**Evaluation of Knowledge, Attitudes, and Practices Regarding Infant and Young Child Feeding Among Mothers of Children Under Two at Cox's Bazar Sadar Hospital, Bangladesh**

**CHAPTER I**

**INTRODUCTION**

**1.1 Introduction**

Infant and young child feeding (IYCF) practices play a critical role in determining the nutritional status, health, growth and development of children, along with improving the health of mothers (WHO, 2003). The current guidelines suggest breast feeding should to be initiated within the first hour of birth and infants be exclusively breast fed for the first 6 months of life, that is, receive only breast milk, with the exception of oral rehydration syrups solutions, drops/of vitamins, minerals and medicines (WHO, 2015). Exclusive breast feeding (EBF) offers the required nourishments for normal growth and development till 6 months of age; thereafter safe, timely and nutritionally adequate complementary foods should be added to the diet of infants, along with continued breast feeding up to 2 years of age (WHO, 2021).

Bangladesh Demographic and Health Survey (BDHS, 2014) have provided useful national- and state-level information on the IYCF practices. Available data showed a gross interstate variation. However, the BDHS was not designed to provide district-level data. According to the BDHS-2014 data Fifty-five percent of infants under age 6 months are exclusively breastfed. The Multiple Indicator Cluster Survey 2012-13 reported lower exclusive breastfeeding rates of 56 percent (Progotir Pathey, 2014). Overall, 26 percent of breastfed children age 6-23 months are given the recommended four or more food groups, and 63 percent are fed at least the minimum number of times. According to the Multiple Indicator Cluster Survey 2012-13 early initiation of breast feeding (within an hour of delivery) is 57.4%., continued breast feeding up to 2 years 87.5%.

Children who have been breast fed for longer periods of time tend to exhibit lower odds of infectious morbidity and mortality, as infants who are not breast fed have six-fold greater risk of infections related in the first 2 months of life when compared with infants that have been adequately breast fed (Henrick et al., 2017). The current evidence suggests that high-income countries practice shorter duration of breast feeding (<20%) compared with low/middle-income countries (Rahman et al., 2020). However, even within LMICs, approximately only 37% of infants younger than 6 months are exclusively breast fed (Adda et al., 2020). Nutrient dense foods that can be easily eaten and digested should be added to infants’ diet in order meet their dietary demands. Both breast feeding and appropriate complementary feeding are pivotal for child growth and the prevention of disease and malnutrition (Bhandari & Chowdhury, 2016).

Bangladesh faces several challenges in ensuring age-appropriate nutrition to growing children which is critical for avoiding undernutrition during early development. For secured sustenance and developing a strong immune system, a child must be given only breastmilk for the first six months. After this period, caregivers must introduce some foods into their diets and continue breastfeeding until age two. This practice, known as complementary feeding, is the transition from exclusive breastfeeding to family foods. Many parents are inadequately informed about when and how to feed their children complementary food alongside breastfeeding — when to start, frequency and minimum dietary diversity. Household food insecurity affects a quarter of the population. Families with limited incomes cannot always buy protein such as fish and meat. Nationally, age-appropriate complementary feeding rates are very low and in some areas like urban slums, alarmingly so (UNICEF, 2021). This study will assess the level of knowledge, attitudes and practice about Infant and young Child Feeding among Mothers of Under -Two children in Bangladesh.

**1.2 Justification of the Study**

Infant and young child feeding (IYCF) practice is a highly concerned global public health issue for its extensive role on child development, growth, and survival (Kamble et al., 2020). Almost 5.9 million under-five children died in 2015; among them, 45% were directly or indirectly associated with malnutrition, pneumonia, and diarrhea, while more than two thirds of those deaths were due to improper feeding practices (WHO, 2018).

Childhood malnutrition is appeared as a public health threat in both low-income and lower middle-income countries (LMICs) including Bangladesh (RE et al., 2008). Proper IYCF practices is crucial for improving nutritional status and health, particularly for the young children aged 0–23 months in Bangladesh, as nutritional status could be directly affected by the IYCF practice. Inadequate IYCF practice has a considerable effect on childhood malnutrition, risk of diarrhea (S et al., 2001), and respiratory infections (Chowdhury et al., 2016). For both breast feeding and complementary feeding, mother’s knowledge and time investment are crucial and there are limited studies that investigated IYCF knowledge and practices and the health outcomes of the children in resource poor settings of Bangladesh (Lubna et al., 2015). This study will make aware about the importance of IYCF practices for all mothers and women in Bangladesh. Findings of this study will help policy makers to implement new programs.

**1.3 Operational Definitions**

**Infant and Young Child Feeding (IYCF):** Refers to the feeding practices for children from birth to two years, including breastfeeding and the introduction of complementary foods to ensure proper nutrition and growth.

**Exclusive Breastfeeding (EBF):** A feeding practice where infants receive only breast milk, with no other foods or liquids, for the first six months of life, except for certain medical solutions or supplements.

**Complementary Feeding:** The process of introducing solid, semi-solid, or soft foods to an infant's diet while continuing breastfeeding, typically starting around six months of age.

**Nutritional Status:** A measure of the health of an individual based on the balance of nutrients consumed, which influences growth, development, and overall health.

**Household Food Insecurity:** A situation where members of a household lack reliable access to a sufficient quantity of affordable, nutritious food, leading to potential malnutrition and health issues.

**Dietary Diversity:** The variety of different foods and beverages consumed by an individual or household, which is important for ensuring adequate nutrient intake.

**Childhood Malnutrition:** A public health issue characterized by inadequate nutrient intake leading to undernutrition (stunting, wasting) or overnutrition (overweight, obesity) in children.

**Health Outcomes:** The consequences of healthcare practices or interventions, which can include improvements or declines in health status, growth, and development of children.

**Public Health Issue:** A health problem that affects a large number of people and requires collective action and policy intervention to address.

**1.4 Research Question (s)**

What is the level of knowledge, attitude and Practice about Infant and young Child Feeding among Mothers of Under Two children in Cox's Bazar Sadar Hospital, Bangladesh.

**CHAPTER II**

**LITERATURE REVIEW**

Malnutrition refers to deficiencies, excesses or imbalances in a person’s intake of energy and/or nutrients (WHO, 2018). It can be caused by various factors classified as Immediate causes which include diseases, inadequate dietary intake, underlying causes that is food insecurity at house hold levels, inadequate care, insufficient health services and unhealthy environment and basic causes which are inadequate education, political and economic factors (Weinstein et al., 2017).

AS, FS and Md, (2011) illustrates that maternal malnutrition during the prenatal period, or infant malnutrition during the early postnatal stage, can result into lasting damage to the structure and function of the developing body systems, resulting in deficits which become manifest by early childhood. IYCF has received increasing attention over the past 25 years. The WHO and UNICEF joint global strategy has significantly fostered appropriate practices of young and infant child feeding in mothers and caregivers (WHO, 2003).

A case control study in Central Sulawesi province- Indonesia (Hijra, Fatimah-Muis and Kartasurya, 2016) found out that inappropriate complementary feeding increased the risk of stunting in children of 12-24 months of age by 8.26%. Similarly, the percentage of mothers who practiced optimal complementary feeding was 40.5% with low timely complementary feeding (56.4%), appropriate meal frequency (60.6%) and dietary diversity of 40.5% in a community-based cross-sectional study in North-West Ethiopia (Belew et al., 2017).

A report by (Arage and Gedamu, 2016) indicate that exclusive breastfeeding in first six months of life can avert 1.4 million deaths and 10% of diseases burden among infants and young children in developing world. Further evidence suggests that about 10–15% of global under-five deaths could be prevented by achieving 90% of exclusive breastfeeding (Holla-Bhar et al., 2015). According to (Lassi et al., 2020), optimal IYCF is the single most effective intervention. Jones et a/. found that exclusive breast-feeding (EBF) could prevent 13 to 16% of all deaths; adequate complementary feeding (CF) between 6 and 24 months could prevent an additional 6% of all deaths; and if these practices spread to 90% of the deserving population, 19% of all deaths under five could be prevented.

**CHAPTER III**

**RESEARCH METHODOLOGY**

**3.1 Study Objectives**

**General Objective:** Assess the knowledge, attitude and practice about infant and young child Feeding among Mothers of under-Two Children in Cox's Bazar Sadar Hospital, Bangladesh.

**Specific Objectives:**

* To evaluate the knowledge, attitude, practice of IYCF among mothers of under 2 children
* To find out the association the knowledge, attitude, practice of IYCF among mothers of under 2 children with socioeconomic factors

**3.2 Conceptual Framework**

**Dependent Variable**

**Independent Variables**

**Knowledge, Attitudes and Practices**

**Socio-Demographic**

Age, Ethnicity, Family type, Religion, Residence

Educational Status

Occupation

Wealth index

Living status

**3.3 Study Design**

A facility based cross-sectional method will be applied as design. Questionnaire, observation tools will be used to collect data.

**The first part (Socio-economic variable):** The socio-economic variables utilized in this study, includes age, ethnicity, family type, religion, residence educational status, occupation, counseling, wealth index, and living status.

**The first part (Socio-economic variable):** The KAP variables utilized in this study, includes:

**Knowledge of infant and young child feeding recommendations:**

* Correctly answered recommended duration of continued breastfeeding
* Correctly answered age of start of complementary foods
* Gave good reasons for giving complementary foods at 6 months
* Correctly knew how to ensure consistency of meal
* Gave good reasons why consistency of meal of meal is necessary
* Correctly knew how to ensure dietary diversity and ways of enriching porridge

**Attitudes towards infant and young child feeding recommendations:**

* Feels confident in preparing food for child
* Perceives that giving different types of food is beneficial to child
* Has difficulty giving different types of food to child
* Perceives that feeding child several times each day is beneficial
* Has difficulty feeding child several times a day
* Perceives that its beneficial to continue breastfeeding beyond 6 months
* Has difficulty continuing to breastfeeding beyond 6 months

**Practices towards infant and young child feeding recommendations:**

* Animal milk (goat and camel) should be given to children < 5 months
* A 3-day-old baby needs water to quench its thirst
* Breastfeeding increases mother-child bonding
* First yellow breast milk (danbar, colostrum) is harmful to children’s health
* A small child with diarrhoea should be given fewer liquids than normal

**3.4 Target Population & Sample Population**

In this particular study, the target population will encompasses all women who have under two years age of children.

**3.5 Study Site & Area**

Cox’s Bazar District Sadar Hospital is located in southeastern part of Bangaldesh, which is 150 km (93 mi) south of the city of Chittagong. The city covers an area of 23.4 km2 (9.0 sq mi) with 58 mahallas and 27 wards and as of 2022 had a population of nearly 200,000.

**3.6 Study Period**

An institutional-based cross-sectional study will be conducted from October 01, 2024, to November 15, 2024 in Cox’s Bazar District Sadar Hospital among pregnant women.

**3.7 Sample Size**

The Sample size was calculated using Cochran’s formula considering 5% level of significance, 5% precision level (permissible error) and 55.5% mothers have proper knowledge about IYCF practice (Arzu et al., 2018).

The formula is: n =

Where, n = estimated sample size

Z = 1.96 (in 95% Confidence Interval)

p = prevalence, 55.5% (0.555),

q = 1- 0.555 = 0.445,

d = permissible error, 5% (0.05)

So, sample size (n) = {(1.96)2\*0.555\*0.445}/ (0.05)2 = 379.51 ≈ 380

Calculated sample size was 379.51 but we collected data as a round figure 380 respondents.

**3.8 Inclusion Criteria**

This review will be focused:

1. Mothers of Under 2 children
2. Those who are willing to participate in the study.

**3.9 Exclusion Criteria**

The study will exclude:

1. Those who are not willing to participate in the study.
2. Data will not be collected from the Over- 2 Childs mother
3. Severely ill person.
4. Mentally disoriented.

**3.11 Data Collection Tools**

The primary researcher and research assistants conducted interviews with the study participants to gather quantitative data. The questionnaire encompassed inquiries about demographic and socio-economic details, featuring a combination of open-ended and closed-ended questions. The questionnaire was structured into three sections: the first section, labeled as socio-demographic (Section A), the second section (KAP Questionnaire).

**3.12 Data Management & Analysis Plan**

Data collection will involve conducting face-to-face interviews. Before initiating data collection, permission will be sought from the respective couples. A comprehensive explanation of the study's purpose will be provided to the respondents. The interviews will be conducted within the waiting area. Respondents will receive assurance, from an ethical standpoint, that the content of the interview will remain confidential and will not be disclosed to any unauthorized individuals.

**Data Preparation:** The data will be thoroughly cleaned and prepared for analysis, which includes the identification of missing values, outliers, and any other irregularities within the data.

**Descriptive Statistics:** Descriptive statistics will be calculated for the variables of interest. This will involve determining measures such as the mean, median, standard deviation, and frequency distribution. These calculations will provide insights into the data's distribution and facilitate the identification of outliers or unusual observations.

**Inferential Statistics:** Inferential statistical tests will be conducted to examine the study's hypotheses. These tests may include a chi-square test to assess the association between KAP on IYCF and various socioeconomic factors.

**Interpretation of Results:** The results of the statistical tests will be interpreted, taking into consideration elements such as p-values, effect sizes, and confidence intervals. Typically, a p-value below 0.05 is considered indicative of statistical significance, implying that there is less than a 5% probability that the results are due to random chance.

**3.13 Quality Control & Quality Assurance**

Before collecting data from the respondents, a friendly and welcoming environment was established, and the research objectives were clearly communicated to the participants. Throughout the data collection process, an effort was made to engage with the respondents in the local Bangla language.

**3.14 Ethical Considerations**

Written permission will be obtained from the relevant authorities and the respondents before commencing data collection. The investigator will provide the respondents with a detailed explanation of the study's objectives before collecting data.

**3.15 Expected Outcomes**

We anticipate that there is a noteworthy association between the KAP on IYCF with various socioeconomic factors. We hypothesize that there is a relationship between the KAP on IYCF, socio-economic status factors those who receive PNC services from Cox’s Bazar Sadar Hospital.

**3.16 Work Plan**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Activities** | **Apr**  **2024** | **May**  **2024** | **Jun**  **2024** | **July**  **2024** | **Aug**  **2024** | **Sep**  **2024** | **Oct**  **2024** | **Nov**  **2024** |
| **Designing the Study** |  |  |  |  |  |  |  |  |
| **Review of Literature** |  |  |  |  |  |  |  |  |
| **Development & approval of proposal** |  |  |  |  |  |  |  |  |
| **Development of Data Collection Tools** |  |  |  |  |  |  |  |  |
| **Pre-testing Questionnaire** |  |  |  |  |  |  |  |  |
| **Data Collection, Entry & Analysis** |  |  |  |  |  |  |  |  |
| **Report Writing** |  |  |  |  |  |  |  |  |
| **Submission & Approval of Thesis** |  |  |  |  |  |  |  |  |
| **Printing, Binding, and Submission** |  |  |  |  |  |  |  |  |

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**APPENDICES**

**APPENDIX-A**

**CONSENT FORM**

Hello, my name is (your name). We are surveying the “Evaluation of Knowledge, Attitudes, and Practices Regarding Infant and Young Child Feeding Among Mothers of Children Under Two at Cox's Bazar Sadar Hospital, Bangladesh”. I would like to talk to you about your IYCF practices and other topics. This interview usually takes about 45 minutes. All the information we obtain will remain strictly confidential and anonymous. If you wish not to answer a question or wish to stop the interview, please let me know. May I start now?

**APPENDIX-C**

**QUESTIONNAIRE**

**ABOUT YOU**

Before you begin, we would like to ask you to answer a few general questions about yourself: by circling the correct answer or by filling in the space provided.

**Socio-Demographic**

What is your **age**?

What is your **ethnicity**?

What is your **family type**?

What is your **religion**?

Where is your **residence**?

What is the highest **education** you received? None at all

Primary school

Secondary school

Tertiary

What is your **occupation**?

Do you have **smoking habit**?

Do you have **alcohol consumption**?

What is your **wealth index**?

What is your **living status**?

**Knowledge of Infant and Young Child Feeding Recommendations:**

1. What is the recommended duration of continued breastfeeding?
2. At what age should complementary foods be introduced?
3. What are some good reasons for giving complementary foods at six months?
4. How can one ensure the consistency of a meal for an infant?
5. Why is the consistency of a meal necessary for young children?
6. How can dietary diversity be ensured, and what are some ways to enrich porridge?

**Attitudes Towards Infant and Young Child Feeding Recommendations:**

1. Do you feel confident in preparing food for your child?
2. Do you believe that giving different types of food is beneficial to your child?
3. Do you have difficulty providing different types of food to your child?
4. Do you perceive that feeding your child several times each day is beneficial?
5. Do you have difficulty feeding your child multiple times a day?
6. Do you believe that it is beneficial to continue breastfeeding beyond six months?
7. Do you find it difficult to continue breastfeeding beyond six months?

**Practices Towards Infant and Young Child Feeding Recommendations:**

1. Should animal milk (goat and camel) be given to children under five months?
2. Does a three-day-old baby need water to quench its thirst?
3. Does breastfeeding increase mother-child bonding?
4. Is the first yellow breast milk (colostrum) harmful to children’s health?
5. Should a small child with diarrhoea be given fewer liquids than normal?