.1 Continuation of Breastfeeding Feeding Among Mothers.

Although breast milk do not meet all the nutritional requirement of children after 6 months it is recommended by WHO to breastfed on demand of children upto 2 to 5 years. Continuation of Breastfeeding practice after six months is a vital practice that is important in this study and thus is presented here.

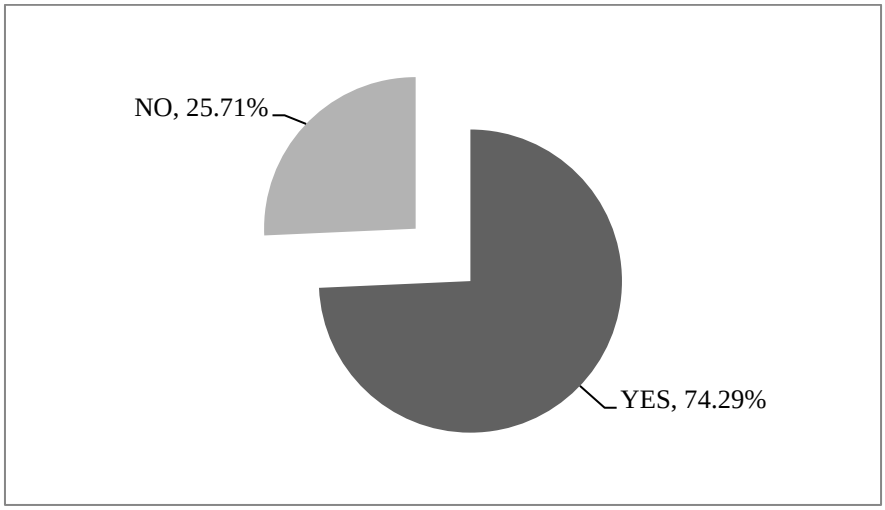


Figure 7.1: Continuation of Breastfeeding practice after six months

Source: Field Survey, 2012

Above pie chart explains about the brestfeeding practices after six months at study area. 3/4th (74.29%) of respondent mothers in this study were found to continue feeding. This might seems high due to research question about continuation of

Breastfeeding only as frequency has not been asked and children are found to left for several hours during day when mothers get busy in household and farm works and when she returns children demand for breastfeeding at evening.

7.2 Practice of food quantity given to child at main meal

Right amount of food quantity is required for good growtrh and development of child and important variable in this study.Even with optimum breastfeeding children will become stunted if they do not receive sufficient quantities of quality complementary foods after six months of age. Thus this information is presented in below figure.

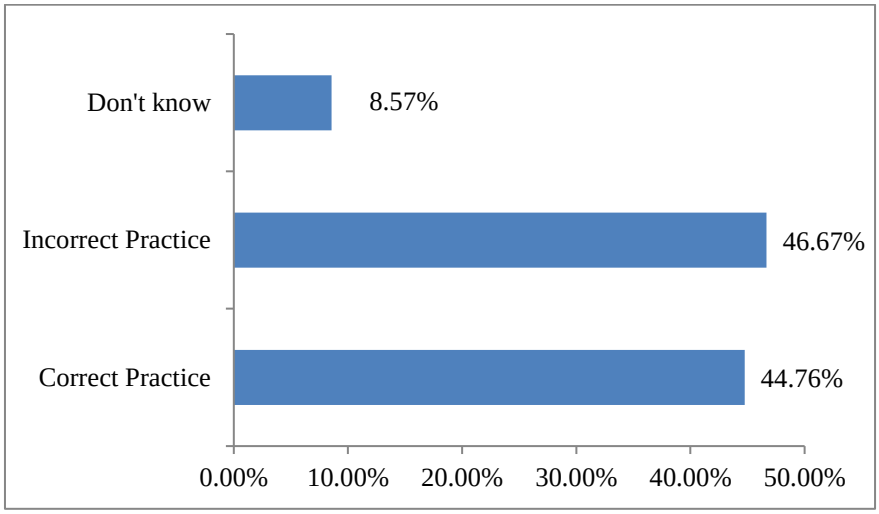


Figure 7.2: Practice of food quantity given to child at main meal

Source: Field Survey, 2012

Above bar chart showed that current practice of mothers of Pokhari VDC about quantity of food eaten at mailmeal. The result revealed half(46.67%) of respondent mothers had incorrect practice. Four out of ten 44.76 % had correct practice. This is due to mothers busy schedule of work and mothers low level of education in this area.

7.3 Practice of giving animal source product at main meal

Animal source food to child is crucial for childs' growth and development. Thus this study collects repondent mothers practice on giving animal source food.

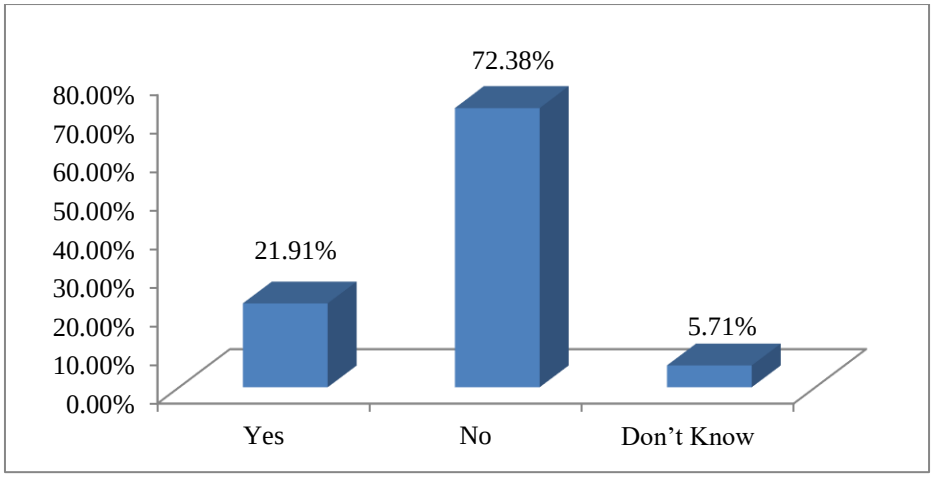


Figure 7.3: Practice of giving animal source product main meal

Source: Field Survey, 2012

Above barchart explains about the practices of mothers of giving animal source product at the main meal at study area. About the practice of mothers about child eating animal source the study result revealed that two out of ten (21.91%) of child had animal source food. This is due to food taboo in this area that animal source product might not be palatable to children.

7.4 Practice of giving dairy product to child at main meal

Dairy product is also important in complementary feeding ingredient to a child. Thus this variable is computed and presented here.

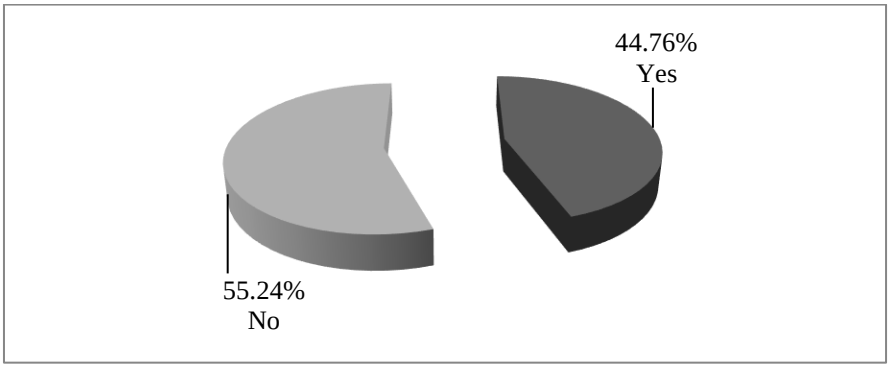


Figure 7.4: Practice of giving dairy product to child at main meal

Source: Field Survey, 2012

Above pie chart shows the practices among mothers about giving dairy product to child at main meal. In this study four out of ten (44.76 %) of mothers were found to

feed their child dairy product. It was visibally seen that food taboo especially for dairy product and animal source food was present in this area.

7.5 Practice of giving grain to child at main meal

Grain is important source of protein and should be included in children's diet and the information about practice of giving diet containing grain is computed here.

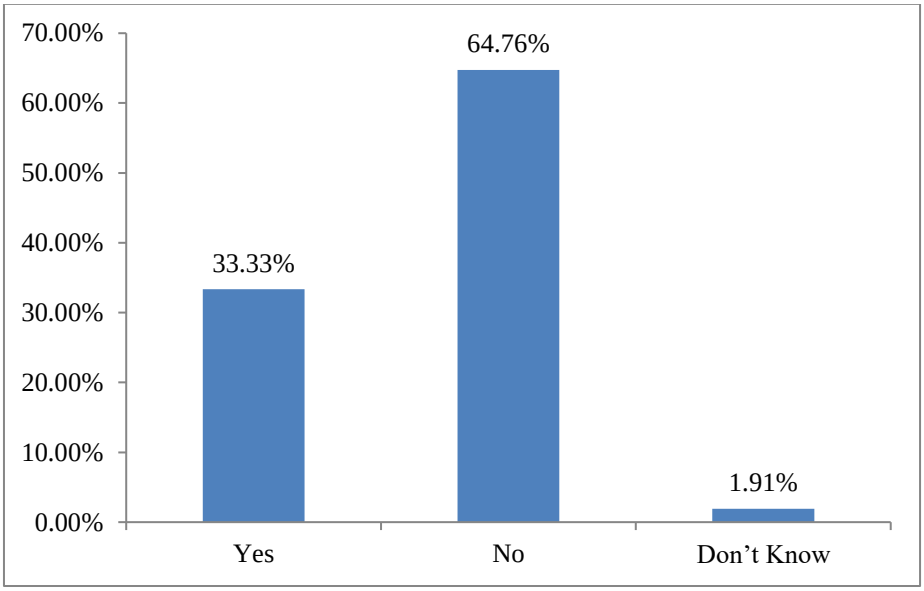


Figure 7.5: Practice of giving grain to child at main meal

Source: Field Survey, 2012

Above bar chart explains about the practices of mothers about giving grain to child at main meal at study area. About the current practice of feeding grains to child, the study result showed that three out of ten (33.33%) of mothers gave grains to their child in the meals. This is also due to the food taboo and cultural food habits of that area and perception of mothers that children do not like grains and can't digest.

7.6 Practice of giving vegetable food to child at main meal

Vegetable food is also important in complementary feeding. Generally 4 categories of food like protien rich, carbohydrate rich and vitamin rich vegetables should be included in children's main diet regularly and practice regarding this is presented here.

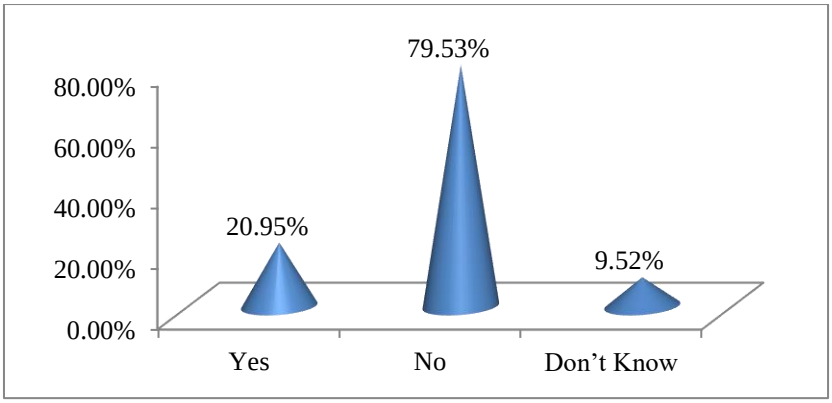


Figure 7.6: Practice of giving vegetable food to child at main meal

Source: Field Survey, 2012

Above bar chart describes about the mothers practices of giving vegetable food to child at main meal. In this study, it was found that few (20.95%) of mothers included vegetables in child's meal as practice of feeding practice. This might be due to unfertile land and less production in this area which has set food culture having no vegetables in main diets.

7.7 Use of water during preparation of food for child

Water use during preparation of food for child might also affect children's health. Thus, this variable is important in this study.

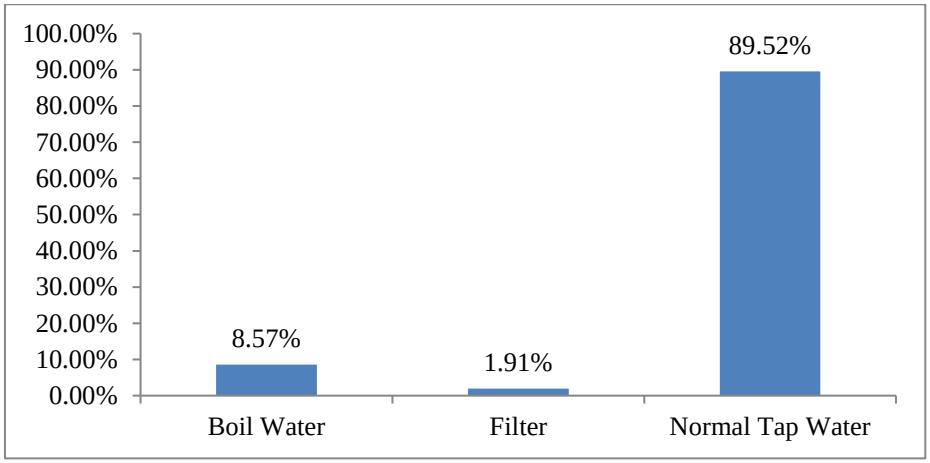


Figure 7.7: Use of water during preparation of food for child

Source: Field Survey, 2012

Water quality can also affect child's health so this information is presented herre. Above bar chart shows about the practice of using water during preparation of food for child. During preparation of food in this study, majority (89.52%) of mothers used normal tap water where as only very few (8%) used boil water during preparation of

food for the child.This is due to most household still use wood fire in house for fuel and water facility is very poor in this area.

7.8 Practice of hand washing with soap water before preparation of food

Hygiene behavior of fodd prepare and mother can also affect children's health so information regarding this is presented here.

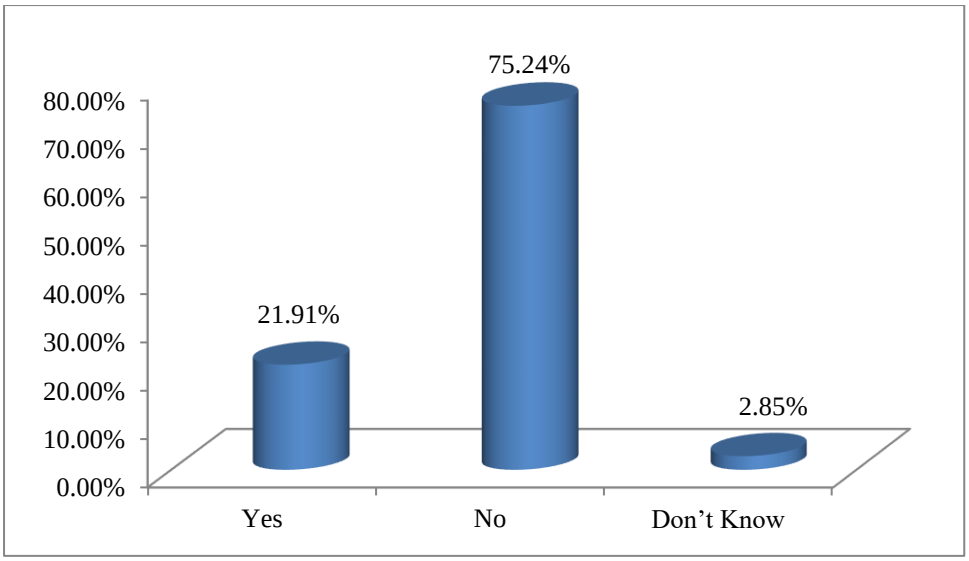


Figure 7.8: Practice of hand washing before preparation of food with soap water

Source: Field Survey, 2012

Above bar chart explains about the practice of handwashing practices with soap and water before preparation of food at study area. During the study it was found that two out of ten (21.91%) of mothers washed their hand before preparation of food for their child. This is due to scarcity of water and mothers perception on why to wash hands before cooking food.

CHAPTER VIII

ASSOCIATION BETWEEN SOCIO-DEMOGRAPHIC FACTORS WITH KNOWLEDGE AND PRACTICE OF COMPLEMENTARY FEEDING

This chapter explains about relationship between socio-demographic variables with knowledge and practices of complementary food revealed about study population at study area.From sociological point of view this chapter tries to explain the positive and negative association between sociological factors with various important variables of knowledge and practices regarding complementary feeding practices among respondent mothers. Those variables whose chisquare test could be computed and those which are crucial variables are only presented here

8.1 Association of Socio-demographic factors with mother knowledge on necessity to give additional food after six months

Necessity to give additional food after six months is mandatory and every mother or parents must know that additional food is needed in right amount for growth and development of child therefore association of Socio-demographic factors with mother knowledge on necessity to give additional food after six months is crucial factor for this study.

Table 8.1: Association of Socio-demographic factors with mother knowledge on necessity to give additional food after six months

			n=105	
Characteristics	**Yes**	**No**	**Chi-square value**	**p-value**
Religion			-	-
Hindu	84	18		
Others (Christian, Buddhist)	2	1		
Ethnicity				
Upper caste group	57	8	3.86	0.049
Disadvantage group	29	11		

Family Type				
Nuclear	47	17	7.93	0.160
Joint	39	2		
Age of Respondent				
<20 years	12	14	29.89	0.001***
>20 years	74	5		
Education				
Illiterate	60	18	5.08	0.024
Literate	26	1		

Source: Field Survey, 2012

**p value is less than 0.05, so there is high statistical significance (p=<0.001)

Above table reveals the significant relationship between of Socio-demographic factors with mother knowledge on necessity to give additional food after six months about mothers of study area. This study suggested that age of respondent (p-value=0.001) was statistically significant with mothers' knowledge on additional food to give to child after six months. From this it can be interpreted that age factor of mother can influence necessity to give additional food after six months. Also, mothers of less age before 20 have likely chance of having not enough proper knowledge on complementary feeding than mothers of more age or after 20.

8.2 Association of Socio-demographic factors with knowledge of mothers about correct amount of food to be given to their child

Association of Socio-demographic factors with knowledge of mothers about correct amount of food to be given to their child is also very crucial for this study as the study is trying to reveal the significance influence of these variables in knowledge level of complementary feeding practices.

Table 8.2: Association of Socio-demographic factors with knowledge of mothers about correct amount of food to be given to their child

			n=105	
Characteristics	**Yes**	**No**	**Chi-square value**	**p-value**

Religion			-	-
Hindu	19	83		
Others(Christian, Buddhist)	2	1		
Ethnicity				
Upper cast group	15	50	1.01	0.314
Disadvantage group	6	34		
Family Type				
Nuclear	7	57	8.42	0.134
Joint	14	27		
Age of Respondent				
<20 years	3	23	1.55	0.907
>20 years	18	61		
Education				
Illiterate	3	75	49.47	<0.001**
Literate	18	9		

Source: Field Survey, 2012

**p value is less than 0.05, so there is high statistical significance (p=<0.001)

Above table describes about significant relationship between Socio-demographic factors with knowledge of mothers about correct amount of food to be given to their child at study area. The study suggested that there was no association between family type and age of the respondents where as there is high degree of positive relationship between education and correct amount of food to be given to their child at study area. A study in Pakistan among the 500 mothers having infants attending pediatric outpatient department showed that a positive relationship was found between the nutritional status of infants and educational status of mothers ($P < 0.001$). The study revealed that most infants with evidence of malnutrition belonged to the mothers with virtually no school education. From this it can be interpreted that education level of mother's can influence correct practice of mothers to give correct amount of food to their child.

8.3 Association of Socio-demographic factors with correct level of knowledge of mothers about frequency of times to feed their child

Frequency of complementary feeding is also very important variable in this study as WHO recommends at least 4 times feeding of right amount for proper child feeding and this study is tries to reveal the significant relationshipbetween Socio-demographic factors with correct level of knowledge of mothers about frequency of times to feed their child.

Table 8.3: Association of Socio-demographic factors with correct level of knowledge of mothers about frequency of times to feed their child

			n=105	
Characteristics	**Yes**	**No**	**Chi-square value**	**p-value**
Religion			-	-
Hindu	33	69		
Others (Christian, Buddhist)	1	2		
Ethnicity				
Upper cast group	26	39	4.52	0.033
Disadvantage group	8	32		
Family Type				
Nuclear	10	54	21.01	0.008
Joint	24	17		
Age of Respondent				
<20 years	6	20	1.366	0.927
>20 years	28	51		
Education				
Illiterate	12	66	40.02	<0.001**
Literate	22	5		

Source: Field Survey, 2012

**p value is less than 0.05, so there is high statistical significance (p=<0.001)

Above table explains about the significant relationship between Socio-demographic factors with correct level of knowledge of mothers about frequency of times to feed their child. This study reflected that there was statistically significant association between family type (p<0.008) with correct level of knowledge of mothers about

frequency of times to feed their child. It can be interpreted that family type could influence the correct level of knowledge about frequency of times to feed to the child.

8.4 Association of socio-demographic factors with correct level of practice of mothers about food quantity given at main meal the day before

Right quantity of food and its socio demographic affecting factors are very important in this study thus computed here.

Table 8.4: Association of socio-demographic factors with correct level of practice of mothers about food quantity given at main meal the day before

			n=105	
Characteristics	**Yes**	**No**	**Chi-square value**	**p-value**
Religion			-	-
Hindu	46	56		
Others (Christian, Buddhist)	1	2		
Ethnicity				
Upper cast group	42	23	27.20	<0.001
Disadvantage group	5	35		
Family Type				
Nuclear	13	51	39.64	0.001**
Joint	34	7		
Age of Respondent				
<20 years	10	16	0.56	0.989
>20 years	37	42		
Education				
Illiterate	25	53	19.82	0.001
Literate	22	5		

Source: Field Survey, 2012

**p value is less than 0.05, so there is high statistical significance (p=<0.001)

Above table explains about the significant Association of socio-demographic factors with correct level of practice of mothers about food quantity given at main meal the day before at study area. Table 10 reflects that family type (p-value=0.018) was statistically significant with correct level of practice of mothers about food quantity

given at main meal the day before. It can be interpreted that family type could affect correct level of practice of mothers about food quantity given at main meal.

8.5 Association of socio-demographic factors with correct level of practice of mothers with about hand washing with soap water before preparation of food

Millions of children die annually due to various communicable diseases and poor hygiene. Thus, mother awareness as well as practice on handwashing with soap water before preparation of food determines the nutritional status of children and thus its association with variables is highly important for this study.

Table 8.5: Association of socio-demographic factors with correct level of practice of mothers with about hand washing with soap water before preparation of food

			n=105	
Characteristics	**Yes**	**No**	**Chi-square value**	**p-value**
Religion			-	-
Hindu	21	81		
Others (Christian, Buddhist)	2	1		
Ethnicity				
Upper cast group	22	48	0.09	0.764
Disadvantage group	10	25		
Family Type				
Nuclear	5	59	19.01	0.001
Joint	18	23		
Age of Respondent				
<20 years	8	18	1.6	0.901
>20 years	15	64		
Education				
Illiterate	5	73	42.57	<0.001**
Literate	18	9		

Source: Field Survey, 2012

**p value is less than 0.05, so there is high statistical significance (p=<0.001)

Above table describes about association of socio-demographic factors with correct level of practice of mothers with about hand washing with soap water before

preparation of food at study area. The study reflected that there was statistically significant relationship between family type (p-value=0.001) with correct level of practice of mothers about hand washing with soap water before preparation of food. It can be interpreted that handwashing practices can be influenced by family type among mothers.

CHAPTER IX

SUMMARY, CONCLUSION AND SUGGESTION FOR FURTHER STUDIES

The chapter presents summary of this study and major findings and conclusion along with suggestions for further studies.

9.1 Summary

The study was conducted entitled "Complementary Feeding practices among mothers having 6-24 months' children in Pokhari VDC of Doti District." Nutritional status of women and children are poor in Nepal and malnutrition is a common issue related to women and child health problem in Nepal and this issue has contributed a big percentage in maternal and child deaths annually. The objective of the study was to find out the level of knowledge & practice of complementary feeding practices. The specific objectives were to assess the knowledge on complementary feeding practices, assess the practices on complementary feeding practices and to identify the association of socio-demographic factors with complementary feeding knowledge & practice.

The study was guided by Health Belief Model Theory, Theory of Social Suffering and Theory of Planned Behavior. The study is related to medical anthropology but it does not study about curative aspect of it. It only focuses on knowledge, awareness, beliefs, attitudes and practice of complementary feeding among mothers having children under 6 to 24 months. Study design was cross sectional descriptive study. Study type was mainly quantitative studies. The study population of the research were mothers having children under 6 to 24 months of Pokhari VDC, Doti. Data collection technique used were interview schedule.

Major Findings

This study documented and explored key findings in knowledge and practice regarding complementary feeding practices.

- Four out of ten (38.09%) respondent mothers were of 25-30 years' age group. Half of respondents belong to Chhettri (59.2%) by ethnicity, majority (97.1%) were Hindu by religion, nuclear family six out of ten (60.9%) by family type.

- Majority of respondents (96%) gave birth to their child at home and majority of respondents (98%) didn't go for ANC checkup during pregnancy. Thus, while assessing the level of knowledge it was found that majority (81.91%) of the mothers were aware about the necessity of giving additional food to the child and two out of ten (20%) knew it differs according to the age of the child.
- Majority of the mothers (80%) weren't aware that 6 months was the right period of time to start additional food. Only few 20% of the mothers said correctly the amount of food that can be given to the 6 months' child. Complementary feeding practices like amount of food given correctly to the child, frequency by respondent mothers in Pokhari VDC were 20 percent.
- Three fourth (74.29%) of respondents were found continuing breast feeding during the study. Uses of boil water during preparation of food were very few (8.57%) and hand washing practices before feeding were found 21.91 percent only.
- Analyzing various socio-demographic variables family type (p-value=0.001) were significantly significant with correct level of knowledge of mothers about density of food to be given to their child.
- In this study, family type (p-value=0.001) too showed positive relation with correct level of practice of mothers about food quantity given at main meal the day before. It was also found in this study that family type (p-value=0.001) with correct level of practice of mothers about hand washing with soap water before preparation of food showed positive relationship.

9.2. Conclusion

The study was focused to find out status of level of knowledge and practice of complementary feeding practices among mothers having 6-24 months' children in Pokhari VDC of Doti districtalong with possible association between respondents and socio demographic factors. Pokhari VDC is one of the representative VDC of rural hard to reach area of Nepal and status found by this research is fragile. During pregnancy trend for Antenatal checkup were also found low as access to health service was poor and lack of birthing center and trained health personal. Huge gap

between knowledge of complementary feeding and practices applied for complementary feeding was found which depicts having knowledge is not enough but it should be practiced.Also, correct level of knowledge of frequency to be given to child among mothers were found very low and various cultural practices and beliefs has affected for this kind of practice. However, awareness level on importance of handwashing during feeding child, health problems arising due to poor hygiene and management of child health problems was found impressive. This might be due to the observation or recall of similar problemsfaced by them in past.Frequency, Quantity and animal source protein feeding practice was found poor due to inadequate knowledge, low literacy, early age at marriage and early age of pregnancy.

There was significant relationship found between Socio-demographic factors like age, education, family type with mother knowledge on necessity to give additional food after six months, knowledge of mothers about correct amount and frequency of food to be given to their child about mothers of study area. It suggests level of education and age determines the knowledge and practice of complementary feeding practices and family type can influence the knowledge and practice of complementary feeding. In joint family, older generation could teach good practices based on their learnings. Therefore, these variables should be focused while designing awareness activities and ensure full involvement of family members. Other association were not found significant enough to compute relation due to limitation of the study i.e. small sample size.Thus, this study has explored various areas of complementary feeding knowledge and practices and its association with socio demographic factors and has shown various status that need to be improved to promote nutritional status of children under 2 years.

9.3 Suggestion for further study

1) The study was conducted in Pokhari VDC of Far western region of Nepal at Doti district and sample size of the study is small so similar study could be done using larger sample in different setting for greater generalization.
2) It will be better to conduct the population survey study in the community setting so that complementary feeding practices could be completely observed at overall and provide better validity to the study.

3) From reviewing different literature, it is concluded that there are very limited studies conducted regarding complementary feeding practices in rural part of Nepal like Doti district where prevalence of malnutrition is high so researcher and concerned institution should increase resources as well as research in these areas.

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Appendix

Interview schedule

Tribhuvan University

Prithvi Narayan Campus

Faculty of Humanities and Social Sciences

Department of Anthropology

Researcher is a student of M.A Anthropology 2nd year from Prithvi Narayan Campus, Pokhara of Tribhuvan University. This study is being conducted as the partial fulfillment of requirement for M.AAnthropology. The purpose of this interview is to find how much the mother is aware about complementary feeding and finding significant association between social factors with knowledge and practices regarding complementary feeding.

Direction: See the references for finding the correct knowledge and practice of Questions 19 to 22 and 36 and 37. The researcher will appreciate your help in answering the questions and would like to assure you that your responses will be kept confidential and used only for the purpose of study. Your identity will not be disclosed. Your answers to the question will be marked by the researcher as you respond.

Date: ---------- Code No: ----------

Part I : General Information about Breast Feeding

1. Date of birth of child……....
2. Age of child in months …….. ……..
3. What was your child's birth weight …….
4. What is the order of birth of this child? …….. .
5. Has your child had any infection for past two weeks?
   a. Yes [ ] b. No [ ] c. Don't Know [ ]
6. Has your last child ever been breastfed?
   a. Yes [ ] b. No [ ] c. Don't Know [ ]

7. When did you start breastfeeding this child?

   a. The very first day after delivery [ ] b. The second day [ ]

   c. The third day [ ] d. The fourth day [ ] e. Don't Know [ ]

8. If breastfeeding began on day one, please indicate the hours after delivery Breastfeeding commenced?

   a. Within 30 minutes after birth [ ] b. Within one hour after birth [ ]

   c. Within two hours after birth [ ] d. Don't Know [ ]

9. Are you still breastfeeding your child?

   a. Yes [ ] b. No [ ]

   If the answer is **no**, what age did you stop breastfeeding the child?

   Specify…….. (Months)

10. Do you give water to your child?

    a. Yes [ ] b. No [ ] c. Don't Know [ ]

    If 10 is **yes**, at what age of the child did you start?

    Specify..... (Months)

11. Have you started giving complementary foods to the child?

    a. Yes [ ] b. No [ ] c. Don't Know [ ]

    If **yes** to 11, at what age of the child did you start?

    Specify ……. (Months)

12. Do you give the child breast milk anytime the child asks for?

    a. Yes [ ] b. No [ ] c. Don't Know [ ]

13. On the average how many times do you breastfeed your child in a day?

    b. Two times [ ] c. Three times [ ] d. Four times [ ]

    e. Five times [ ] f. Six times [ ] f. Seven times [ ]

    g. Don't Know [ ]

14. How many times do you breastfeed during the night?

    .....

Part II: KNOWLEDGE OF MOTHERS ABOUT COMPLEMENTARY FEEDING PRACTICES

15. Is it necessary to give additional food to the breast feeding child?

    a. Yes [ ] b. No [ ] c. Don't know [ ]

16. If yes, what is the proper age of starting additional food other than breast milk?

    a. Before 6 months [ ] b. At 6 months [ ]

    c. After six months [ ] d. Don't Know [ ] e. ……..months

17. In your opinion do the type of food given depends upon age of the child?

    a. Yes [ ] b. No [ ]

18. What consistency of food should be given at 6 months when additional food other than breast milk starts?

    a. Soft kheer [ ] b. Rice and dhal [ ] c. Soft jaulo [ ]

    d. Fruits pieces [ ] e. Sarbottam pitho ko lito [ ] f. Don't Know [ ]

19. What amount of food should be given at a feeding to your…… months child?

    a. Correct knowledge [ ] b. Incorrect knowledge [ ] c. Don't know [ ]

20. What number of times (frequency) do your child need to fed per day?

    a. Correct knowledge [ ] b. Incorrect knowledge [ ] c. Don't know [ ]

21. What density of food should be given to your child?

    a. Correct knowledge [ ] b. Incorrect knowledge [ ] c. Don't know [ ]

22. What consistency of food should be given to your child?

    a. Correct knowledge [ ] b. Incorrect knowledge [ ] c. Don't know [ ]

23. Do you know to prepare Sarbottam pitho?

    Yes [ ] No [ ]

24. If yes describe …… a. Correct [ ] b. Incorrect [ ]

25. Is it necessary to wash hand before preparing food?

    Yes [ ] No [ ]

26. 26. Can child face any problem if mother is not careful about giving additional food?

    Yes [ ] No [ ]

27. If yes, what problem can arise?

    Indigestion [ ] Vomiting [ ] Diarrhea [ ]

    Tuberculosis [ ] others (specify) ……..

28. How can you prevent such problem?

    Introduction of additional food according to age [ ]

    Proper amount of additional food [ ]

    Introduce large amount of additional food [ ]

    Others……..

29. How the problem can be managed?

    Home management [ ] Seek medical help [ ]

    Use o traditional healer/others (specify) ……..

30. What are the benefits of complementary feeding?

    Physical development [ ] mental development [ ]

    Others (specify)……

31. What health problems can occur to search child when additional food is not started at proper age?

    Under weight [ ] Inactive child [ ] Short height [ ]

    others (specify)……

32. From where did u get information about additional food?

    Health institution [ ] Radio, T.V etc [ ]

    Family members [ ] others (specify)……..

Part-III: CURRENT PRACTICE OF COMPLEMENTARY FEEDING AMONG MOTHERS

33. What was the age of your last child at weaning? ..... Months
34. How many times do you give the child complementary foods? .....times
35. Are you continuing Breast feeding? a) Yes b) No
36. Quantity of food eaten at main meal yesterday? .....cup

    a. Correct Practice [ ] b. Incorrect Practice [ ] c. Don't know [ ]

37. How many meals of thick consistency did the child eat yesterday? .....meals

    a. Correct Practice [ ] b. Incorrect Practice [ ] c. Don't know [ ]

38. Child ate an animal-Source food yesterday? a) Yes [ ] b) No [ ] c. Don't Know[ ] a. If yes specify……. (Meat/fish/egg)
39. Child ate dairy product yesterday? a) Yes b) No c. Don't Know [ ]

    a. If yes specify……

40. Did child ate grains yesterday? ..... a) Yes b) No c. Don't Know [ ]
    a. if yes specify…….. (Pulses/nuts/seeds)
41. Did your child eat vegetable yesterday? ..... a) Yes b) No c. Don't Know [ ]
    a. If yes specify……. (Yellow fruits/green leaves/vegetables)
42. Does child has his/her own bowel or ate from family pot? a) Own bowel b) family pot
43. Who prepare food for child? .....
44. Use of water during preparation of food? a) Boil [ ] b) filter [ ] c) normal [ ]
45. Hand washing before feeding? a. Yes [ ] b. No [ ] c. Don't Know [ ]

Part III: DEMOGRAPHIC CHARACTERISTICS

46. What is your Family type? a. Nuclear [ ] b. Extended [ ]
47. What is your caste?

    a. Dalit [ ] b. Disadvantage Janajati [ ] c. Relatively advantage Janajati [ ]

    d. Upper Caste [ ] e. Others [ ]

48. What is your religion? a. Hindu [ ] b. Christian [ ] c. Buddhist [ ] d. Muslims [ ] e. Others [ ]
49. How many people are there in your family?.....
50. What is your family's main source of income?
    a. Agriculture [ ] b. Service [ ] c. Business [ ] d. Remittance [ ] e. Others……..
51. Food is enough for? a. Less than 6 months [ ] b. 6 to 12 months [ ] c. more than 12 months [ ] d. Don't Know [ ]

Part-IV : Maternal Factors

52. What is your age ……. (Years)
53. What was your age at marriage.....?
54. At what age did you became first pregnant? .....
55. Are you literate? a.Yes [ ] b. No [ ]

    If yes, what is your highest level of education attained?.....

56. Occupation of mother

    a. Agriculture [ ] b. Labor [ ] c. Service [ ]
    d. Business [ ] e. House wife [ ]

57. How many children (still birth, dead or alive) have you delivered?

    a. One [ ] b. Two [ ] c. Three [ ] d. Four [ ] e. Five [ ]
    f. Others (specify).....

58. What was your age while having latest child? .....
59. Where did you gave birth to your latest child? a. Health institution [ ] b. Home [ ]
60. Did you went for ANC visits? a. Yes [ ] b. No [ ]

    If yes, then times of ANC visits

    a. 1 times [ ] b. 2times [ ] c. 3 times [ ] d. 4 times [ ]
    e. > 4 times [ ] f. Didn't go [ ]

THANK YOU A LOT

WHO Practical guideline on the frequency and amount of food to offer children 6–23 months of age

Age	Energy needed per day in addition to breast milk	Frequency	Amount of food an average child will usually eat at each meal
6–8 months	200 kcal per day	2–3 meals per day Depending on the child's appetite, 1–2 snacks may be offered	Start with 2–3 tablespoonfuls per feed, increasing gradually to ½ of a 250 ml cup
9–11 months	300 kcal per day	3–4 meals per day foods, and foods that baby can pick up Depending on the child's appetite, 1–2 snacks may be offered	½ of a 250 ml cup/bowl
12–23 months	550 kcal per day	3–4 meals per day Depending on the child's appetite, 1–2 snacks may be offered	¾ to full 250 ml cup/bowl