Perceptions of Adolescent Mothers on Feeding and Nutrition of their Children Aged 0-3 Years in Rural Bangladesh

By

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A thesis submitted to Brac Institute of Educational Development, Brac University in partial fulfillment of the requirements for the degree of
Master of Science in Early Childhood Development

Brac Institute of Educational Development
Brac University
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Declaration

It is hereby declared that

1. The thesis submitted is my own original work while completing degree at Brac University.

2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.

3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.

4. I have acknowledged all main sources of help.

Student's Full Name & Signature:

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Approval

The thesis titled "Perceptions of Adolescent Mothers on Feeding and Nutrition of their Children Aged 0-3 Years in Rural Bangladesh" submitted by Faiza Farzana, ID: 20155001 of Fall, 2021 has been accepted as satisfactory in partial fulfillment of the requirement for the degree of Masters of Science in Early Childhood Development on 13st December, 2021.

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Ethics Statement

Title of Thesis Topic: Perceptions of Adolescent Mothers on Feeding and Nutrition of their Children Aged 0-3 Years in Rural Bangladesh

Student Name: Faiza Farzana

1. Source of population: Adolescent mothers having children of 0-3 years living in rural area of Faridpur district.

2. Does the study involve (yes, or no)
   a) Physical risk to the subjects (no)
   b) Social risk (no)
   c) Psychological risk to subjects (no)
   d) Discomfort to subjects (no)
   e) Invasion of privacy (no)

3. Will subjects be clearly informed about (yes or no)

   a) Nature and purpose of the study (yes)
   b) Procedures to be followed (yes)
   c) Physical risk N/A
   d) Sensitive questions (yes)
   e) Benefits to be derived (yes)
   f) Right to refuse to participate or to withdraw from the study (yes)
   g) Confidential handling of data (yes)
   h) Compensation and/or treatment where there are risks or privacy is involved (yes)

4. Will Signed verbal consent for be required (yes or no)

   a) from study participants (yes)
   b) from parents or guardian (yes)
   c) Will precautions be taken to protect anonymity of subjects? (yes)

5. Check documents being submitted herewith to Committee:

   a) Proposal (yes)
   b) Consent Form (yes)
   c) Questionnaire or interview schedule (yes)

Ethical Review Committee:

Authorized by: (Chair/Co-chair/Other) _____

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Abstract

Proper feeding practices of newborn and young children are the key to improve child overall health and to achieve developmental milestones. In Bangladesh, a large portion of young rural girls have ended up becoming mothers before the age of 18. From past records it has been seen that most interventions which are designed to improve infant and young child feeding practices have mostly targeted older mothers. That is why, this study has been designed with an aim to explore the perceptions and practices of infant and young children feeding among adolescent mothers aged less than 19 years old in rural Bangladesh. For this study, data was collected through in-depth interviews and group discussions with a total of twelve adolescent mothers who are less than 19 years old and have children aged 0-3 years old. Data has revealed that majority of the mothers hold very limited knowledge on nutrition as well as child nutrition. Among them, who are educationally a bit ahead hold a little better knowledge on those issues. All the participants are aware of exclusively breastfeeding for up to 6 months, though they all misinterpret the term 'exclusive breastfeeding' with other liquid food. From the data it has also emerged that most of the mothers recognize the ideal timing of starting complementary feeding but very few of them actually understand what to feed children in regular basis. In spite of having misconception and superstation rural adolescent mothers' practice responsive feeding instead of force feeding. No gender discrimination has found regarding child feeding in mothers' responses. Findings of the study pinpointed that mothers are unable to practice proper infant and child feeding due to lack of knowledge and limited affordability. Educating young girls & young mothers and improving financial security could be an effective way to promote improved infant feeding practices.

Key Notes: Adolescent Mothers' Perception; Infant and Young Child Feeding ; Rural Bangladesh

Dedication

I would like to dedicate this thesis to my father and mother both because they are the pillar of my every success and they brought me this far. I also want to thank my husband for supporting me when I need him the most.

Acknowledgement

I would like to express my sincere gratitude to BRAC IED, BRAC University to give me such an opportunity to learn so many things through this research work.

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Lastly, I would like to thank my parents to giving birth to me at the first place and supporting me throughout my life. And thanks to my husband who always supports me in every part of my life.

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List of Acronyms

EBF: Exclusive Breast Feeding

IYCF: Infant and Young Child Feeding

UNICEF: United Nations International Children's Emergency Fund

UNDP: United Nations Development Programme

WHO: World Health Organization

Chapter I

Introduction & Background

Introduction

Proper nutrition and appropriate feeding during the earliest stages is basic to guarantee the early childhood as well as the further development, wellbeing, and advancement of children to achieve their potential. To improve the overall situation of a nation, improving the newborn children's and young children's nutritional status is a mandatory need for the whole human development especially in low-income and low middle income nations, cause childhood malnutrition, malnutrition as in over malnutrition or under nutrition, any of these can raise the different type of threatening manifestation in the human life which consequently harms the whole nation. Different harmful issues like obstruction, fatality, delaying in developmental, poor execution in school and decreased intellectual capabilities are also caused by it. This also hampers progression to attain many improved human developments and financial development targets. The physical and mental well-being of children can be hampered by destitute nutrition amid early years which subsequently may lead to a more prominent chance of casualty from communicable infections or extra critical contaminations which eventually end in a greater financial burden of a society (Chen et al., 1980; Bardosono et al., 1999).

The very first years of human life provide an essential way of amenities for guaranteeing children's suitable development and improvement by perfect feeding practices. Age-

appropriate infant and young child feeding (IYCF) practices are fundamental to young child nourishment. Deficient child nutrition is known to be related with deficient survival outcomes (Black et al., 2008). Destitute long-term outcomes like, school execution, compensation in adulthood is also caused by poor child nutrition (Hoddinott et al., 2008). An improved and proper infant and young child feeding (IYCF) practice has the potential to develop, improve and ensure child prosperity and improvement outcomes in needy and ailing resourced communities (Krishty et al., 2015). The official board of the World Health Organization called for the reanimation of worldwide pledge to suitable newborn child and young child feeding and nutrition, and specifically breastfeeding and complementary nourishment in 1998 (WHO, 2003). In 2002, WHO long with UNICEF embraced the world wide strategy for newborn and young child feeding (UNICEF, 2003). WHO has subsequently suggested following the infant and young child feeding (IYCF) diterminors on the outset of soft and both solid foods and semi solid foods, least dietary diversity, least meal frequency, and least acceptable diet amid two years of age (WHO, 2007).

For safe feeding and creating a solid immune system, a child aged 0-6 months should be given only breast milk exclusively. According to WHO (2019) recommendation, breastfeeding is a foremost compelling ways to make sure child wellbeing, survival and further development as breast milk is the perfect nourishment for newborn children. The clean and pure breast milk contains different antibodies which help to restrain numerous common illnesses of young children. Vitality and supplements are given by breast milk and those things give all that a newborn child needs in his or her very first months of life. Breast

milk proceeds to supply up to fifty percent even more of the nutritional needs of a child amid the first few months of the child's primary year, and this goes up to quarter of the second year of life. After 6 months of age, caregivers need to introduce a few foods into their regular meal besides breastfeeding and this breastfeeding needs to be continued until age two. Actually the transition of feeding, from breastfeeding to family's regular foods is a practice which is called the complementary feeding practice. It is pivotal for assembling a child's expanded dietary needs and covers the 6-24 months period, basic for physical development and cognitive development. Development process slows down to some degree during the toddler years, but nutrition is still an important need. The toddler years are a time of transition, particularly between 12 to 36 months, when they learn to eat table nourishment and tolerate unused tastes and textures. Breast milk and formula are perfect for infants, but when the child grows as a toddlers, s/he needs to start having a variety of foods. Different evidence scientifically proves that improper complementary feeding patterns have significant results for the development, improvement and survival of newborn children and children (Butte, 2000). From the study of Bhutta (2008), it is stated that according to WHO, numerous parents are inadequately educated about when and how to feed their children complementary food nearby breastfeeding, recurrence and least dietary differences. It has been evaluated that suitable complementary nourishing practices contribute to 17 percent reduction in the predominance of stunting at 24 months of age and could deflect 6 percent of under-five passing each year. Imperfect breastfeeding practices and infectious diseases are the prompt causes of under nutrition within the first two years of life (Pridmore, 2009).

From previous recommendations it has been found that mothers' education is strongly related with convenient introduction of family food as well as complementary feeding and other issues. Meal frequency, dietary diversity, and the practice of a least acceptable diet are that 'other issues' which are related with mothers' knowledge (Khanal et al., 2013). Additionally, socio economic background of family, introduction to media like television or other media, maternal age, geographical area and the utilization of antenatal and postnatal visits are related with progressing complementary feeding practices (Dibley et al., 2010). A study uncovered that mothers had a higher chance of not introducing complementary foods timely if they had no education (Kabir, 2012). As mostly the primary caregiver of a child is his/her mother so if the mother does not have ideas about child feeding and nutrition children might be fed unhygienic and improper nourishments even before completing 6 months and also further transition of feeding would not be designed in the proper way. If the mother fails to design the proper meal, it indicates a child's poor nutrition that will hamper his/her development, improvement and contributes significantly to child malnutrition. A child's regular dietary intake can have an incredible effect on her/his development and advancement (WHO, 2008). As mothers are the main provider of food, so mothers' perceptions on nutrition could play an imperative part in child's feeding and nutrition to progress wholesome status.

Statement of the Problem

From the past studies it has been seen that all over the world breastfeeding is still poor and complementary feeding practices are way far to reach. From past records of WHO, around the world, it is assessed that just 34.8% of newborn children are solely breastfed for the first

6 months of their life, the larger part getting a few other foods or liquids within the early months (WHO, 2009). Information from 64 nations covering 69% of births within the developing countries recommend that there have been advancements in this circumstance. Between 1996 and 2006 the exclusive breastfeeding rate for the first 6 months of life expanded from 33% to 37%. Noteworthy increments were made in sub-Saharan Africa, where the rates expanded from 22% to 30%; and Europe, with rates expanding from 10% to 19%. In Latin America and the Caribbean, Brazil and Mexico, the rate of newborn children solely breastfed expanded from 30% in around 1996 to 45% in around 2006 (UNICEF, 2007). From the data of WHO (2021), still globally 3 in 5 babies are not breastfed in the first hour of life. Over 820000 could be saved yearly if 0 to 24 months were optimally breastfed. This also stated that only 41% of infants under 6 months of age are exclusively breastfed.

According to WHO (2020), universally 149 million children aged under five were evaluated to be stunted (as well the height is shorter for age), 45 million were assessed to be wasted (as well the body is lean for height), and 38.9 million children were overweight or it can be said obese. About 44% of newborn children 0 to 6 months old are solely breastfed. In numerous nations less than a fourth of newborn children aged between 6 to 23 months of age accomplish the standard of dietary diversity and feeding recurrence that are suitable for their age. Some children get nutritionally satisfactory and secure complementary foods but the percentage is not so high. Only 52% have achieved minimum meal frequency and 29% met dietary diversity (UNICEF,2021).

In Bangladesh 4.3 million children are found stunted and 1.9 million children are found wasted in 2020 according to UNICEF. According to the Global Nutrition Report (2021), recently a few progresses have been made towards accomplishing the low birth weight target with 27.8% of newborn children having a low weight at birth. A few improvements have also been made towards accomplishing the target, with 65.0% of newborn children aged 0 to 5 months solely breastfed. Another very recent study found that 61% of Bangladesh mothers are practicing exclusive breast-feeding with noteworthy variety across a few personal, household and community level factors (Rahman, 2020). According to NIPROT (2016), 23% of breastfed children aged 6 to 23 months are receiving a least satisfactory count of calories. 30.8% of children under 5 years of age are affected, which is higher than the normal for the Asia locale (21.8%) as mentioned in Global Nutrition Report (2021).

In securing appropriate nutrition according to the age of young children, which is basic and foremost for avoiding under-nutrition during early development, Bangladesh faces a few challenges. According to the report of WHO (2020), in Bangladesh only 33 percent of children are given complementary foods at the right time with convenient design and only 23 percent of children are fed according to the recommendations of infant and young child feeding practices . A study has found out that rural infants are more likely to reach the amount of problematic complementary

feeding practices as compared to children from urban areas (Saizuddin & Hasan, 2017). Another study revealed that more scientific feeding practice was found in urban respondents than rural due to education variables. The nutritional status of the chosen newborn children was found to be varied with varying degrees, but an improved dietary condition was found in urban newborn children than rural (Huq, 2017).

Purpose of the Study

To ensure the holistic development of a child, it is essential to emphasize on the practices of appropriate complementary food from a dietary standpoint according to a distinctive age group. Although Bangladesh includes a strong culture of breastfeeding, suitable feeding practice is still very low. Mothers are often unaware that they are able to feed their child nutritionally satisfactory, effectively prepared, cost viable homemade complementary food. A study has pinpointed that mother's knowledge on IYCF suggestion has associated with IYCF practices of their. Mothers who are having inadequate, poor knowledge on IYCF recommendations are more likely to have improper IYCF practices (Sandra et al., 2014; Gudina et al., 2013). A few variables influence mothers' knowledge on IYCF recommendations. These variables corporate with of mothers' working status, educational status, family estimate, conjugal situation of the mother and age and sex of the child (Central Statistical Agency and ICF International, 2012).

Although the reality is that, universally, between 14 and 15 million juvenile young

ladies aged 15 to 19 years old allow birth each year but sadly most of the past research on IYCF has targeted adult women. (Krishty, 2007). Bangladesh has a higher rate of child marriage which is approximately 51% and rural girls are giving birth before reaching age 18 and completing studies (UNICEF, 2020). Some previous research in Bangladesh had done to investigate what are the complexities of newborn child feeding practices among older Bangladeshi mothers (Eneroth et al., 2009; Giashuddin et al., 2004; Huffman et al., 1980; Rasheed et al., 2011; Haider et al., 1997). For this context, this study has been designed toward the goal to measure IYCF perceptions among rural adolescent mothers and to explore their practices related with destitute IYCF practices.

Justification & Significance of the Study

Improved and appropriate infant and young child feeding (IYCF) practices are important, if we need to develop both physical and mental prosperity and advancement of young children, unfortunately in Bangladesh, research on perceptions and practices of adolescent mothers on feeding and nutrition is limited. Most intercessions and interventions are designed to target the improvement of IYCF practices among older mothers (WHO, 2006). This study would contribute to the knowledge creation on the perceptions and practices of adolescent mothers in this regard.

From the statistics of UNICEF (2020), it is found that adolescent mothers are more likely to drop out from school and eventually cannot complete their education, also they have a low chance for future employment opportunities. Mothers' less education

might indicate that they do not have proper knowledge on the health and well- being of their children. Without knowing the perceptions of adolescent mothers, we might not be able to understand where the knowledge gap exists. We may not be able to design an effective intervention or advocacy program for them. It is important to document the adolescent mothers' perceptions for further research. The findings of the study are expected to offer assistance to the individuals who are responsible for making policies. Thus policy makers would be able to target strategies like 'alteration of behavior' in mothers to upgrade the IYCF practices in rural Bangladesh.

Research Objectives

The two main objectives of this study are mentioned below:

- To explore adolescent mothers' perceptions regarding feeding and nutrition of their children aged 0-3 years in rural Bangladesh
- To explore adolescent mothers' feeding and nutrition practices in the regular life of their children aged 0-3 years

Research Questions

R.Q. 1 What is the understanding of adolescent mothers' regarding nutrition and feeding of their children aged 0-3 years?

R.Q.2 How adolescent mothers are practicing child feeding in terms of dietary intake and adequacy in the regular life of their children aged 0-3 years?

Operational Definitions

Nutrition: WHO (2000) defined nutrition as a basic portion of health and improvement. Better nutrition is related to improved infant, child and maternal wellbeing, more grounded immune systems, more secure pregnancy and childbirth, lower hazard of non- communicable infections. In this study child nutrition, their dietary intake and food adequacy are considered.

Perception: Scientifically perception is the organization, distinguishing proof, and translation of tangible data in order to speak to and get it the displayed data or environment. In simple words it can be said that perception is the way in which something is regarded, understood, or interpreted by a person. It is "an individual's or group's unique way of viewing a phenomenon that involves the processing of stimuli and incorporates memories and experiences in the process of understanding" (McDonald, 2012). In the study, only rural adolescent mothers' perceptions are considered.

Practices: Practice is the actual application or use of an idea or information, belief, or method, as opposed to theories relating to it. In the study, only rural adolescent mothers' practices are considered (Oxford Dictionary, n.d.).

Adolescent Mothers: According to the 2011 edition of Encyclopedia of Child Behavior and Development**,** adolescent mothers are the women between the ages

of 11 and 19 who become pregnant and rearing their children. In the study, women who are between 13 to 19 years and become pregnant or rearing their children are considered as adolescent mothers.

Lower Income Class: If someone's purchasing power parity is below $1.90 per day then s/he falls into this category (Asian Development Bank, 2020).

Lower Middle-Income Class: The lower middle class made up of less educated people with lower incomes, such as small business owners (Types of Social Classes of People, n.d.).

Chapter II

Literature Review

Infant and young children feeding (IYCF)

According to the WHO (2017), the ideal and appropriate practices characterized as the start of breastfeeding within the first one hour of a child's birth, for the first six months breastfeeding solely, proceeding to breastfeed up to two years, breastfeeding on demand of the child, before six months no giving of colostrum, no bottle feeding, no prelacteal feeding and introduction of family food both semi-solid and solid food at six month, least dietary diversity, least meal recurrence, least satisfactory diet, utilization of foods which contains iron or foods which is fortified with iron, breastfeeding according to age, transcendent breastfeeding before 6 months, and bottle (milk) feeding recurrence for the

children who are non-breastfed (WHO, 2010). Inappropriate infant and young child feeding (IYCF) practices contribute significantly to child malnutrition and passing for the most part in poor and underdeveloped countries (Black et al., 2008; Hop et al., 2000 and Edmond et al., 2006). Inappropriate feeding practices include early cessation of breast-feeding, non-exclusive breastfeeding and improper complementary feeding (introduction of solid, semi-solid, or soft foods, minimum dietary diversity, and minimum meal frequency).

Malnutrition happens fundamentally since of inadequate food intake and poor dietary diversity. In developing nations, lacking knowledge on complementary feeding is one of the main reasons for malnutrition (Dewey, 2003). From medical science it is revealed that stunting happens mostly within the first two years from conception, because in this time children's linear development depends on his or her nutrition. Nutritional deprivation and environmental stress can be the possible reasons of this issue. (Onis, *et al.*, 2013 & WHO, 2008)During the primary days, from conception to 6 months of age, the child is totally subordinate for its nutrition on his or her mother either by means of the placenta during the period of pregnancy or by means of breast-milk during the beginning 6-month select breastfeeding period. However, the biggest stunting extent happens when it is time for the complementary feeding period (6 to 23 months), the first two years is the transition time from select breastfeeding within the first 6 months and expanding a wide range of family foods whereas breastfeeding proceeds. To support ideal physical development and brain development in children, satisfactory and appropriate complementary feeding is basic. Complementary foods need to be nutrient-rich and be fed regularly to avoid stunting.

Scientific proof demonstrates that improper complementary feeding practices can have significant consequences for the development, advancement and survival of infants and children (Butte et al., 2000). Dietary deficiencies during this period can lead to disabled cognitive development, compromised educational accomplishment and low financial efficiency which ended up difficult to switch afterward in life (Grantham et al., 2007).

Child malnutrition and consequences

The factors which are responsible for achieving the healthy growing process of young children whose age is between 0 (birth) to 5 years of age are moreover the same worldwide (Multicenter Growth Reference Study Group, 2006). The worldwide figure of 2016 demonstrates that 25% (159 million) of children under age five were suffering from stunting since persistent nutritional deprivation (UNICEF, WHO & WBG, 2016). For the children who suffered stunting in the earliest stages, it is found that this stunting of early childhood causes long lasting harm. Stunting in early age expanded fatality, destitute cognition and execution from academic education in childhood, short stature in adulthood, expanded chance of natal both perinatal and neonatal passing for mother, minimizing efficiency and decreased incomes in adults. That is why it is precise to say that advancement of whole societies can be hampered by stunting (Victora et al., 2008). Around 112 million children who were under 5 years old in 2005, were underweight in both low and middle-income nations (Black et al., 2008). Most important thing is, of these children nearly 33% lived in south Asia, where it was estimated that 77 million children endure from stunting. Around 45% of total child mortality cases are related to malnutrition (Robert et al., 2013). In sub- Saharan Africa and in South Asia, under-

nutrition is the number one risk factor according to some research (Victoria, 2016).

Child malnutrition and feeding practice scenarios in Bangladesh

Under-five mortality rate is 5.6 million per year in Bangladesh, and malnutrition is the main factor that causes this mortality (UNICEF, 2017). Recently, in Bangladesh a few progresses have been made towards accomplishing the low birth weight target with 27.8% of newborn children having a low weight at birth. Moderately underweight and severely underweight rate has declined from 31.9% in 2013 to 22.6% in 2019. In the similar way, both moderate stunting and severe stunting has gone down significantly from 42% in 2013 to 28% in 2019 (UNICEF, 2020).

A few improvements have been made since the last few years in Bangladesh towards accomplishing the target of exclusive breastfeeding, with 65.0% of newborn children aged to 5 months solely breastfed. But Bangladesh has shown constrained progress towards accomplishing the diet- related non-communicable disease (NCD) targets (Global Nutrition Report, 2021). From past studies of FAO (2010), it was found that the predominance of underweight extended from 49.8% in Khulna to 64.0% in Sylhet which moreover appeared the most elevated predominance of stunting (61.4%) and wasting (20.9%). In spite of the high levels, rates of stunting have declined consistently over the past 10 years. Less than 25% of children aged 6 to 23 months old in Afghanistan, Bangladesh, India, Nepal and Pakistan are encouraged diets that meet the least necessities in terms of recurrence and differing qualities (UNICEF, 2015). Another problematic scenario is that many families do not have the proper access to pure clean water or have

the sufficiency of complementary foods and thus children are encouraged to eat unhealthy and ynhygenic foods before 6 months of age. This feeding pattern of a child undermines his/her growth and development and further it contributes to child diarrheal disease and passing (Arifeen, 2001). From the study of Krishty (2015), it is found that until then in Bangladesh, there were few studies on the complementary feeding practice and mostly studies were not descriptive, which components are affecting infant and young children complementary feeding, mothers' discernment of weaning, knowledge of mothers, mother's attitude and practice regarding complementary feeding among mothers and newborn child. However, most of the studies are quantitative studies. There's confined research in profundity about mothers' challenges and obstacles about complementary feeding practices.

Link between mothers' perceptions and children's nutrition & feeding practices

Mothers' knowledge and maternal attitudes are critical determinants of child wellbeing as well in general (Brenner, 2011; Owais, 2011 and Sheth, 2004), but also newborn child feeding practices in specific (Senarath, 2021; Susiloretni, 2015). Progressing maternal attitudes, knowledge and practice through different nutrition related counseling and instruction can play a lead role to improved IYCF practices, and subsequently, improved young child advancement and development, particularly in settings where low maternal proficiency exists (Bhutta, 2013; Dewey, 2008 and Lassi, 2013). Children, whose mothers had more knowledge on complementary feeding were more likely to achieve the appropriate food according to the recommendation. Those children got minimum meal frequency, least dietary diversity

and least acceptable diet compared with those with low knowledge (Maingi, 2020). Mother's knowledge on nutrition enormously impacts the whole nutritional status of her child as she has the capacity and ability to create a nutrition cognizant choice to feed her child (Marriott & Foote, 2003). Developing nations have a lack of information on how to feed children, which in the long run raises vulnerability in most infants and children's health (WHO, 2003).

Teenage pregnancy and consequences

All over the world pre-adult motherhood could be a serious issue. The wide extent of impacts on health and financial results both for young mothers and children, associated with it. Globally approximately 17 million adolescent young girls give birth each year comprising 11.0% of all births around the world. Larger part of these births (95.0%) happen in low- and middle-income nations (WHO, 2017). In low income the predominance of pre-adult motherhood is much higher as compared to high income nations. Fifty percent of all pre adult births happen remarkably in only just seven nations over the world. According to WHO (2014), the Democratic Republic of the Congo, the United States, Nigeria, Ethiopia, Brazil, India and Bangladesh have the highest adolescent birth rate. In South Asia, the most noteworthy pre-adult fertility rate was in Bangladesh, where in 10 young girls 1 girl has a child before they reach age 15 while in 3 at least 1 pre-adult gets to be mother or pregnant before the age of 19 (UNDP, 2016). Some evidences stated that, in spite of remarkable advancement in human developmental goals, pre-adult motherhood is exceedingly diligent in Bangladesh for the most part due to the higher predominance of child marriage

comapared to other countries (Islam et al., 2014; Hossain et al., 2015).

A number of social issues, health issues and financial challenges come due to the early pregnancy amid adolescence period. For young mothers and their children, early pregnancy has various impacts. Children adolescent mothers are at maximum risk of low birth weight, malnourishment, destitute improvement and passing accordion to WHO (2006). From various studies we have seen that early motherhood has an impact on a girl's wellbeing, academic education and basic rights, which in further life prevents her from utilizing her potential and eventually has unfavorable impacts on their children. Generally adolescent motherhood is related with unfavorable wellbeing results and higher hazard of mother and her newborn baby, that is counting a more noteworthy chance to maternal mortality and child mortality (Ganchimeg et al., 2014; Chen et al., 2007).

Most important issue is that pre-adult mothers cannot complete their education. Not completing academic education is diminishing mothers' work opportunities in the future life and further jeopardizing the overall health, well-being and upbringing of their children. As pre adult mothers cannot complete study, their knowledge is left behind. A study revealed that mothers who had no education had a higher risk of not introducing complementary foods timely (Kabir, 2012). International Center for Research on Women, 2017 stated that, to bear the burden of childbearing young mothers may not be adequately emotionally mature enough. As they are not emotionally attached properly with their children which indicates their poor child

rearing practices and poor child rearing practice will not be able to support proper feeding practice. That's why most nations consider avoidance of adolescent pregnancies to be a vital priority, but the care of teenagers who are pregnant and their infants unfortunately given less consideration (WHO, 2006).

Chapter III

Methodology

Research approach

To explore mothers' perceptions and practices towards infant and young child feeding and nutrition, qualitative approach was followed. As researcher was interested in obtaining information regarding mothers' perceptions towards nutrition, child nutrition, child feeding and mothers' practice on child feeding qualitative design was employed. As qualitative research means "any kind of research that produces findings not arrived at by means of statistical procedure or other means of quantification" (Strauss & Corbin, 1991, p.17)-it seemed most appropriate therefore to employ a qualitative approach to the research. One of the aims of my study was to find out the perceptions of mothers towards child feeding and nutrition; what they know, what are their concepts on feeding and nutrition and also to find out mothers' practice on child feeding; how they practice child feeding in their regular life which is also a reason of designing qualitative study. According to Polit & Beck (2010), the goal of most qualitative studies is not to generalize because the focus is on the local, the personal, and the subject. To fulfillment the requirement of the study in-depth interviews and group discussion were conducted.

Study Setting

The data was collected from two villages of two upazilas of Faridpur District, which is 158 kilometers far away from Capital City Dhaka. Two different villages from the same district were selected because they are mostly similar socially and culturally.

Study Participants

The target population was the rural adolescent mothers aged between 15-19 years and having child/children of 0-3 years old. Though primarily 11-19 year old mothers were designed as the target population but while doing data collection only 15-19 years old mothers were available. The mothers who were more than 19 years old and lived in urban areas were excluded. Mothers who do not have children aged between 0 to 3 years were also excluded. Additional exclusion criteria were mental disability, visible sickness or not comfortably participating for the duration and question of the interview.

Research Participants

There were 12 participants in total, 6 from each village. 6 participants were asked for an in-depth interview and another 6 participants participated in group discussion. Data was also collected on age, education, family form and family income.

Participants Selection Procedure

In this study, the participant selection process was purposive. Adolescent mothers who have child/children aged between 0 to 3 years living in Faridpur district were the inclusion criteria.

Research Instruments

In-depth interview and informal group discussion guidelines were used as data collection tools for the study. The guidelines were developed by the researcher and were reviewed by the experts.

Data Collection Procedure

Data collection process was started within the destined time just right after getting approval from the ethical committee of BRAC University The data collection was started after developing and reviewing the In-depth Interview (IDI) and group discussion guidelines by the experts. After conducting 2 piloting of the tools with 2 participants the guidelines were revised more than once through the required revision for more accuracy and to make the data collection more fruitful.

Total 6 IDIs and 2 group discussions in the two different rural areas of Faridpur district were conducted. Areas are respectively Sadarpur and Shovarampur. To conduct the IDIs with the mothers coming from a low-middle income background of rural areas, oral consent was taken from the adolescent mothers as per their preferences. Data was collected through face to face interviews maintaining all the necessary health protocols. Before starting the interview, the objective of the study was clearly addressed and rapport was built with the participants. Permission for audio record was taken before recording. The participants were ensured about the confidentiality of the data and anonymity of their personal information. The participation in the study was completely voluntary and participants were given the

right to withdraw from the study at any time if they do not feel comfortable. If they wanted to skip any question then the specific questions listed in the guidelines were not asked. All the data were documented descriptively through field notes, and tape recorder. Mothers' information about their socio-economic status were collected from them. The researcher noted down the mother's vocal tones, facial & bodily expressions.

Two IDIs were conducted in a day and the length of each IDI was 60-90 minutes. Data from IDIs were collected by the researcher herself. The IDI guideline contained semi-structured questionnaires for adolescent mothers to ask about their children's feeding, their perspectives on child feeding and nutrition. The responses were primarily recorded with audiotape and then it was transcribed.

Two group discussions with a total of 6 mothers (3 mothers from each upazila) were conducted. As it was conducted face to face, all the necessary health protocols were maintained. One group discussion was conducted in same day. The length of each group discussion was 60 to 90 minutes. Before starting the discussion data on age, occupations, number of children, their ages, family income were taken. The researcher took the oral consent from all the participants for recording their answers. During the discussion a semi structured questionnaire was used. During this time the researcher made important notes which helped her to write an elaborate transcript. In the end, the researcher thanked all the participants for giving their valuable time for the discussion and then ended each session. Group discussion guideline was developed and designed by the researcher herself using an easy understanding language. Mother's knowledge and attitudes towards nutrition and feeding and the

practices, concerns everything were covered in the group discussion questionnaire in a semi structured manner.

Data Management and Analysis

In-depth interviews & group discussions were conducted for this study and data was overseen from the beginning of the data collection method. While taking the In-depth interviews and group discussions each participant`s comments, their reflections everything were recorded. Each day after talking to the participant every note was reorganized with date and time. Without any further delay it was precisely put on papers for the transcriptions. Before checking on and taking note of the data, at least two duplicates of data were made and that data was kept in a secure place. After completing the transcripts, data was thoroughly checked once again. During memoizing the transcript, all indicating impressions of the participants were recorded and the main data which was significant to research questions and sub- questions were organized and highlighted. For this study, researchers utilized the concept of content analysis. According to Holsti (1968) "content analysis is any procedure for making inductions by systematically and objectively distinguishing indicated characteristics of messages" (Haggarty et al., 1996). Another reason for using content analysis strategy was as it includes classifying and coding information with a goal of making the collected data sensible and to highlight the imperative key messages, forms and findings. At the beginning stage of the data analysis, every research question and methods were rechecked and reviewed again and when data collection was finished, all the transcriptions and notes were read more than once to get a clear sense of data and to

ensure that any theme was not overlooked. Then categorizing and thematic design was done based on the collected data. Thereafter, each category was examined to establish respective themes and issues of this study. In qualitative research, the most common form of analyzing the data is thematic analysis. According to some researchers it is stated that, for identifying, analyzing and documenting trends (themes) within the data, thematic analysis is the tool which is used (Braun & Clarke, 2006). The purpose of this strategy that the researcher utilized in this study is that 'rigorous thematic approach which can create a shrewd analysis that answers specific research questions' (Braun & Clarke, 2006). Finally, the findings of the study are displayed distinctly under each theme and translated and displayed according to them.

Reliability and Validity

Researcher took absolute care in conducting the study. As legitimacy is an issue in qualitative research to protect the precision and validity of the study, a few methodologies were maintained to guarantee validity of this study. To ensure credibility, peer debriefing was done with a mentor. Member checking was conducted with one research participant. Researcher perused a few information from the transcript to check precision and meaning with the chosen participants. In order to guarantee transferability, nitty gritty clear data were collected. Suitable strategies were maintained based on the research objectives and questions and guidelines for in-depth interview and group discussions in conjunction with the deciphered version was checked and reviewed by experts. For conformability and reflexivity practice reflective journals were also kept. Reliability of the study was maintained by

defining the questionnaire clearly. Simple and clear dialect was used, checked and reviewed by experts and based on their feedback, in- depth-interview and group discussion guidelines were edited more than once. Field testing was also conducted with two mothers before the main data collection.

Ethical Issue

All ethical issues related to research involving human subjects are addressed according to the Ethical approval committee of IED, BRAC University. The prospective participants were given free opportunity to receive summary information of the study including purpose in writing before giving consent and taking part of the interview. Confidentiality of the participants was strictly maintained and no name of the respondents was analyzed. The ethical issue considered the following things:

-Voluntary participation

Participants agreed to participate in this study voluntarily.

Informed consent: Participants of the study were informed about the procedure and risks involved in participating in the study and based on that information, participants made an independent voluntary decision to give their consent to participate.

-Confidentiality: During this study the researcher gave assurance to the participants that identifying information obtained about them would not be released to anyone outside the study. The researcher also gave assurance to the participants that no one, not even the researcher would be able to link data to a specific individual. In order to protect the anonymity of research participants, no names of mothers, children are given.

Limitations of the Study

A limitation of the study is only rural areas were selected and data was collected from only two areas of Faridpur district. Another limitation of the study was the limited sample size and also the time duration is short. While conducting the study, the researcher faced some challenges in conducting IDIs keeping in mind the pandemic situation.

Chapter IV

Result and Discussion

This chapter is designed to present the data which are collected from two different villages of Faridpur district. The data were collected from mid-October to the end of October, 2021. A total of 12 adolescent mothers participated in the study. 6 mothers attended 6 IDI and 6 mothers attended 2 informal group discussions (3 members in each group). 2 pilot testing was done before starting the actual data collection. This chapter has two sections. One section consists of 3 different themes with sub themes and another section is holding the key findings which are derived from the results.

Demographic Profile of Mothers and Children

The age range of the mothers is 15-18 which indicates that all mothers are adolescent mothers. 6 mothers are from Sadarpur, which is the village of Bhanga Upazilla of Faridpur District. Another 6 mothers are from Shobharampur, which is the village of

Sadar Upazilla of Faridpur District. All mothers have children between 0-3 years old. 8 of those children are female and 4 are male. 9 of the mothers are from a lower income socio-economic background and 3 of them are from a lower middle income socio-economic background. One of the mothers has completed her SSC examination, another one has passed 9th grade and the rest of the mothers completed only primary education. All of the mothers are housewives. Only 2 of them live in a nuclear family and the rest of the mothers live in joint family.

Theme 1: Mothers' Perception on Nutrition

Mothers' Understanding about Nutrition

Most of the mothers have little knowledge about nutrition. Though all the mothers are familiar with the term nutrition but do not hold that much knowledge about it. Mothers who have their education background above 8th grade they have little more knowledge than the mothers who only completed their grade 5th education.

'I have heard this word nutrition from television and from people, saying about it. This is what I know about it'. (IDI-1, 20.10.2021)

'Do you mean 'pushtikona'? From Brac apa I have heard things like pushti, pushtikona'. (Group Discussion-2, Mother B, 25.10.2021)

'Yes I've heard about nutrition and also we learnt about it in our textbook. Body needs nutrition. Good amount of food, good quality food is needed to ensure nutrition'. (IDI-5,

22.10.2021)

Mothers' Understanding about Child Nutrition

Most of the mothers have little knowledge on child nutrition and to most of them the words 'nutrition' & 'child nutrition' are the same. They do not perceive the idea that 'nutrition' and 'child nutrition' are different words or different concepts.

'I try to give my child eggs, cow milk, and meat. Is it child nutrition?' (IDI-1, 20.10.2021)

'I give my child breast milk every day that is child nutrition to me'. (IDI-2, 20.10. 2021)

'I've heard the word child nutrition but I do not know what it is'. (IDI-4, 21.10.2021)

'Feeding them (children) what is good for them and feeding them timely is child nutrition'. (Group Discussion-2, Mother A, 25.10.2021)

Theme 2: Mother's Perception on Child Feeding

Mothers Knowledge about Exclusive Breastfeeding and Its Importance

All mothers mentioned that breast milk is good for babies. All the mothers know the timeframe of exclusive breastfeeding which is up to 6 months. They also shared that breastfeeding should be started right after the birth. All of them know that breastfeeding is important but they are unsure about the reason. When they were asked, what does that 'exclusive' word mean and why they think 'exclusive breastfeeding' is important they could not give the proper answer.

"Our elder family members like my mother, my mother in law always told me to breastfeed my child frequently. From them I have heard that breast milk is so important. Then from the television advertisement I also heard it. When I was pregnant, I visited a doctor apa, she also said breastfeeding is important." (Group Discussion-1; Mother-C, 25.10.2021)

'*My child did not get sufficient breast milk. But I knew it was important so I tried hard to feed her breast milk.' (IDI-6, 22.10.2021)*

'*We heard from our elder, doctor and also when Brac apa came to visit she used to tell us to breastfeed our children. I know it is important but why, I cannot tell. To be honest, I never thought about it.' (IDI-1, 20.10.2021)*

'Newborn baby needs to breastfeed with the right nutrition, I know that and I have done the same. I fed my child just after birth which we call 'shaldudh' locally.' (IDI-5, 22.10.2021)

Mothers' Knowledge about Complementary Feeding & it's Importance

Majority of mothers understand that their child needs to be introduced with solid food or family foods from the age of 6 months besides breastfeeding. All mothers know that after 6 months breast milk alone is not sufficient for child growth. Majority participants know that the ideal time to start feeding solid family foods is at 6 months of age and they also gave complementary food after 6 months. But one of them reported that she tried to feed her child solid food at the age of 4 months old. Because she thinks fruit is an essential food for baby's growth.

'She (child) does not eat properly. I try to give 'khichuri' but she does not eat. I try to breastfeed but she also does not always drink. I give her 'bhaat'er mar' sometimes but I try to give her soft fruit and fruit juice (fresh squeezed) every day because she likes it and I think fruit is important for my child's healthy growth.' (IDI-4, 21.10.2021)

When they were asked if they think complementary food is important, all of them mentioned that it's important for child growth. Some of them also mentioned that a good complementary food is a determiner of good health. When mothers were asked which complementary foods they think are best for their little children, different types of foods were mentioned. Rice is seen as a great complementary food because most of the mothers think it gives their child energy and grows their child fast. Some mothers think that vegetables are best since they are full of vitamins. Some mothers also mention that pure cow milk is a good complementary food to them. One of the mothers mentioned that fruits are important to her for the healthy growth of her child.

'Cow milk has so many vitamins. For a child nothing is better than pure cow milk. I feed my child cow milk every day and make different food items like 'shuji' with cow milk to feed my child.' (Group Discussion-1; Mother C, 25.10.2021)

'I have tried to give my child 'anarer rosh' (pomegranate juice) at least once a week when I first started to give him complementary foods. Fruit juice is so important to me. I cannot buy expensive fruit everyday but I try to manage.' (Group Discussion-1; Mother A, 25.10.2021)

Theme 3: Mother's Practices on Feeding

Practices on Exclusive Breastfeeding and It's Duration

All mothers of this study reported that they breastfed their child just right after the birth. Majority of the mothers know that breastfeeding is sufficient alone for a baby for the first 6 months of life. So they do not try gave/give any solid other food besides breastfeeding. But two mothers reported that they gave solid food before 6 months because one of them, despite knowing that fact she had to give her child other food, she had very few amounts of breast milk which is actually insufficient. Another mother started giving solid food from the age of 4 months.

'No no! I did not give any solid food before 6 months. One apa came to visit in our area when my child was 1 month old, she told us not to give any solid food before 6 months'. (Group Discussion-2, Mother B, 25.10.2021)

'*My child did not get sufficient breast milk. So she used to cry. First 3 months I gave her 'lactogen milk'. But that was too expensive. So I started giving solid foods before reaching 6 months.' (IDI-6, 22.10.2021)*

'*I started giving her 'khichuri' at 4 months. I give her 'kichuri' with 'shing macher jhol'. She liked to eat it. Sometimes I also gave her mashed potatoes.' (IDI-4, 21.102021)*

But the scenario for liquid foods such as water, juice is a little different. All the mothers reported that they gave liquid food to their child before reaching 6 months of age. Mothers think their child needs water besides breast milk.

'*I gave water besides breast milk. We all need water, especially when my child was born,*

it was summer time then. We all get thirsty in summer so the baby must also feel the thirst, that's why I gave water.' (IDI-1, 20.10.2021)

'*I gave her freshly squeezed fruit juice. I have heard that fruit is an important food for child growth so I gave her fruit juice besides breast milk when she was 4 months old*.' *(IDI-4, 21.10.2021)*

As the study area was a Muslim inhabited area and all the participants of this study were Muslim, so they all stated that duration of breastfeeding will be 2-2.5 years as according to Islamic law mothers are allowed to breastfeed their children for 2 years. They said that they will be continuing breastfeeding 2 years or maximum 2.5 years.

Practice on Complementary Feeding

Majority of mothers reported that they have introduced complementary feeding to their child at the age of six months. Most commonly reported complementary food was 'khichuri', boiled soft rice, vegetable (mostly potato, papaya, and spinach), soft fruit or fruit juice and eggs. Every mothers of this study believes in responsive feeding. This behavior or feeding pattern from rural adolescent mothers is really admirable. All of them agreed in one point that force feeding is not a good practice. They never force their child and sometimes wait to let their child call for food or sometimes they try to figure out different ways to feed their child.

'If my child does not want to eat, I asked her father to bring something she likes to eat. Then I tell her to finish the 'rice' then I will give you this chocolate/chips.' (Group

discussion-1; Mother B, 25.10.2021)

'If my child does not want to eat, I wait for the call. When he calls for food I feed him. I never force my child to eat.' (IDI-6, 22.10.2021)

None of them mentioned any fixed time table or fixed amount of meal. Almost all mothers reported the same pattern of meal frequency. They said they usually try to feed solid food 3 to 4 times a day. But if the child still remains hungry or wants to eat they feed them accordingly. Even they stated the same thing about breastfeeding. They said they maintain no time table. When they feel their child needs to feed they feed. And one important thing is they mentioned that at night time they only feed breast milk, no bottle milk or anything because feeding breast milk at night is convenient.

'Making a milk bottle at midnight is trouble so I just give my child breast milk if my child cries at night.' (Group Discussion-1; Mother-A, 25.10.2021)

Mothers from low middle-income families tend to design complementary feeding with diverse food items or recipes. But mothers from lower income families are not always able to do that and also they have apathy to design a diversified diet. Mothers from lower income families in this study told almost the same thing regarding meal diversification. They said if the child does not want to eat eggs regularly, they give them vegetables, if they get bored with vegetables, they just feed them rice mixed with cow milk. But they do not mention trying different recipes of the same food item, like egg curry, egg with vegetable, egg custard and these kinds of variations.

Some of them who are from lower income families also mentioned that they know a child needs to feed eggs, poultry or fish regularly. Children need a different variety of vegetables but they cannot provide these food items every day because of a lack of affordability. On the other hand, one mother of this study has affordability but due to the lack of proper knowledge she does not provide her child exactly what the child needs, rather she feeds her child what seems good food to her.

'As she (child) loves to 'shing macher jhol' so I try to give her 'shing macher jhol every day. And I try to feed her rice every day.' (IDI-4, 21.10.2021)

Some mothers are still holding superstitions about child feeding. They shared some impractical thoughts about feeding and child growth. One of the mothers mentioned a term 'ola banga'.

"My mother-in law said if I do not feed my child pure cow milk, my child will not grow taller and active because it will keep him down from 'ola bhanga'. So I gave my child cow milk beside breast milk from 2 or 3 months." *(Group Discussion-1; Mothe C, 25.10.20210)*

Key Findings

- All the mothers agree that child feeding is an important issue. No matter how much work they have, they do not avoid their child when it's time to feed.

- Mothers from both lower income and lower middle income socio-economic backgrounds know very little about nutrition. They are familiar with the terminology but they do not know the details of it.
- Mothers who completed only their primary education (grade V) have less idea about nutrition and proper feeding than the mothers who finished their 9th grade and who passed her SSC examination.
- There is no gender discrimination is reported in feeding practices.
- All mothers are aware of exclusive breastfeeding. But in reality, they sometimes misinterprets the term and use water and/or other liquid foods. They know it is important but the reasons are still unclear to them.
- All mothers have a satisfactory level of knowledge about breastfeeding frequency, duration and cessation. But the practices sometimes differ from the expectations due to many challenges they face, such as insufficient breast-milk, for extreme heat during summer days water is given with breast-milk, mothers think cow milk is better for a baby's growth.
- Mothers have limited knowledge about complementary foods. Almost every one of them (except 1 mother) knows when to start complementary foods but they are not aware about what to feed as well as what is appropriate for their child. They just made a good food model according to them which is mostly rice or cow milk.
- Mothers from lower income families cannot afford the proper complimentary meal to their child due to financial hardship. Mothers from lower middle-income families have the ability to provide a proper meal but sometimes they do not serve a proper meal due to lack of knowledge. Despite of having affordability some

mothers still do not give what their child needs everyday rather than they give what their child loves to eat.

- Usually mothers from lower socio-economic backgrounds are unable to diversify the meals of their children. Mothers from lower middle income families and mothers who are more educated academically tend to alter the meal of their children.
- Mothers who are less educated are practicing more problematic feeding pattern than the mothers who are little more educated.
- Still few of less educated rural mothers hold some superstitions about child feeding.
- Almost all mothers do not believe in force feeding. Though they reported this situation is frustrating, but, all of them have the same thought that a child should not be forced into feeding. They usually try to figure out different ways to feed their child.

Discussion

The study population has a different demographic profile. Some of them are from lower middle income families and some of them are from lower income socio economic status. Their academic education level is different also. Some of them just have primary education or less than it. On the other hand, this study also has mothers who went to high school and who have passed secondary education. These results highlight what are the perceptions of adolescent mothers on nutrition and feeding practices, what practices they

do in order to feed their child. As mothers are the primary caregiver in most families and usually mothers cook and provide food so this study targeted only mothers as the point of interview.

The major analysis of this study revealed the perception of how mothers define 'Nutrition' and 'Child Feeding'. It is found that mothers who have less education know very little about nutrition, child feeding, have more misconceptions and mothers who have a little more education have better knowledge about nutrition and child feeding compared to the previous group. The significance of mother's education for child wellbeing and nutrition has been well demonstrated and numerous researches has revealed that maternal education influences children's health and nutritional outcomes. (Caldwell 1979; Kabubo-Mariara et al., 2009; Ruel et al., 1992; Mosley & Chen, 1984) stated that maternal education influences children's health and nutritional outcomes. There is a retrograde relation of knowledge and affordability found in some mothers. Two mothers reported that they are not able to buy nutritious food every day because of affordability although they answered roughly right about complementary food. And also, some mothers who have affordability do not have sufficient knowledge about child feeding because of the lack of education. According to the United Nations Second report on the world nutrition situation (1992), practices and attitudes of people are impacted by knowledge, awareness and aptitude levels. Indeed in families with similar levels of access to expendable wage and assets, there's a wide variety in nutritional results of children. It is clear that if mothers have affordability still there is a chance that their child will not get

proper nutrition because those mothers have knowledge gaps which will reflect on their practices.

All mothers are aware of exclusive breastfeeding recommendations for the first 6 months, but they do not know what means ‘exclusive’ and why it is important, also unknown to them, and some of them interpret ‘exclusive’ to mean breast milk and liquids foods like water or pure cow milk. But some of the mothers again think breast milk is sufficient for the first 6 months. According to some researchers they have also found a similar kind of scenario in adolescent girls. They mentioned they have found that adolescent girls are aware of IYCF recommendation to breastfeed only for 6 months but they interpret ‘exclusive’ to breast milk and other fluids (Krishty et al., 2015). These findings together, propose that misinterpretations of that ‘exclusive breastfeeding’ idea stay common in different area of Bangladesh and may be similar in different rural populations.

Almost all mothers reported that they have started breastfeeding right after birth. Every one of them said that they will be continuing breastfeeding for up to 2-2.5 years. Most of them agreed that no solid food is needed in the first 6 months of age. Water is mostly reported as non-breast milk fluid encouraged to infants before 6 month. In terms of perceptions of breast milk and newborn baby’s thirst, even in hot areas and hot seasons, according to WHO (2009) healthy newborn children do not need additional water during their first 6 months of age while they are exclusively breastfed. Breast milk is composed of 88% water, which is enough to satisfy a baby’s thirst. Few mothers mentioned that

they give cow milk, freshly squeezed homemade fruit juice, and nutritious drinks to their babies. According to Dykes & Williams (1999) breast milk insufficiency can be taken as a reason not to breastfeed or it can also even become a fact because of not frequent suckling, because suckling is the stimuli required for continued production of breast milk.

Majority mothers know that the ideal time to start giving solid family foods is at 6 months of age. They are also practicing this in their regular life as most of them shared that they introduced solid food at the age of 6 months of their child. But a few mothers also tend to introduce complementary food earlier because of knowledge gaps and some misconceptions in them about feeding practices and another reason behind this is insufficient breast milk. Mothers who mostly misinterprets the IYCF guidelines are found less educated. Their less education creates a knowledge gap which leads to misconceptions and misinterpretations.

One important thing has been found from this study is that mothers of today's generation are not likely to discriminate against girl children, especially with regard to food quality and amount of complementary foods. According to the USAID (2021), in gender equality Bangladesh has made a noteworthy prosperity in the last 20 years. The previous scenario of gender biased attitude has changed a lot. This remarkable change suggests that today's mothers as well as family members hold a positive attitude for female children.

All the mothers mentioned that there is no fixed time that they follow to breastfeed, when they feel the baby needs it, they feed them according to their baby's demand or whenever they cry. Different mothers have different kinds of breastfeeding frequency. Perceptions and practice about timing of introduction of complementary food are pretty satisfactory. Almost all mothers agreed that solid food needs to be given after the age of 6 months. Though they have a misconception about giving other liquid (water, fruit juice) before 6 months but in terms of giving solid food just a few mothers said that they tried/try to give 'kichuri' or very little portion of plain rice to their child before 6 months. When mothers were asked which complementary foods are ideal and best for their children, different mothers respond in a different way. One of them strongly believes that cow milk is the best food. One of them says fruit is very nutritious and fruit needs to be given every day. But the most commonly believed concept among mothers is that rice is a great food, source of energy and rice helps a child to grow. So they cook 'khichuri' with the combination of 'chal' and 'dal'. Comparable result has been also found in two other studies done in a rural community in Bangladesh and in a slum of Dhaka city (Islam et al., 2012; Akhter et al., 2012). Those studies found that 'khichuri' was the most reported complimentary food in the rural region of Bangladesh and another commonly believed good food was is eggs (Karim et al., 2012). No fixed meal timing was reported by mothers. Every mothers answer was almost the same at this point. They try to serve food at least 3 times a day. Besides, they also serve food to their children on demand. They also reported that, if a baby cries, they give them food to keep them quiet. Another thing they mentioned is that when family members sit to eat, sometimes their child wants to eat with them, that time they give small portions of food into their mouth.

Diversity of meals found in financially stable families. Mothers who are from a lower middle-income family can manage to offer a variety of foods to their children, on the other hand meal diversifying practice is very low in the mothers who are from lower income families. The major reason behind not being encouraged to eat the suitable amount according to age and not being fed from different food groups are reported to be insufficient knowledge, child's unwillingness to eat and not being able to manage enough food. Mother's lack of knowledge is responsible for their perceptions and their knowledge gaps reflect in their practices. Other than mother's affordability is another reason for improper feeding.

Young mothers are found way better in practicing responsive feeding. Mothers of this study don't believe in force feeding. Different studies on human behavioral issues observed that responsive feeding with psycho-social care practices incorporates a positive impact on child development and improvement (Engle et al., 2000 ; Pelto et al,. 2003). Mothers of this study reported that they try to figure out different ways to feed their child. From another study they have found that the practices of giving minimum meal frequency and least amount of food were better than other practices of mothers. And researchers of that study said that it could be due to responsive feeding given to the child whenever the child cried (Pryer et al., 2004). From this study we can see that responsive feeding practice is also common in lower class mothers.

There are some barriers, which lead toward the malpractice of child feeding. Two

common barriers found in the study are, (1) Insufficient breast milk and (2) Unaffordability. For insufficient breast milk, mothers give other liquid such as lactogenic milk, fruit juice, ‘bhat er mar’ (rice water) to their children. In lower income families the big deal is their ability to afford good quality food items. This study has found some mothers have a minimum knowledge on complementary feeding but due to their unaffordability they cannot serve all food that their child needs on a regular basis. They just simply feed their child whatever is available at home. Another finding of this study is that diet diversity is more common in lower middle income families than lower income families. Families who do not have affordability are more apathetic in designing diverse meals for their child.

Major misconception lies in ‘exclusive breastfeeding’. Mothers take this ‘exclusive’ as no solid food during the first 6 months of age but other liquid food can be given besides breastfeeding. Water is very common to those mothers. They think water is a must have thing in daily life. Another misconception is, to the mothers crying is an indication of the child is hungry or the breast milk or food is insufficient so they offer breast milk or food whenever the child cries. Babies crying not always indicates that they are hungry but their mothers misinterpret the signal most often.

Every mothers has her own concept of ‘good complementary food’. Concepts of ‘good food’ of more educated mothers are better than less educated one, The mothers have less education and less knowledge about nutrition and child feeding have made mistakes in

giving the definition of good food. Some of those mothers mentioned cow milk is the best, some of them mentioned vegetables but the most commonly reported ‘good food’ is rice. Very few mothers have a knowledge on proper balanced diet other than that rest of mothers’ ‘good food’ concept depends on any one food item (like only rice, only vegetable, only egg or cow milk), and whatever they serve to their child this one ‘good food’ is a must have item.

Conclusion

Newborn child and young child feeding practices could be a key area to improve child development areas and promote sound growth and improvement. The primary years of a child's life are immensely vital, as ideal nutrition amid this period brings down morbidity and mortality, diminishes the chance of persistent illness, and cultivates better advancement in general.

Result of this study has explored particular knowledge gaps of rural adolescent mothers in nutrition and child feeding. This gap could be addressed by focusing on interventions at adolescent mothers in rural Bangladesh. Adolescent mothers need education and knowledge to influence the opportunity of positive impact on newborn child wellbeing results. An expanded venture in early education of young adolescent to establish a secure IYCF practice could be a viable technique to advance and support an improved and advanced child feeding practices. If social and financial strength as well as knowledge on child feeding could be imparted to adolescent mothers, there might be a chance that these interventions will play a vital role within the creation of more advantageous and healthier

communities all through Bangladesh.

Widespread take-up of international IYCF recommendations will be troublesome to attain without knowing the regular practices, daily life experiences of needy primary caregivers inside particular communities. Documenting adolescent mothers' knowledge, demeanors and perceptions and practice on infant and child feeding is an imperative research need since mothers are likely to influence feeding practices as they are the primary caregiver.

Recommendations

- Educating our girls should be the prime concern to bring changes in their behavior. Government needs to strengthen the existing financial incentives for girls so that they are able to complete at least high school. Such incentives not only progress newborn and young child feeding knowledge and practices, but may also offer anticipation of early marriage and young pregnancy.
- As we can see young ladies enter into arranged marriages, end up as young mothers and eventually do not complete education, so public policy needs to address these basic issues in case newborn child feeding and nutrition are to improve.
- In this study, it has been found that sometimes mothers cannot feed their children properly despite having a little knowledge because of their affordability. GOs and NGOs can work together to face these challenges and strengthen the social safety net services for them.

- The study reveals that mothers still misinterpret the concept of ‘exclusive breastfeeding’ and still hold misconceptions about IYCF guidelines. So more awareness programs need to be designed. Respective authorities should train-up community health workers to deliver the messages more specifically.
- Another positive finding of this study was responsive feeding. As we can see adolescent mothers are not forcely feeding, more interventions can be added in local levels among communities for more improvement of this practice. Focus group discussions can be designed so that the mothers who are practicing responsive feeding can encourage other mothers to do the same.
- From the past studies, gender discrimination was found in nutritional practices in rural households, but in this little study no gender biased statement was reported. More research with larger sample size could be done in this field to see why and how rural mothers’ mindsets have been changing over time and the impact of their changed attitude in child feeding and child nutrition.

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Annex I: IDI Guideline for Adolescent Mothers

Section A: Participants Demographic Information

Interview date: ……

Mother's name: ……... Mothers' age: ……

Mother's educational qualification: …… Mother's occupation: ……

Total number of child/ children:……Child/Children's age: ……

Family Income……. Family type: Single/Joint……

Interview starts time: ……..... Interview ends time: ……

Section B: Mother's Perception on Nutrition and Feeding

1. What do you understand by the word 'Nutrition?

2. What do you know about the nutrition of children? From where did you know about child nutrition?

3. Do you have any idea about what "Child Feeding practice" is? What do you know about child feeding?

4. In your opinion what could be the best feeding practice for your child? Please share.

5. Do you think proper nutrition and dietary adequacy is needed for your child's good health? If yes, then why?

6. Do you think 'Nutrition and Feeding practices' are important for your child's growing years? If yes, then why?

Section C: Mothers' practices regarding child feeding, dietary intake and adequacy in daily life

7. Did/Do you exclusively breastfeed your child (up to 6 months)?

8. How many times a day did/do you breastfeed your child (uto 6 months and after 6 months)?

9. Did/Do you breastfeed on need (child's need) basis (up to 6 months) or do you feed on a routine basis (up to 6 month)?

10. Did/Do you give other food besides breastfeeding (up to 6 months)?

11. Did/Do you give water besides breastfeeding (up to 6 months)?

12. What did/do you feed your child besides breastfeeding (after 6 months)?

13. Did/Do you give your child family food along with breast feeding (after 6 months)?

14. Do/Did you feed on need (child's need) basis (after 6 month) and or do you feed on a routine basis (after 6 month)?

15. Have you introduced your child with all type of family food? Kindly mention the food names/

16. What kinds of food (such as, protein rich food, food containing fat, animal source food (meat, poultry, fish, egg), iron rich food (organ meat, green leafy vegetables, legumes, fruits), vitamin A rich food (dairy, eggs, orange) you put in your child's daily diet/plate? Please share.

17. How often do you serve the meal to your child?

18. Does your child love to eat the same kind of food daily?

19. If s/he doesn't what do you do to bring variation?

20. Did/Do you face any challenges in the case of breastfeeding? If yes, then what did/do you

do to feed your child?

Annex II: Group Discussion Guideline for Adolescent Mothers

Number of group discussion: _____ Date of Interview: _____

Section A: Demographic information

Serial	Mother's name	Age	Educational Qualification & Occupation	No. of children and their ages	
				Number	Age
A					
B					
C					

Section B: Mother's Perception on Nutrition and Feeding

1. What do you understand by the word 'Nutrition?

2. What do you know about the nutrition of children? From where did you know about child nutrition?

3. Do you have any idea about what "Child Feeding practice" is? What do you know about child feeding?

4. In your opinion what could be the best feeding practice for your child? Please share.

5. Do you think proper nutrition and dietary adequacy is needed for your child's good

health? If yes, then why?

6. Do you think 'Nutrition and Feeding practices' are important for your child's growing years? If yes, then why?

Section C: Mothers' practices regarding child feeding, dietary intake and adequacy in daily life:

7. Did/Do you breastfeed your child exclusively (0-6)?

8. How many times a day did/do you breastfeed your child (0-2)?

9. Did/Do you face any physical challenges while breastfeeding? If yes then what did/do you do to feed your child?

10. Did/Do you serve any other food or even water to your child except breast milk (0-6)?

11. When did you first introduce your child to family food?

12. Have you introduced all kinds of family food or just some particular items? If only particular items then please mention the name of the food items?

13. How many meals do you prepare for your child in a day?

14. What food items do you put on your child plate?

15. Does your child enjoy eating the food you serve to him/her?

16. If they don't, do you try to alter the item/menu?

17. Do you think that as a mother you need to give your child full attention in their daily diet, feeding practice and nutrition?

Annex III: IDI Guideline for Adolescent Mothers (Translated in

Bangla)

অনুচ্ছেদ ক : জনতাত্ত্বিক সংক্রান্ত তথ্য:

ইন্টারভিউয়ারের নাম_____ সাক্ষাতকারের তারিখ_____
মায়ের নাম_____ বয়স_____ শিক্ষাগত যোগ্যতা_____
পারিবারিক আয়_____ সন্তানের সংখ্যা: _____ সন্তানের বয়স:
সেশনের সময়কাল: ৪৫ থেকে ৬০ মিনিট

অনুচ্ছেদ খ: পুষ্টি ও খাওয়ানোর বিষয়ে মায়ের ধারণা:

১. পুষ্টি শব্দটি দিয়ে আপনি কী বুঝেন? এই সম্পর্কে আপনি কি জানেন?

২. আপনি কোথায় থেকে 'পুষ্টি' সম্পর্কে জানতেন?

৩. "শিশুকে খাওয়ানোর অভ্যাস" কি সে সম্পর্কে আপনার কি কোন ধারণা আছে?

আপনি শিশুর খাওয়ানো সম্পর্কে কি জানেন?

৪. আপনার মতে আপনার সন্তানের জন্য সেরা খাওয়ানোর অভ্যাস কি হতে পারে? দয়া করে আমার সাথে শেয়ার করুন.

৫. আপনি কি মনে করেন যে আপনার সন্তানের সুস্বাস্থ্যের জন্য সঠিক পুষ্টি এবং খাদ্যের

পর্যাপ্ততা প্রয়োজন? যদি হ্যাঁ, তাহলে কেন?

৬. আপনি কি মনে করেন 'পুষ্টি এবং খাওয়ানোর অভ্যাস' আপনার সন্তানের বেড়ে ওঠার জন্য গুরুত্বপূর্ণ? যদি হ্যাঁ, তাহলে কেন?

অনুচ্ছেদ গ: শিশুকে খাওয়ানো, খাদ্য গ্রহণ এবং দৈনন্দিন জীবনে খাদ্য পর্যাপ্ততা সম্পর্কে মায়ের অভ্যাস:

৭. আপনি কি আপনার সন্তানকে (৬ মাস পর্যন্ত) বুকের দুধ খাওয়াতেন/খাওয়ান?

৮. দিনে কতবার আপনি আপনার সন্তানকে বুকের দুধ খাওয়াতেন/খাওয়ান (৬ মাস পর্যন্ত এবং ৬ মাস পর)?

৯. আপনি কি প্রয়োজনের ভিত্তিতে (সন্তানের প্রয়োজনে) বুকের দুধ খাওয়ান (৬ মাস পর্যন্ত এবং ৬ মাস পরে) নাকি আপনি নিয়মিতভাবে (৬ মাস পর্যন্ত এবং ৬ মাস পরে) দুধ খাওয়ান?

১০. আপনি কি বুকের দুধ খাওয়ানোর পাশাপাশি (৬ মাস পর্যন্ত) অন্য খাবার দিয়েছেন?

১১. আপনি কি বুকের দুধ খাওয়ানোর পাশাপাশি (৬ মাস পর্যন্ত) পানি দেন?

১২. আপনি আপনার শিশুকে বুকের দুধ খাওয়ানোর পাশাপাশি কি খাওয়াতেন/খাওয়ান(৬ মাস পর)?

১৩. আপনি কি আপনার সন্তানকে বুকের দুধ খাওয়ানোর সাথে পরিবারের অন্য খাবার দেন (৬ মাস পর)?

১৪. আপনি কি প্রয়োজনের ভিত্তিতে (সন্তানের প্রয়োজন ভিত্তিতে) (৬ মাসের পরে) খাওয়ান নাকি আপনি নিয়মিত ভিত্তিতে (৬মাসের পরে) খাওয়ান?

১৫. আপনি কি আপনার সন্তানকে সব ধরনের পারিবারিক খাবারের সাথে পরিচয় করিয়ে দিয়েছেন?

১৬. আপনি আপনার সন্তানের প্রতিদিনের খাদ্য/প্লেটে কী রাখেন? কী ধরনের খাবার (যেমন, প্রোটিন সমৃদ্ধ খাবার, চর্বিযুক্ত খাবার, পশুর উৎসের খাবার-মাংস, মুরগি, মাছ, ডিম, আয়রন সমৃদ্ধ খাবার-অর্গান মিট, সবুজ শাক সবজি, লেবু, ফল, ভিটামিন এ সমৃদ্ধ খাবার-ডেইরি, ডিম, কমলা আপনি আপনার সন্তানের প্রতিদিনের খাবার/প্লেটে রাখেন? অনুগ্রহ করে শেয়ার করুন।

১৭. আপনি কতবার আপনার সন্তানের জন্য খাবার পরিবেশন করেন?

১৮. আপনার সন্তান কি প্রতিদিন একই ধরনের খাবার খেতে ভালোবাসে?

১৯. যদি সে না ভালোবাসে তাহলে বৈচিত্র আনতে আপনি কী করবেন?

২০. বুকের দুধ খাওয়ানোর ক্ষেত্রে আপনি কি কোন শারীরিক চ্যালেঞ্জের মুখোমুখি হয়েছেন?

যদি হ্যাঁ, তাহলে আপনার সন্তানকে খাওয়ানোর জন্য আপনি কী করেছিলেন/করেন?

Annex IV: Group Discussion Guideline for Adolescent Mothers

দলগত আলোচনার সংখ্যা_____ সাক্ষাতকারের তারিখ_____

অনুচ্ছেদ ক: জনতাত্ত্বিক সংক্রান্ত তথ্য

সিরিয়াল	মায়ের নাম	বয়স	শিক্ষাগত যোগ্যতা	শিশুদের সংখ্যা এবং তাদের বয়স	
				সংখ্যা	বয়স
ক.					
খ.					
গ.					

অনুচ্ছেদ খ: পুষ্টি ও খাওয়ানোর বিষয়ে মায়ের ধারণা:

১. পুষ্টি শব্দটি দিয়ে আপনি কী বুঝেন? এই সম্পর্কে আপনি কি জানেন?

২. আপনি কোথায় থেকে 'পুষ্টি' সম্পর্কে জানতেন?

৩. "শিশুকে খাওয়ানোর অভ্যাস" কি সে সম্পর্কে আপনার কি কোন ধারণা আছে? আপনি শিশুর খাওয়ানো সম্পর্কে কি জানেন?

৪. আপনার মতে আপনার সন্তানের জন্য সেরা খাওয়ানোর অভ্যাস কি হতে পারে? দয়া করে আমার সাথে শেয়ার করুন.

৫. আপনি কি মনে করেন যে আপনার সন্তানের সুস্বাস্থ্যের জন্য সঠিক পুষ্টি এবং খাদ্যের পর্যাপ্ততা প্রয়োজন? যদি হ্যাঁ, তাহলে কেন?

৬. আপনি কি মনে করেন 'পুষ্টি এবং খাওয়ানোর অভ্যাস' আপনার সন্তানের বেড়ে ওঠার জন্য গুরুত্বপূর্ণ? যদি হ্যাঁ, তাহলে কেন?

অনুচ্ছেদ গ: শিশুকে খাওয়ানো, খাদ্য গ্রহণ এবং দৈনন্দিন জীবনে খাদ্য পর্যাপ্ততা সম্পর্কে মায়ের অভ্যাস:

৭. আপনি কি আপনার সন্তানকে শুধুমাত্র (০-৬) বুকের দুধ খাওয়াতেন/খাওয়ান?

৮. দিনে কতবার আপনি আপনার সন্তানকে বুকের দুধ খাওয়াতেন/খাওয়ান (০-২)?

৯. বুকের দুধ খাওয়ানোর সময় আপনি কি কোনো শারীরিক চ্যালেঞ্জের সম্মুখীন হয়েছেন? যদি হ্যাঁ, তাহলে আপনি আপনার সন্তানকে খাওয়ানোর জন্য কী করেছেন/করেন?

১০. বুকের দুধ ছাড়া আপনি কি আপনার বাচ্চাকে অন্য কোন খাবার বা পানি পরিবেশন করেছেন/করেন (০-৬

১১. আপনি কখন প্রথম আপনার সন্তানকে পারিবারিক খাবারের সাথে পরিচয় করিয়ে দিয়েছিলেন?

১২. আপনি কি সব ধরণের পারিবারিক খাবার বা কিছু নির্দিষ্ট আইটেম চালু করেছেন? শুধু বিশেষ আইটেম থাকলে খাবার আইটেমের নাম উল্লেখ করুন অনুগ্রহ করে?

১৩. আপনি আপনার সন্তানের জন্য দিনে কতবার খাবার প্রস্তুত করেন?

১৪. আপনি আপনার সন্তানের প্লেটে কোন খাবারের আইটেম রাখেন?

১৫. আপনি তাকে যে খাবার পরিবেশন করেন তা কি আপনার শিশু খেতে পছন্দ করে?

১৬. যদি তারা না করে, আপনি কি আইটেম/মেনু পরিবর্তন করার চেষ্টা করেন?

১৭. আপনি কি মনে করেন একজন মা হিসেবে আপনার সন্তানকে তাদের দৈনন্দিন খাদ্যাভ্যাস, খাওয়ানোর অভ্যাস এবং পুষ্টিতে পূর্ণ মনোযোগ দিতে হবে