

Internship Report

on

Training for Conducting Online Research (During Covid -19) - a 360 Degree Approach at icddr,b.

Submitted to

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Date of Submission: 29-05-2021

LETTER OF TRANSMITTAL

Date: 29 May, 2021

The Head

Department of Nutrition and Food Engineering (NFE)

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Subject: Submission of Internship Report.

Dear Sir,

It is a great pleasure to submit my Internship Report, as a partial requirement of the Internship Program and a prerequisite for completion of the BSc. in Nutrition and Food Science Program. I believe it is one of my great achievements to pursue and successfully complete my internship at icddr,b. This report is based on my work entitled **Training for Conducting Online Research** (**During Covid -19) - a 360 Degree Approach at icddr,b.** I have got the opportunity to work in icddr,b in Health System and Population Study Division for four months, under the supervision of **Dr. Sabrina Rashid,** Associate Scientist. This internship opportunity gave me to gain knowledge both academic and practical perspective. During the entire period of my internships I specially learnt about the various research activities of this division at icddr,b. In addition, I get the opportunity to get introduced with some of my fellow intern from various background which helped to acquire diversified information of their research area. Finally, I have joined an online presentation to my supervisor for sharing my internship outcome and report in formal way.

I shall be highly obliged if you are kind enough to accept this report and provide me your valuable judgment. It would be my immense pleasure if you find this report useful and informative to have an apparent perspective on the issue.

Thank you again for your support and patience.

Oiendrila Baroi

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LETTER OF RECOMMENDATION

This is to certify that the internship report entitled "Training for Conducting Online Research

(During Covid -19) - a 360 Degree Approach at icddr,b" which is submitted for assessment to

the examination committee by **Oiendrila Baroi** bearing ID:171-34-606, Department of Nutrition

and Food Engineering (NFE), Daffodil International University (DIU).

I am pleased to declare that this report is entirely written by the author and all the related works

have been conducted by the intern under my strong supervision and observation. This is a piece of

original work and has not been submitted or published anywhere for any other purpose.

I strongly recommend the approval of the report by the authority and I also pursue a positive

and fair evaluation of the work.

I wish her all the success in life.

Yours Sincerely

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Dr. Amir Ahmed

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05/07/2021

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ACKNOWLEDGEMENTS

First of all, my gratitudes and thanks go to the Almighty Allah, the most merciful and the kind who has blessed me with the ability to make this work successful. I would like to say thanks to the Honorable Vice Chancellor of Daffodil International University (DIU) for extending me this opportunity to pursue my BSc. Degree in Nutrition and Food Engineering (NFE) Department.

My deep gratitude and sincere thanks to **Professor Dr. Ahmad Ismail Mustafa**, the Honorable Dean, **Professor Dr. Bellal Hossain** the Associate Dean, Faculty of Allied Health Sciences (FAHS); **and Associate Professor Dr. Sheikh Mahtabuddin the** Head, Department of Nutrition and Food Engineering (NFE), for their kind cooperation and encouragement to assign and accept this Internship Report.

My deep and sincere appreciation to **Dr. Amir Ahmed**, Associate Head of Department Nutrition and Food Engineering (NFE) for his constructive suggestions, effortless guidance and continuous support throughout my internship which has helped me immensely to complete this work successfully.

My gratitude goes to **Dr. Shabrina Rashid,** Associate Scientist, icddd,b for all the meaningful and goal oriented learnings she has delivered with great passion and sincerity throughout my internship at icddd,b.

I am also thankful to all my great teachers Assistant Professor Dr. Md Rezaul Karim; Assistant Professor Sarwar Inam; my Batch Advisor Assistant Professor Fouzia Akter, Assistant Professor Dr. Nizam Uddin, Senior Lecturer Tasmiah Tasnim, Senior Lecturer Effat Ara Jahan, Senior Lecturer Nasima Akter Mukta, Lecturer Najia Kamrul; Lecturer Juwel Rana, Lecturer Harun-Ur-Rashid, Lecturer Humyra Nowshin, for their countless inspiration and encouragement during my student life.

My warmest thanks to our Coordination Officer Mr. Emran Hossain, Assistant Technical Officer Mr. Reaz Mahmood and Assistant Officer Mr. Elahi Box. My gratitude goes to the entire NFE Department of Daffodil International University for arranging this research opportunity and facilitating the work throughout.

OVERVIEW

Training for Conducting Online Research (During Covid -19) - 360 Degree Approach at icddr,b.

Organized by Health System and Population Studies Division of icddr,b. Mohakhali Dhaka-1212, Bangladesh





Course Advisor: Dr. Sabrina Rasheed, Associate Scientist; HSPS division.

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- 1. Foujia Tanjir Anne, Assistant Research Investigator.
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- **3.** Sujaul Islam, Field Researcher.
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1. INTRODUCTION

ICDDR,B (earlier known as the International Center for Diarrhoeal Disease Research, Bangladesh) is a worldwide wellbeing research association situated in Dhaka, Bangladesh (Ahmed, 2012). Dedicated to saving lives through examination and treatment, icddr,b addresses probably the most basic wellbeing concerns confronting the present reality, going from improving neonatal endurance to HIV/AIDS. As a team with scholarly and research foundations over the world, icddr,b conducts exploration, preparing and augmentation exercises, just as program-based exercises, to create and share information for worldwide lifesaving arrangements.

icddr,b is one of the main examination foundations of the Global South, delivering, as per the Thomson Reuters Web of Science, 18 percent of the Bangladesh's distributions (Dilruba, 2008).

icddr,b has a blend of public and worldwide staff, including general wellbeing researchers, lab researchers, clinicians, nutritionists, disease transmission experts, demographers, social and conduct researchers, IT experts, and specialists in arising and reappearing irresistible infections, and immunization sciences. icddr,b is upheld by around 55 benefactor nations and associations, including Sweden (SIDA), Canada, UK, Bangladesh, USA, UN specific offices, establishments, colleges, research foundations and private area associations and organizations that share the middle's anxiety for the medical conditions of agricultural nations and who esteem its demonstrated involvement with tackling those problems (Children's Health Foundation, 2009). The middle is administered by a recognized global Board of Trustees containing 17 individuals from everywhere the world.

During this online research at icddr,b I learn about those infant, mother, pregnant mother and lactating mothers who can not get proper nutrition and food which is most important for them. Even we know that very well, complementary food or weaning food is most important for 6-23 month child. Their mental and physical growth is depends on this period. If they doesn't get proper or enough nutritious food then wasting, stunting and malnutrition can occurs and many child in the world die because of this problem. Lacking of information, illiteracy, poverty, improper

knowledge can be a cause for this problem. Even most of village woman does not know about this weaning or complementary food. They provide same food which made for the whole family member to their child. Most of the child in village never get any complementary food. That's why they suffer from malnutrition. As well as if a pregnant woman don't get enough food and nutrition, her new born baby become malnourished and there have a chance of death of mother and baby. So it's an important factor .



1.2 ABOUT ICDDR,B

1.2.1 HISTORY

ICDDR,B has its underlying foundations in the SEATO Cholera Research Laboratory framed in 1960. At the point when Bangladesh got autonomous in 1971, exercises were downsized because of a shortage of assets. In this way, a respective arrangement was endorsed by Bangladesh and USAID for direct asset stream to the association. Until 1978, there were number exploration achievements, for example, ORS, Patho-Physiology of shigellosis, Rotavirus, inspiring family arranging program and so forth in 1978 proposition by a global gathering of researchers was advanced to hoist the association to a worldwide exploration place. The association was set up in its present structure through a law declared by the President and afterward that was approved in parliament in 1979. The middle has, among its different achievements, assumed a significant part in the disclosure and usage of oral rehydration treatment for the treatment of loose bowels and cholera (UNICEF, 2011). Oral rehydration treatment is thought to have saved more than 50 million individuals worldwide (Ginzberg and Lin Lin, 2014).

Since 1978, the middle has prepared in excess of 27,000 wellbeing experts from more than 78 nations. Courses give commonsense preparing in clinic the board of diarrheal infections, the study of disease transmission, biostatistics, family arranging, segment reconnaissance, and kid endurance techniques. As kid passing from infection have been decreased, passing from wounds, for example, suffocating, have become a proportionately more prominent danger to kid survival (icddr,b 2011).

1.2.3 AWARDS AND RECOGNITION

In 2017, icddr,b won the Conrad N. Hilton Humanitarian Prize with \$2 million in prize cash in recognition (Center Foundation, 2017) of the foundation's imaginative way to deal with addressing worldwide medical problems affecting the world's most devastated networks. In 2016, previous UN Secretary-General Ban Ki-moon noted, that icddr,b's advancements are straightforwardly adding to manageable turn of events, decreasing baby, kid and maternal mortality fundamentally in Bangladesh and past (Ban Ki-moon, 2016).

In 2001, icddr,b got the primary Gates Award for Global Health from the Bill and Melinda Gates Foundation. In 2002 the primary Pollin Prize for Pediatric Research was granted to Drs. Norbert Hirschhorn, Nathaniel Pierce, Dilip Mahalanabis and David Nalin for their commitments to the turn of events and execution of oral rehydration treatment. Crafted by Drs. Hirschhorn and Nalin was done at the Cholera Research Laboratory starting in 1967. Dr. Dilip Mahalanabis made his significant commitment to oral rehydration treatment in 1971 while working in Calcutta and filled in as Director of Clinical Research at icddr,b during the 1990s. In 2006, the Prince Mahidol Award for general wellbeing was offered mutually to Drs. Mahalanabis, Richard A. Money, David Nalin, and Stanley Schultz for their work on oral rehydration treatment. In 2007, icddr,b got the Leadership Award from the Alliance for the Prudent Use of Antibiotics.

It won the \$2 million 2017 Conrad N. Hilton Humanitarian Prize from the Conrad N. Hilton Foundation (icddr,b 2017).

1.3 ACHIEVEMENT

- 1. Research laboratory for cholera
- 2. Surveillance for population in Matlab
- 3. Reducing Cholera fatality to less than 1%
- 4. Rice based ORS
- 5. Launched Cholera vaccine
- 6. Identified new Vibrio cholerae 0139
- 7. Opens the 1st tuberculosis laboratory
- 8. Effects of arsenic on human health.
- 9. Zinc Diarrhoea Care.
- 10. Tetanus Toxic Mothers' Vaccine.
- 11. Guidelines for Extreme Malnutrition Care.
- 12. Vaccine testing: rotavirus vaccine included.
- 13. Solutions for Family Planning.
- 14. The ongoing innovation.
- 15.Mat for Maternal Blood Loss Assessment.
- 16.Ultra-Low-cost CPAP System for serious occupational pneumonia.
- 17. In order to avoid and manage malnutrition in the health sector, therapeutic foods.

1.4 STRATEGY

Achieving their Mission and Vision - Strategic Plan 2019-2022

Table 01: Mission and Vision - Strategic Plan 2019-2022

Goal	Mission & Vision
1	Maintain a Focused Research Strategy
2	Support and strengthen the use of inventions for Bangladesh and the rest of the developing world
3	Clinical and Humanitarian Services and Response
4	Develop in the Field Sites and Study Tools
5	Increase the Strong Impact of Our Research Evidence
6	Invest in Our People for the research work
7	Improve Organizational Efficiency and Cost Effectiveness immediately.
8	All time ensure Financial Sustainability for this work

1.5 FUNDING

Exploration at icddr, b is subsidized by a blend of center reciprocal benefactor financing and award benefits. The Administration of Bangladesh is appreciative to Icddr,b for giving monetary assistance to adequate time. The staggering measure of monetary help for research work is upheld by different kinds of NGOs. The top 10 sources of revenue for restricted and unrestricted grants in 2017 are summarized in the table no. 02.

Table 02: Funding NGOs

Number	NGOs
1	Bill & Melinda Gates Foundation, USA
2	UKAID: Department for International Development (DFID)
3	Centres for Disease Control and Prevention (CDC), USA
4	United States Agency for International Development (USAID)
5	The Global Fund to Fight AIDS, Tuberculosis and Malaria
6	National Institutes of Health (NIH), USA
7	Government of the People's Republic of Bangladesh.
8	Swedish International Development Cooperation Agency (SIDA)
9	Commission of the European Community

1.6 PROGRAMS OF RESEARCH

- i. Universal Health Coverage;
- ii. Non-Communicable Diseases;
- iii. Climate Change and Health, and
- iv. Gender and Reproductive Rights.

The department also maintains programs for health and population surveillance at field sites.

2. OBJECTIVES

2.1 GENERAL OBJECTIVE

The overall target is to satisfy the necessity of being trained in my future specialization goals towards the completion of my graduation (BSc. in Nutrition and Food Engineering). It contains four credits for entry level positions and I need to present a primary internship report to my department. As an undergrads study of Nutrition and Food Engineering Program I might need to assemble functional information by working in Health System and Population Studies Division, International Center for Diarrheal Disease Research Bangladesh ((icddr,b). Presently, I may need to complete a few works related to my study field for a quarter of a year to secure reasonable information about genuine circumstances.

SPECIFIC OBJECTIVES:

- Acquiring knowledge about the capacities and exercises of the Health System and Population Studies Division in the International Center for Diarrheal Disease Research, Bangladesh.
- 2. Getting prepared for the continuous task as a field specialist.
- 3. Gaining knowledge about complementary or weaning food for children as well as the importance of nutrition for pregnant and lactating women.
- 4. Learning the ways of different types of literature review and the techniques of scientific paper writing.

3. LITERATURE REVIEW

Abeshu et. al., (2016) found in his research that Hand crafted correlative nourishments in Ethiopia depend overwhelmingly on oats and vegetables, and are generally an augmentation of family food sources, for example, fetfet, kitta, dabo, slop, and porridge. Accordingly, the eating regimens have great energy thickness regardless of whether ampleness of day by day energy admission was clashing. Notwithstanding, the eating regimens are low in supplement thickness of micronutrients, including those marked by the WHO as "issue supplements." The weight control plans need creature source food sources just as products of the soil. Admission of micronutrients, for example, iron, zinc, and calcium, from hand crafted correlative nourishments was extremely low (Abeshu et al., 2016).

This paper attempted to survey proposals and works on rotating around corresponding taking care of. Regardless of whether numerous significant territories were covered, the accompanying impediments ought to likewise be noted. To begin with, the survey centers around proposals for full-term youngsters with normal bosom milk consumption and doesn't address necessity for non-breastfed and non-full-term kids. Moreover, due accentuation was given to taking care of practices dependent on hand crafted correlative food sources in agricultural nations, for example, Ethiopia (Abeshu et al., 2016).

In this research Eardley and his co-researchers found that 87 examinations were incorporated. Between rater dependability was acceptable (kappa = 0.8). Study system and nature of announcing were poor. The predominance of CAM utilize differed generally inside and across EU nations (0.3–86%). Commonness information showed considerable heterogeneity random to report quality; along these lines, we couldn't pool information for meta-examination; our report is account and dependent on expressive measurements. Home grown medication was most ordinarily revealed. CAM clients were predominantly ladies. The most well-known purpose behind use was disappointment with customary consideration; CAM was broadly utilized for musculoskeletal issues (Eardley et al., 2012).

Lange, Visalli, Jacob, Chabanet, Schlich and Nicklaus (2013) they worked on 203 mothers and were approached to record every food offered to their newborn children from the earliest starting

point of the weaning time frame to the age of 15 months and to score the acknowledgment of every nourishment for the initial 4 introductions. The nourishments were grouped into classifications (for example natural products, vegetables...). The connection between singular attributes (maternal age, training level, equality, parental figure during weaning and newborn child sexual orientation) and elite breastfeeding length, age at the commencement of weaning, age at the presentation of every food classification, number of new food sources presented from all classes and the baby's acknowledgment of every food was examined. At last, the connection between taking care of practices and babies' acknowledgment of new nourishments was dissected.

72 percent of the babies were only breastfed from birth for a middle length of 68 days. Overall, the age at the commencement of weaning, 5 months, was as per the current French proposals. The quantity of new food sources presented was 13.4 every month all things considered and contrasted starting with one newborn child then onto the next with no relationship with singular attributes. The responses to new nourishments were positive in 90% of the cases however varied by food classes. In the early weaning time frame, products of the soil were the least decidedly acknowledged food sources; nonetheless, the normal acknowledgment pace of these nourishments mirrors babies' positive responses. The previous vegetables were presented, the higher the acknowledgment of new vegetables was. At last, new food acknowledgment was essentially connected with the quantity of various nourishments offered in the initial two months of weaning, especially for products of the soil (Lange et al., 2013).

- Evaluation of the impact of weaning food messages on infant feeding practices and growth in rural Bangladesh
- 2. Child Weaning Practices among Selected Urban Slums of Dhaka City, Bangladesh
- 3. Development and Evaluation of Weaning Foods Using Locally Available Fruits in Bangladesh.

Author/year	Purpose/aim	Design	Sample size	Dependent variables	Finding
Amy Brown, Sara Wyn Jones & Hannah Rowan (2017)	To define that Does all infants traditionally introduced to solid foods using spoonfeeding of specially prepared infant foods.	Pre test and post test	55	Introduced solid foods, specially prepared infant foods	This methodology includes permitting babies to self-feed family nourishments, urging the baby to establish the tone and admission of the feast. Defenders of the methodology trust it advances smart dieting conduct and weight acquire directions, and proof is beginning to construct encompassing the strategy

Hannah Rowan, CristenHarris (2011)	To determine the significant changes in dietary intake during weaning	Pre test and post test	110	Solid food Introduction and Dietary intake change of family	No huge changes in dietary admission during the initial three months of weaning, in any case, guardians offered their youngsters 57% of similar food sources they were burning-through. Results recommend that BLW doesn't prompt dietary changes among guardians during the weaning cycle.
Kathryn G.Dewey , Kenneth H.Brown (2003)	This paper want to provides an update to the 1998 WHO/UNICE F report on complementar y feeding.	Pre test	95	Minimum meal frequency and adequacy	Complementary nourishments are frequently lacking, and the admission of different supplements may likewise be low in certain populaces

4.1 PROCEDURE OF CLASSES

As this was online internship, that's why my task was to review all literatures which were related with my topic (complementary food for infant and proper nutrition for pregnant and lactating mother). I have 3 classes in a week for 1-2 hours. In this class I knew about icddr,b with ongoing research activities as well as my research topic.

At our 1st class we get the opportunities to select our own internship and project topic. Then we are starting to research about our topic.

4.2 NUTRITIONAL GUIDELIENS FOR PREGNANT WOMAN IN BANGLADESH

The nourishing rules in western or created nations have been utilized as global rules in numerous nations to guarantee, in principle, that it will be the best to the soundness of a pregnant lady and her creating embryo. Person countries ought to be building up their own healthful rules to be more setting explicit as a portion of the worldwide rules may not be suitable. World Food Program (WFP, 2014) in Bangladesh expressed that during pregnancy ladies have unique wholesome requirements. Pregnant ladies have a more noteworthy need for energy and furthermore for the supplements that make their bosom milk sustaining to their infants. This is basic in circumstances where ladies are as of now malnourished previously pregnancy and don't get certain nutrients or minerals (WFP, 2014). The healthful rules for Bangladeshi pregnant ladies have been created as appeared in table-1.

In Bangladesh, to survey and strengthen dietary data at each pre-birth visit to advance great nourishment, attendants can assume a significant part in guaranteeing satisfactory nourishment for pregnant ladies. During the underlying pre-birth visit, nurture lead a careful appraisal of a ladies' run of the mill dietary practices and address any conditions that may cause deficient sustenance, for example, sickness and heaving or absence of admittance to satisfactory food.

 Table 1. Bangladeshi pregnant women daily nutrition requirements.

Nutrient	Element Quantity	Food stuff	Quantity
Calories	2,500	Rice	235 grams
Protein	1 gram/kilogram body weight + extra 10 grams	Wheat	115 grams
Calcium	1 gram	Pulses	90 grams
Iron	40 grams	Leafy	145 grams
Vitamin-A	750 micrograms	Others vegetables	90 grams
Vitamin-B1	1.3 milligrams	Potato or kachu	75 grams
Vitamin-B2	1.4 milligrams	Seasonal fruits	90 grams
Niacin	1.7 milligrams	Milk	235 grams
Vitamin-C	50 milligrams	Oil	45 grams
Folic acid 150-300 micrograms		Sugar	30 grams
Vitamin-12	1.5 micrograms	Fish or meat	60 grams
Vitamin-D	120 micrograms	Egg	1

4.3 EFFECT OF NUTRITION ON MATERNAL AND INFANT HEALTH OUTCOMES

Admission of satisfactory and adjusted eating routine before origination is needed for effective pregnancy results. All ladies experience expanded dietary prerequisites during pregnancy, and in this way all ladies ought to guarantee they are well educated about and endeavor to keep a solid adjusted eating routine previously and during pregnancy. Notwithstanding, a few ladies may think that it's harder to get to or devour all the fundamental parts of a solid eating routine for the duration of their life and during pregnancy.

A few investigations found that lacking supplement admission of both macronutrients (carb, protein, fat) and micronutrients, (for example, iron, calcium, phosphorus, magnesium, zinc, nutrient A, thiamine, riboflavin, niacin, and nutrient C) appear to influence maternal paleness, expanding the danger for other maternal morbidities and mortality, fetal development hindrance and low fetal birth weight. Under sustenance of mother during pregnancy made major issue of low birth weight or weighing of child under 2,500 grams upon entering the world generally happened in Asia. Low birth weight is a significant pointer of the in general strength of the mother and the infant.

Intrauterine development hindrance (IUGR) and preterm birth are the two fundamental driver of low birth weight. In low-pay nations, most of low birth weight babies are brought into the world little yet not untimely. An examination in country Bangladesh detailed that IUGR was the significant supporter of low birth weight (96.4%) while just 3.6% of infants were conceived preterm (Nahar, 2004). The paces of low birth weight among Bangladeshi newborn children, despite the fact that decreased from 40%, are still among the most noteworthy on the planet, going from 20% to 22%. In the wake of controlling for the autonomous impacts of other covariates, maternal BMI and tallness were demonstrated to be the incredible indicators of LBW in Bangladesh. Study among 100 sets of pregnant mother-infant in metropolitan and rustic territories of Dhaka city, Bangladesh found that there were relationship between the moms' body weight also, their babies body weight demonstrating that all around supported moms brought forth sound

infants. A new report among pregnant ladies in helpless networks in Bangladesh, exhibited that giving pre-birth different micronutrient supplementation including iron and folic corrosive joined with early food supplementation assisted with expanding maternal hemoglobin level and birth weight even was not at genuinely critical, but rather brought about diminished baby death pace of 16.8 per 1000 live births when contrasted with 44.1 per 1000 live births in ladies getting a standard program that included treatment with iron and folic corrosive and normal food supplementation normal greeting. Micronutrient-related unhealthiness is frequently named 'hidden hunger' as the results are not generally obvious. Lacking admission of micronutrients during pregnancy inclined ladies to various complexities of pregnancy has discovered that lacking iron admission was related with preterm conveyance. Deficient calcium admission was related with expanding maternal pulse during pregnancy among ladies in danger of hypertension. Micronutrient lacks additionally enormously affects the drawn out wellbeing possibilities of kid. Deficient nourishment, particularly right off the bat in the pregnancy, may debilitate fetal mental health and cause variations from the norm in endocrine working, organ improvement and the energy digestion of kid. Pregnant ladies whose foliate levels were low in light of the fact that their weight control plans needed food sources containing this B-complex nutrient, expanded the danger of deformities in the neural containers of their infants. Pre-birth inadequacies in nutrients D and E have been related with expanded occurrences of respiratory challenges, including wheezing and asthma, in the child. A new report found that admission of pre-birth nutrients may decrease the danger of having kids with chemical imbalance. Micronutrient lacks particularly iron and folic corrosive insufficiencies that bring about wholesome pallor in youngsters and ladies and neural cylinder absconds in babies stay a general medical condition in Bangladesh. Helpless admission of food sources rich in iron and folic corrosive and different contaminations have brought about high paces of frailty among pregnant ladies and kids under two years. Inclusion of pre and postnatal iron also, folic corrosive enhancements is exceptionally low (just 15% of pregnant ladies in provincial regions take in any event 100 tablets during pregnancy) due, to some extent, to low consistence rates and low inclusion of antenatal administrations. Inclusion of various micronutrient supplements figured to address iron and other micronutrient insufficiencies is likewise low. The commonness of basic youth diseases, for example, the runs and intense respiratory diseases keeps on being a significant reason for baby and youngster bleakness and mortality in Bangladesh. It has been suggested that insufficient admission of supplements during pregnancy incites the baby to create variations to a

restricted stock of supplements, brings about lasting change on its design, physiology, capacity, and digestion. Such change is designated "fetal programming" which may initiate various illnesses sometime down the road when person open to dietary admissions and ways of life diversified altogether from the shortage experienced in uteroplacental deficiency, cause the arising the hypothesis of "fetal starting points of grown-up sickness"; endocrine and cardiovascular illness in grown-up life.

NUTRITIONAL PROBLEMS AND BEHAVIORS IN BANGLADESHI PREGNANT WOMAN

5.1 MATERNAL NUTRITIONAL PROBLEMS IN BANGLADESH PREGNANT WOMEN

In Bangladesh, maternal death rate stays high supported by the reality most conveyances happen at home, away from crisis obstetric consideration and without a talented specialist; additionally, improper utilization of food. Bangladesh proceeds to battle with levels of maternal lack of healthy sustenance that are among the most noteworthy in the world. Just about one-quarter ladies are viewed as undernourished with BMI of under 18.5 (National Institute of Population Research and Training, Mitra and Partners, ICF International, 2013). Also, paleness is a serious general wellbeing issue in pregnant ladies because of absence of nourishment (UNICEF, 2007). World Food Program (WFP, 2012) in Bangladesh showed that micronutrient inadequacies especially iron insufficiency sickliness and iodine lack is far reaching and different insufficiencies are normal. Iron inadequacy pallor among pregnant lady is a genuine nourishing test; with one of every two pregnant ladies is pallor. Pregnant ladies in Bangladesh experience the ill effects of under sustenance and underweight (WFP, 2012). Micronutrient insufficiencies particularly iron and folic corrosive inadequacies result in nourishing iron deficiency during pregnancy. Helpless admission of nourishments wealthy in iron and folic corrosive furthermore, various diseases have brought about high paces of paleness among pregnant ladies. Inclusion of pre and postnatal iron and folic corrosive enhancements is exceptionally low (just 15% of pregnant ladies in country regions take in any event 100 tablets during pregnancy) due, in part, to low consistence rates and low inclusion of antenatal administrations. Inclusion of numerous micronutrient supplements planned to address iron and other micronutrient inadequacies is likewise extremely low in Bangladesh (UNICEF, 2007). Along these lines, consideration regarding suitable eating conduct and appropriate supplement admission will supply satisfactory sustenance to accomplish ideal wellbeing for both mother and kid.

5.2 EATING BEHAVIORS IN BANGLADESHI PREGNANT WOMAN

Eating conduct is significant for pregnant ladies to keep a sound life also, great birth results. Eating conduct varies from different kinds of wellbeing practices furthermore, its fundamental structures are fundamental forever. Some eating practices are not important to support life, for example, drinking mixed refreshments. Eating conduct is an indispensable part of individual, family, and local area ways of life.

Eating practices and works on during pregnancy in Bangladesh have been broadly considered. An examination by Karim, Bhat, Troy, Lamstein, and Levinson (2002) found that 40% of ladies demonstrating a conviction that more food during pregnancy is ideal anyway they didn't, indeed, set up this information as a regular occurrence during their last pregnancy. Variables not fundamentally connected with food utilization during pregnancy included number of antenatal visits, family unit size, and family type. A investigation of dietary practices among pregnant moms in a rustic zone served by a regenerative wellbeing and nourishment program announced that regardless of significant degrees of consciousness of nourishing dietary necessities, a large portion of the pregnant ladies detailed unaltered or diminished food admission during pregnancy. Dietary restrictions and food repugnance were generally drilled. Ladies reliably got the last and littlest food shares during eating times. The discoveries feature the need to address conventional dietary restrictions and inclinations, and effectively target key family unit chiefs, specifically, spouses and mothers by marriage, in sustenance conduct change correspondence (Shannon et al., 2008). The discoveries of Shom (2010) demonstrated that pregnant ladies had a significant level of solid dietary practices in the parts of nature of diet and avoiding diet during pregnancy, aside from advantageous eating regimen during pregnancy should have been improved. This is steady with an examination by Islam and Ullah (2005) which found that about 75% ladies accept that mother's lack of healthy sustenance is the primary driver of kid unhealthiness. A large portion of the pregnant ladies have positive assessment on taking food. A few customary skepticism exists about taking milk and certain organic products, for example, pineapple and banana. From the examination it was seen that pregnant ladies don't take milk (21%), Pineapple (75%), Banana (10%) for different doubts. Consequences of a subjective report among super poor pregnant ladies found that ladies typically considered pregnancy as an ordinary occasion except if intricacies emerged, 23 also, the majority of them abstained from looking for antenatal consideration aside from affirmation of pregnancy, and no earlier groundwork for labor was taken. There were various

food-related restrictions and limitations, which diminished the utilization of protein during pregnancy and baby blues period (Choudhury and Ahmed, 2011). An ethnographic examination in a metropolitan ghetto in Dhaka, Bangladesh found that ladies knew about the significance of good sustenance and exhibited exact, Bio medically-based information on good dieting works on during pregnancy. The regularizing sexual orientation decides that have customarily compelled ladies' admittance to dietary assets are unwinding in the metropolitan setting; nonetheless, ladies are tested in getting to sufficient quality and amounts of food because of the expansion in food costs at the market (Levay et al., 2013). Discoveries of a few investigations showed that maternal hunger in Bangladesh is a determined medical problem and is the result of various complex factors, including adherence to food 'restrictions' and a male centric sex request that limits ladies' portability and dynamic (Levay et al., 2013; Shannon et al., 2008). Eating down during pregnancy (for example devouring less food) to maintain a strategic distance from having too enormous a child, and subsequently a more troublesome work, is a generally revealed wonder in Bangladesh and in other South Asian nations. This training is counter toward the western biomedical worldview's meaning of smart dieting while pregnant, which expresses that ladies ought to burnthrough more calories during this time. Notwithstanding, there is proof to help the idea that Bangladeshi ladies are not really "eating down" during their pregnancies because of conventional or social reasons. Or maybe, financial status has likewise been discovered to be related with whether a lady expands her food admission while pregnant.

6.1 FINDINGS

6.1.1 ATTRIBUTES OF RESPONDENTS

Most of the infant get the same food which prepare for the whole family as well as, This thing is same for the Pregnant and Lactating mother. The people group individuals were moms and fathers of small kids who were met. Moms were both primiparous and multiparous (table 2). Most had 6-11 years of training; every one of them were housewives and generally were individuals from helpless family. Fathers were equitably dispersed among the various degrees of schooling. WHO recommended some weaning food for infant as well as some way of feeding.

- 1. two main way of feeding for baby and making sure these baby get enough nutrition-
 - very frequent feeding
 - using food with high concentration of nutrition.
- 2. what food are best for babies during weaning period -
 - good for baby
 - easily available for family
 - not expensive

Staple food is always less expensive in all country, that's why WHO recommended this staple food. it can be rice, wheat, potato etc. and this contain lots of carbohydrates and others nutrients. as well as some others food such as green leafy vegetables, food from animal, oil and fat, beans, fruits etc. Among all of this varieties of food, some are less expensive and easily available food

poor people. But most of poor baby can't get proper nutrients and food. but why? Where is the problem then?

There are some causes for which baby can't get enough food and nutrients: -

- **Misconception** (for example beef, this is considered expensive food, but there has some alternative animal food but village people considered as undesirable)
- **Save of time** (In village some mothers work at field or other place so they don't get enough time to make special food for baby)
- **Use less fuel** (They want to save fuel because of poverty it is an issue, so they don't prefer to make special food for baby)
- Lack of information (Some mothers don't know about frequency of feeding, and the proper amount of food for baby as well as they don't know about supplement which can get from health worker)
- Lack of knowledge (for example some time some foods are available at house but mother don't prefer to provide this to the children because they know that this food is harmful for baby)
- Lack of awareness (counseling and health checkup is important for those mother and baby but those mother never go to the health complex for this.)
- **Poverty** (because of poverty sometimes whole family members eat rice with only green chilly onions, in this family a special food for a baby is not possible)

7.0 DISCUSSION

7.1 INFANT AND YOUNG CHILD FEEDING

Regarding breastfeeding, the local area had incredible social worthiness and backing from both the relatives and the wellbeing laborers. In any case, moms appear to connect impression of bosom milk insufficiency, which is a significant idea to address dependent on investigations led among mother in other country territories of Bangladesh, to satisfactory food utilization during lactation. They didn't interface it to diminished span and recurrence of taking care of which is a significant issue to address. Our exploration discoveries show that there are not huge social restrictions against taking care of creature source food sources and nutrient a rich nourishment to little youngsters. When all is said in done they are viewed as solid for the youngster as far as his development and improvement. A couple of creature source nourishments, for example, meat was viewed as costly and inaccessible and a couple of different food sources were not viewed as alluring if the kid was sick with various illnesses. Most moms assisted their youngsters with eating dependent on 24-hour review and perception of supper times which is a significant finding. Moms didn't incline toward making exceptional food sources for kids and discussed utilizing family food sources for making correlative food sources. This is a significant highlight note for planning taking care of proposals for kids. In any case, when we took a gander at the genuine utilization example of the small kids, we found that dietary variety and both recurrence and measure of corresponding food sources given to little youngsters were not sufficient. This demonstrates that either moms didn't have the foggiest idea about the measure of food to take care of their kids or the youngsters wouldn't eat the measure of food gave. Furthermore, none of the kids were given food enhancements or MNP powders despite the fact that moms thought about them and they were accessible for buy through the market and NGO wellbeing laborers. As far as CHWs giving guiding to the moms about IYCF we found that the CHWs only from time to time homed visits and moms didn't visit the wellbeing office when the youngster is well for exhortation. This finding shows that during early stages when the IYCF messages and data could be basic for the moms to empower them to follow taking care of proposals, the chance for directing is insignificant. This was strengthened by our office perception where we saw CHWs just giving sustenance directing to pregnant moms.

Suggestions for family preliminaries: Based on our own discovering we should direct preliminaries of proposals identified with dietary variety and taking care of satisfactory amount of food sources to babies and small kids. Alongside these proposals direction ought to be given about how to make nourishments worthy to the kids (lessen eating, offer food when kid is eager, washing food sources to eliminate additional zest, cautiously taking out the bones). The discoveries from the preliminaries will be valuable to form BCC materials and procedure on this theme.

Suggestions for BCC materials and technique: At the local area level the BCC for IYCF should zero in on bosom milk deficiency, dietary variety and taking care of old enough proper satisfactory amount of correlative food sources. In view of the qualities about solid kids held by the moms the messages should zero in on mental health, insight, energy and absence of sickness as key goal of the proposal. The crowd for this data ought to be moms and other guardians of the little youngsters. The data ought to be given as and when it is valuable for the moms. Notwithstanding, when all is said in done moms and relatives of the little youngsters ought to be furnished with a believed individual and office to go to for data and backing in regards to newborn child taking care of. At the family level, the BCC procedure ought to underline the help required from relatives to execute the taking care of proposals. To refer to models: urge relatives to take up family errands to permit moms to breastfeed, bringing significant nourishments home to empower moms to take care of little youngsters. The BCC material ought to consider the financial state of the family unit while creating proposals for significant nutrition classes. At the wellbeing frameworks level chances ought to be made for development observing and well youngster visits to permit openings for advising between the CHWs and the local area moms and parental figures. It is significant that the CHWs are prepared to give age suitable IYCF directing to the moms during office visits or home visits. Counting the current CHWs from the NGO area alongside the public areas CHWs in the BCC methodology could assist with dispersing the messages locally.

7.2 PREGNANCY

It was a significant finding that mother's meaning of solid pregnancy included being dynamic and having energy just as prosperity of the embryo. The greater part of the hindrances of eating significant food sources during pregnancy were identified with mother's bigotry of the food or accessibility of the food in the family unit as opposed to genuine untouchable. Moms think about

the significance of eating nutritious nourishments just as devouring sufficient amount of food sources. They profited the ANC administrations at the wellbeing office and believed that the CHWs were significant wellspring of data for diet during pregnancy. The CHWs once in a while gave nourishment guiding to the moms. We found that relatives of the pregnant ladies upheld them by giving data, bringing them significant nourishments, taking them to wellbeing offices and assisting them with childcare and housework. Notwithstanding have a steady climate when we took a gander at the real dietary acts of pregnant ladies we found that pregnant ladies don't burnthrough nutrient A rich products of the soil sufficiently incompletely in light of the fact that they were ignorant of what these nourishments are and the significance of these food sources. They additionally didn't devour nuts and seeds. Regarding organic product utilization they were subject to the family creation of the organic product instead of the market. As indicated by the 24 hour review the pregnant ladies' utilization of IFA tablets likewise required a lot of progress since they are not burning-through it despite the fact that they think about it. Most pregnant moms thought about IFA tablets and many went to ANC meetings. The CHWs likewise generally gave nourishment data and administrations during ANC. Notwithstanding, past stock outs, the current thoughts regarding the hatchling becoming too huge ought to be expressly tended to in the BCC material to make to more adequate to the moms locally.

Suggestions for family unit preliminary: The discoveries demonstrate that for family preliminaries we ought to suggest the utilization of Vitamin A rich food sources for pregnant moms with an accentuation on the products of the soil that are filled in the family and therefore, available to them. IFA tablet utilization can be empowered by guaranteeing that few definitions are accessible to look over (tablet, case) in view of what moms can endure. Suggestion of techniques for dealing with the results ought to go with the IFA. For both Vitamin A rich food sources IFA tablets it is significant that moms are directed about the significance of these food sources and micronutrients for remaining vigorous and having the option to work during pregnancy notwithstanding their advantageous impact on the hatchling.

Suggestions for BCC materials and system: The BCC technique pregnancy ought to underscore the significance of dietary variety with an emphasis on creature source nourishments, nuts and seeds and nutrient A rich products of the soil. As indicated by our discoveries pregnant moms are right now doing great regarding devouring creature source nourishments. Nonetheless, on the off chance that it is wanted that the ladies ought to have creature source food sources regularly during her pregnancy, gaining of the creature source nourishments at home to make it more accessible and planning them so they are acceptable to the specific pregnant lady is vital to consider. The food sources suggested could change contingent upon moderateness and accessibility of the food sources in the family unit. Discoveries from family unit preliminaries will have the option to give further experiences about the words to utilize and inspirations to abuse for tending to dietary variety during pregnancy locally. As the acquirement of the nourishments and IFA implies that the family leaders should be locked in, during the advancement of the BCC material and procedure, it is essential to remember spouses and more established relatives for the conversation around diet during pregnancy. Top to bottom guiding by the CHWs with the pregnant mother and her relatives will be imperative to sort out methodologies that permit pregnant ladies to devour a different eating regimen consistently. It is significant that dietary suggestion is furnished with an accentuation on its impact on being sound and lively during pregnancy as moms and other family unit individuals consider this angle a significant pointer of a solid pregnancy. Further, thoughts regarding baby developing excessively and causing trouble during conveyance for explicit nourishments, (for example, in the event of IFA tablets) ought to be tended to in the messages created.

7.3 LACTATION

As indicated by our discoveries during lactation the focal point of diet shifts from being revolved around mother's wellbeing with its impact on kid's wellbeing. While breastfeeding, the ampleness of bosom milk creation was seen to be a marker of mother's wellbeing status and sufficiency of her eating regimen. During picking of the particular nourishments moms tend to picked food sources that they see to advance creation of bosom milk (kalijeera is considered to advance bosom milk creation). They additionally attempt to evade nourishments that contrarily influence youngster wellbeing through bosom milk (lafa leaves cause diarrhea to mother and kid). At the point when we take a gander at the 24-hour dietary review for lactating ladies we found that their dietary variety were lower contrasted with pregnant ladies which shows that moms during lactation are done zeroing in on eating great quality nourishments. This is exhibited by the diminished utilization of creature source food sources, nutrient A rich nourishments, nuts and seeds, and lentils

and beans among lactating ladies contrasted with pregnant ladies. Further, lactating mother don't appear to be the burn-through IFA additionally however it is suggested in the public rule. During lactation moms don't appear to visit the wellbeing office for general examination. They will in general utilize wellbeing offices for inoculation, wiped out youngster visits and for obtainment of free prescription when they, at the end of the day, are sick. Accordingly, openings for the CHWs to draw in with the lactating moms are insufficient. This finding is strengthened by our perception (where we didn't notice and directing of lactating moms) just as meetings with the local area moms where we found that moms cited numerous non wellbeing framework wellsprings of data about eating regimen during lactation contrasted with pregnancy. The CHWs were not referenced as vital wellspring of data and backing at this phase of life. Suggestions for family unit preliminaries: These discoveries show that during family unit preliminary we should evaluate systems that expansion lactating mother's dietary variety with an attention on nutrient a rich nourishment, creature source food sources and nuts and vegetables. The message must be made with an emphasis on significant nourishments accessible to the family units and with proposals about less expensive choices (cultivated fish, cultivated chicken, egg) when proper. The family preliminaries will give extra data about the facilitators and obstructions to actualizing systems around expanding dietary variety among lactating moms. Another expected possibility for family unit preliminary is IFA tablets as they are not devoured by the lactating moms in spite of proposals. During the family unit preliminaries, it is essential to underline the advantages of the suggested dietary practice on the energy levels of the moms just as advantages for bosom milk creation and kid wellbeing.

Suggestions for BCC materials and methodologies: At the local area level, both maternal and newborn child wellbeing BCC ought to accentuate the significance of the nature of maternal eating regimen for both maternal and baby wellbeing. The message ought to stress the estimations of the moms locally, for example, energy for work, temperament (mother), bosom milk creation and quality (mother), mental health and insight (youngster). At whatever point conceivable the technique ought to accentuate the incorporation of fathers and more seasoned relatives as they are vital in the turn of events and usage of any suggestion for the lactating moms. As impression of bosom milk insufficiency prompts early presentation of corresponding food sources which is unsafe for kid wellbeing, it must be tended to in the BCC system. The BCC material ought to incorporate the subjects of apparent bosom milk insufficiency and its administration so the discernment that solitary maternal eating regimen can guarantee bosom milk ampleness is

scattered. It is maybe critical to maybe medicalize the idea of bosom milk insufficiency so that moms and their families are urged to look for the CHWs counsel in the event of such event. For lactating ladies, a significant piece of the BCC system is make fascinating chances for moms to interface with CHWs for well kid visits. This will permit CHWs to furnish moms and their relatives with directing suitable for both mother and kid. At the point when we took a gander at the wellsprings of sustenance data NGO laborers were referenced as a significant wellspring of data. It is accordingly, imperative to remember both public and NGO CHWs for the BCC system with the goal that comparable message can be conveyed through different channels to expand its venture into the local area.

8.0 CONCLUSION & RECOMMENDATION

8.1 CONCLUSION

In my research I focused on diets of pregnant and lactating women and infant and young children and opportunities to improve their dietary patterns. I will therefore, discuss the implication of the findings for all the three populations.

8.2 RECOMMENDATION

For family unit preliminaries the accompanying practices ought to be tried with the goal that a superior comprehension of the hindrances and facilitators can be acquired for the advancement of BCC materials and procedure:

- 1. Consumption of nutrient A rich nourishments and IFA use for moms during pregnancy
- 2. Dietary variety and IFA use for moms during lactation
- 3. Dietary variety and satisfactory measure of nourishment for 7-multi month old babies

The BCC methodology should consider the significance of food accessibility and cost and the part of relatives in guaranteeing that moms can utilize the sustenance proposals.

The CHWs ought to be prepared and boosted and elevated to give sustenance data and administrations to the local area.

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