



INTERNSHIP REPORT

on

**A Training for Conducting Survey on Health System and Population Studies: a
360°- Approach at icddr, b**

Submitted to

Ms. Fouzia Akter

Head, Department of Nutrition and Food Engineering (NFE)

Daffodil International University

Supervised by

Dr. Amir Ahmed

Adjutant Faculty

Department of Nutrition and Food Engineering (NFE)

Daffodil International University

Submitted by

Era Akter Sema

ID: 172-34-652

Department of Nutrition and Food Engineering

Daffodil International University

Date of Submission:

LETTER OF TRANSMITTAL

Date: 26.10.2021

The Head,
Nutrition and Food Engineering (NFE)
Daffodil International University.

Subject: Submission of Internship Report.

Dear Sir,

I am very pleased to submit my internship report, requirement for the completion of the B.Sc. in Nutrition and Food Engineering. This internship report based on my work “**A Training for Conducting Survey on Health System and Population Studies: a 360°- Approach at icddr, b**”. I have completed my internship in Health system and population study division, icddr, b for two months under the supervision of Dr, Sabrina Rasheed, Associate Scientists. During this period, I learned about the various types and activities of research and how a research is conducted.

I would like to pray and hope that, if you can accept my internship report and provide me with your valuable information and judgement. It would be a great pleasure if you find this report useful and informative.

Era Akter Sema

Era Akter Sema
ID: 172-34-652
Nutrition and Food Engineering
Daffodil International University

LETTER OF APPROVAL

I am pleased to certify that the project report on “**A Training for Conducting Survey on Health System and Population Studies: a 360°- Approach at icddr, b**” prepared by **Era Akter Sema** bearing **ID: 172-34-652**, of the Department of Nutrition and Food Engineering, Daffodil International University has been approved for presentation and defense/viva-voice.

I am pleased to hereby certify that the data and finding presented in the research report are the authentic work of **Era Akter Sema** bearing **ID: 172-34-652**, I strongly recommend the internship report to be presented by **Era Akter Sema** for further academic recommendations and defense/viva voce. **Era Akter Sema** bears a strong moral character and a very pleasant personality. It has indeed a great pleasure working with her. I wish her all success in life.



Dr. Amir Ahmed

Adjutant Faculty

Department of Nutrition & Food Engineering

Daffodil International University

LETTER OF RECOMMENDATION

This is to certify that the project report entitled “**A Training for Conducting Survey on Health System and Population Studies: a 360°- Approach at icddr, b**” which is submitted for assessment to the examination committee by **Era Akter Sema** bearing **ID: 172-34-652**, 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



Dr. Amir Ahmed

Adjutant Faculty

Department of Nutrition &

Food Engineering

Daffodil International University

Ms. Fouzia Akter

Head

Department of Nutrition &

Food Engineering

Daffodil International University

ACKNOWLEDGEMENT

At first, my gratitude's and thanks go to the Almighty Allah, the most merciful and the kind who has blessed me with the ability to make this report successful. I like to express my gratitude to the Honorable Vice Chancellor of Daffodil International University (DIU) for giving me this opportunity to pursue my B. Sc Degree in Nutrition and Food (NFE) Department.

My gratitude and thanks to Professor **Dr. Ahmed Ismail Mustafa**, the Honorable Dean, Professor **Dr. Bellal Hossain** the Associate Dean, Faculty of Allied Health Sciences (FAHS), and **Ms. Fouzia Akter** the Head, Department of Nutrition and Food Engineering (NFE), for their cooperation to assign and accept the internship report.

My thanks go to **Dr. Amir Ahmed**, Adjutant Faculty of Department of Nutrition and Food Engineering (NFE) for his constructive cooperation, effortless guidance throughout my internship this helped me to complete my work successfully.

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

I am also thankful to all my great teacher's Assistant professor **Dr. Nizam Uddin**, Lecturer **Humyra Nowshin**, Lecturer **Harun-Ur-Rashid**, Lecturer **Jewel Rana**, Senior Lecturer **Nasima Akter Mukta**, Senior Lecturer **Iffat Ara Jahan**, and my batch advisor **Tasmia Tasnim**, for their countless inspiration and encouragement during my study life.

My deep thanks to our Coordination officer **Mr. Emran Hossain**, Assistant technical officer **Mr. Reaz Mahmud**. My thanks go to the entire NFE Department of Daffodil International University for arranging this research opportunity and facilitating the work.

DEDICATION

This research work is dedicated to my beloved father **Md. Ali Ashraf** and mother **Mohinur Begum** who gave me the support and courage to fulfil this work successfully.

**A Training for Conducting Survey on Health System and Population Studies:
a 360° -Approach at**

icddr, b

Organized by Health System and Population Studies Division of icddr, b

Mohakhali

Dhaka- 1212, Bangladesh



Course Advisor: Dr. Sabrina Rasheed, Associated Scientists; HSPS division.

HSPS, icddr, b:

1. Morzina Akter, Assistant Research Investigator.
2. Md Salim Ahamed, Assistant Field Researcher



Awards
this certificate
to

Era Akter Sema

for completion of
Field Experience Programme
from 08 June, 2021 -to- 15 August, 2021

A handwritten signature in black ink, appearing to read "Banu", written over a horizontal line.

Senior Manager
Technical Training Unit



International Centre for Diarrhoeal Disease Research, Bangladesh
GPO Box 128, Dhaka 1000, Bangladesh

TABLE OF CONTENT

Number	Content	Page Number
1	Introduction	1
2	Origin of the Repot	2
3	History	3-7
4	Objectives	8
5	Literature review	9-14
6	Internship class	15
7	Basic, Qualitative and Quantitative Research	16-18
8	Learning outcome	19

9	Recommendation	20
10	References	21-22

ABBREVIATION

ICDDR	International center for Diarrhoeal disease research, Bangladesh
EN	Eternal nutrition
NCD	Non-communicable disease
DFID	Department of International Development

CHAPTER 1

1. Introduction

Nutritional status of child is a sensitive indicator of a country's health and economic condition. It is caused by the impact of demographic, socioeconomic, environmental and health-related factors on nutritional status among children in Bangladesh. Child age, mother's education, father's education, father's occupation, family wealth index was discovered to be the most important contributing factors to malnutrition. It was found that pregnant women who are underweight have a higher risk of parental mortality and having babies with low birth weight. Underweight of women and children was very common in both the rural and urban areas of Bangladesh.

Icddr, b, The International Central for Diarrhoeal Disease Research was widely Known in Bangladesh, for their worldwide health research organization. They are attempting to reduce malnutrition and death rates in Bangladesh. They also provide low cost therapeutic diet to improve the nutrition status of the patient. As, I was interested in child health and researches I think this is the best option to complete my internship from this institution to gain knowledge about the research and how it is done. In my second semester, I had a chance for a hospital visit at the icddr, b there I learn about the nutritional status of the child, underweight, diet, supplementary feeding, complementary feeding etc. and I realized I need to learn more about that for my future study. This why, I decided to complete my internship from icddr, b to know more about the Researches.

2. Origin of the Report

The International Centre for Diarrhoeal Disease Research, or ICDDR, B, was widely known as the International Centre for Diarrhoeal Disease Research. It is a Dhaka, Bangladesh-based worldwide health research organization. It is investigating and interfering in order to save existence. This important issue is being addressed by the ICDDR, B, which is attempting to reduce malnutrition and death rates in Bangladesh. In Bangladesh, the creation of an oral rehydration solution for diarrheal patients has reduced mortality by more than half. ICDDR, B also works to treat acute malnutrition by offering patients with a variety of low-cost therapeutic diets to help them improve their nutritional condition. ICDDR, B, in collaboration with scholarly and research foundations throughout the world, performs exploration, preparation, and augmentation exercises, as well as program-based exercises, to develop and distribute information for global lifesaving arrangements. ICDDR, B has been performing remarkable experiments and encouraging the use of experience-based interference for over five decades. According to Thomson Reuters Web of Science, the ICDDR, B a major research body in the Global South, released 18 percent of Bangladesh's reporting.

National and international staff work in various departments at the ICDDR, B including consultants, nutritionists, epidemiologists, demographers, public health researchers, experiment laboratory researchers, community-based and behavioral scientists, computer experts, and specialists in the emergence and reemergence of infectious diseases, among others. Various organizations provide donations so that ICDDR, B can carry out their duties correctly. It is supported by fifty-five contributing countries and organizations. A professional management team leads ICDDR, B.

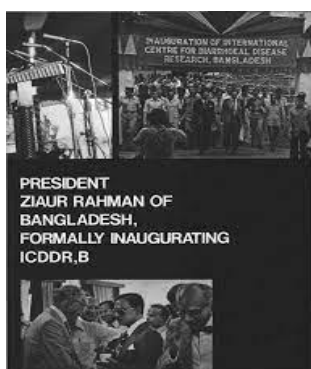


1.2 History Of ICDDR, B

The SEATO Cholera Research Laboratory, established in 1960, served as the cornerstone for the ICDDR, B. Because of a lack of assets, when Bangladesh became independent in 1971, operations were pushed back. As a result, Bangladesh and USAID agreed to a specific agreement for a direct asset stream to the organization. There were numerous investigation accomplishments until 1978, including ORS, Patho-Physiology of Shigellosis, Rotavirus, inspirational family arranging program, and so on. In 1978, a proposal by a worldwide gathering of researchers was advanced to elevate the association to a worldwide exploration location. The association was established in its current form by a presidential proclamation that was later recognized by parliament in 1979.

our researchers and doctors have played critical roles in international humanitarian responses, particularly in the prevention and control of infectious disease outbreaks. Our personnel have aided several relief initiatives in Asia, the Middle East, the Caribbean, and Sub-Saharan Africa during the last 30 years.

Figure 1.1: Ziaur Rahman inaugurating icddr, b



1.3 Awards and Recognition

In 2017, ICDDR, B was awarded the Conrad N. Hilton Humanitarian Reward, which included a \$2 million cash prize, in appreciation of the foundation's innovative approach to addressing global medical challenges affecting the world's most devastated networks (Center Foundation, 2017). In 1971, while working in Calcutta, Dr. Dilip Mahalanabis made a strong commitment to oral rehydration treatment, and in the 1990s, he filled in as Director of Clinical Research at icddr, b. The Bill and Melinda Gates Foundation awarded icddr, b the major Gates Award for Global Health in 2001. Drs. Norbert Hirschhorn, Nathaniel Pierce, Dilip Mahalanabis, and David Nalin were awarded the main Pollin Prize for Pediatric Research in 2002 for their contributions to the development and implementation of oral rehydration therapy. Drs. Mahalanabis, Richard A. Money, David Nalin, and Stanley Schultz were jointly awarded the Prince Mahidol Award for general wellbeing in 2006 for their work in oral rehydration treatment. The Alliance for the Prudent Use of Antibiotics awarded icddr, b the Leadership Award in 2007.

Figure: 1.2: Achievement award



Figure 1.3: Prize ceremony



1.4 Achievements

1	Rehydration solution of oral
2	Experimenting vaccine
3	Domestic violence Regulations
4	Zinc for Diarrhea
5	TTV (Tetanus Toxoid Vaccine) for mothers
6	Solutions of Family Planning
7	Rice Based ORS
8	Launched Cholera Vaccine
9	Opens 1st First Tuberculosis laboratory
10	Effects of Arsenic on Human Health

1.5 Mission, Vision and Goals

Goal	Mission and Vision
1	To Maintained Research Strategy
2	Invest in Research and Field Sites
3	To Ensure Financial Sustainability
4	Increase the Research Evidence
5	Improve Field sites and Tools
6	Invest our people in research work

1.6 Funding's

1	The Global fund to fight AIDS, Tuberculosis and Malaria
2	National Institute of Health (NIH), USA
3	Commission of European Communities
4	Government of the Peoples Republic of Bangladesh
5	Swedish International Development Cooperation Agency (SIDA)
6	Bill and Melinda Gates Foundation, USA
7	UKAID: Department for International Development (DFID)
8	Centres for Disease Control and Prevention

1.7 Health System and Population Studies Division (HSPSD)

In the region, HSPS divisions have specific expertise in areas such as public-health funding, urban health, gender-related topics, new automation, execution research, statistic observation, systematic reviews, and boosting the national health program's economic development.

Programs of Research are:

1. Universal Health Coverage.
2. Non-communicable Disease (NCD).
3. Population study and Risk factors.
4. Gender Rights.

1.8 Field Sites

In Dhaka, we also have two urban field sites: Kamalapur and Mirpur. These sites have been used to collect crucial data on urban poor health and to test treatments to increase access to health care. As the number of Bangladeshi individuals living in cities grows, it is critical to understand urban health. The economics and pathology of different infectious diseases, as well as vaccination research and other community-based therapies, have all been studied. With a population of 140,000 people, Kamalapur is a heavily populated area of informal settlements. Pneumonia, shigellosis, influenza, and dengue fever have all been studied on the site. It has also served as the foundation for research into urban health systems, including how to best offer health care, set up referral systems, and fund health-care initiatives.

Figure: 1.4: Field work



CHAPTER 2

2.1 General Objectives

As a last year student of Nutrition and food Engineering Department, I need to complete the internship for my graduation. As I have an interest in research sector, I want to gather knowledge by working in Health System and Population Studies Division in International Research center for Diarrheal Disease Research, Bangladesh. Now, I like to share the knowledge that I have learnt from the 2 months of internship.

2.2 Specific Objectives

1. Knowing about the activities of HSPSD.
2. How to develop a research.
3. How to do a literature review.
4. Get to know about the different division of researches.
5. Get to Know more about the Data analysis, Data collection and qualitative and quantitative research.

CHAPTER 3

3.1 Literature Review

(Khan and Raza 2014)The main of this research is to find out the nutritional status of the school aged children by measuring the weight for age, height for age and weight for height in Dhaka city. Malnutrition is one of the biggest problems in Bangladesh and large group of children are suffering from malnutrition due to insufficient food and also, they are suffering from calcium, vit A, Vit C deficiency. As Children are the most vulnerable group and they are transition phase of their life so studies are needed on this sector. It is seen that nutritional status can be differentiated by the wealth status of the family.

(Tabassum 2019)In this study it is seen that diet quality is very much important in children and it is needed for better growth and better nutrition. If the children had better diet quality than he can fight against any kind of disease and had better immune systems, better health and mental development. If the quality of diet is poor, then children can suffer from various disease and can decline their physical and mental development. Maternal education is very important and an educated mother take care of their child very well. Children should consume diet high in vegetables and fruits rather than processed food. Diet quality can be effect by dietary pattern, socio-economic status, parent's role, parent's education etc. Mother have an important role on children diet quality because it is seen that if mother give time and care to their children than children have a better nutritional status or better health.

(Rahman and Biswas 2009)Protein energy malnutrition is a major problem in Bangladesh because it effects the physical and mental development of children. It is caused due to various reasons like poor food quality, insufficient food intake, standard of living, food insecurity, insufficient food intake. As a result of overcrowding, poverty, food insecurity, disease, insufficient food malnutrition is seen. It is main causes of mortality and morbidity. The children under 5 years of age are suffering from malnutrition. It is found that if the children are not getting adequate food than they can suffer from chronic illness.

Table 3.1: Nutritional status

Author/year	Purpose/ aim	Design	Sample Size	Dependent variables	Findings
(Mitra et al. 2018) (Mitra et al. 2018)	To define the overnutrition in Bangladesh. As Undernutrition prevalent in country it is seen that overnutrition are also increasing due to transition of diet.	Pre-test	5258	Undernutrition, overnutrition, Diet quality, transition of Diet.	It is found that due to modernization overnutrition is increasing day by day due to the consumption of processed food. It is also related with the socio-economic, demographic, lifestyles.

Table 3.2: Undernutrition in rural areas

Author/year	Purpose/aim	Design	Sample	Dependent Variables	Findings
(Monoarul Haque et al. 2014)	The main aim of this study explores the nutritional status of rural population in Bangladesh.	Pre-test	200	Diet Quality, Undernutrition, stunting, wasting.	47% have normal nutritional status, 30% are overweight, 15% are obese and 8% are suffering from underweight.

Table 3.3: Malnutrition affects economy

Author/year	Purpose/aim	Design	Sample	Dependent Variables	Findings
(Prasad 1949)	Malnutrition affects the child physical and cognitive growth and also it impacts the economy of a country. To Find out the nutritional status of rural and urban children.	Pre-test	80	Economy, Nutritional status, underweight.	22.5% were moderate malnutrition, 72.5% were normal. Socio economic is also a reason of undernutrition. Proper measure should take to minimize the undernutrition.

Table 3.4: Mother Role

Author/year	Purpose/aim	Design	sample	Dependent Variables	Findings
(Patrick and Nicklas 2005)	Food are the essential nutrient for health and the children consumption of food are also affected by different factors. To find out the factors related with children food consumption.	Pre and Post test	456	Food consumption, family preferences, Family environment.	Children food consumption are affected by family environment as they play the main role on children eating behavior and dietary pattern. Mother also play important role as they have take care of the child's food consumption

Table: 3.5: Nutritional status in Dhaka city

Author/year	Purpose/aim	Design	Sample size	Dependent Variables	Findings
(Rizhal Ristanto, Siti Zubaidah, Muhamad Amin 2015)	To find out the nutritional status and dietary pattern among the children in Dhaka city.	Pre-test	210	obesity, undernutrition, Diet quality	24.3% were moderately stunting. The prevalence of thinness, overweight and obese among the children are 22%, 11.9% and 4.8%.

CHAPTER 4

4.1 Internship Class

The internship was done by the Health System and Population Studies Division (HSPSD), by the supervision of Dr. Sabrina Rasheed, Associate Scientists, HSPS Division. The internship was completed through online because of the pandemic situation as they did not allow to go offline. My task is to do the literature review related with the (Children food consumption, Dietary pattern, mother education, nutritional status, Malnutrition of under 5-year age children). I have completed my internship in two months. From the internship, I learn about the basic research, how to do a literature review, how to build up a research paper.

Figure 4.1: Training



Figure 4.2: Teacher discussing with the students



CHAPTER 5

5.1 A review of Basic Research, Qualitative and Quantitative Research

Basic Research

Basic research, also known as pure research or fundamental research, is a sort of scientific investigation aimed at refining scientific ideas in order to fully understand and anticipate natural or other events.

The purpose of fundamental research is to figure out how new molecules and cells work, as well as unusual phenomena and processes that aren't well understood.

Purposes:

1. Obtaining information and/or Discovering, uncovering, and investigating are examples of exploratory words. Gathering information, describing, and summarizing.
2. Theoretical testing Explanatory: for example, determining and comprehending causal relationships. Predictive: for example, predicting what will happen in different settings.

Figure: 4.3: Two main types of research



Figure: 4.4: Types of research



Qualitative Research:

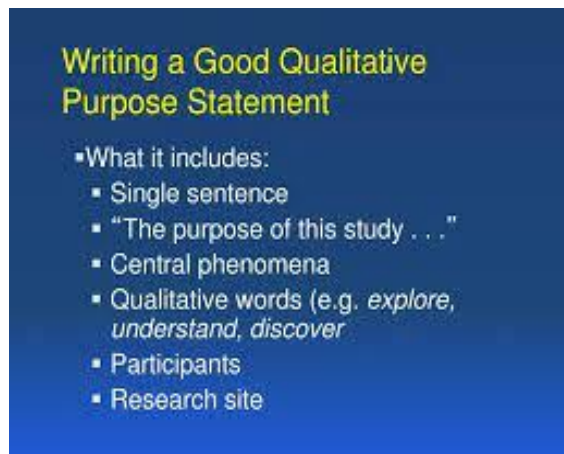
As a humanistic or idealistic method, qualitative research focuses on understanding a study query. People's views, experiences, attitudes, behavior, and interactions are studied using qualitative methods. It generates data that isn't numerical.

Qualitative research is a method that focuses on people's experiences, behaviors, and perspectives. The qualitative researcher main purpose is to address 'how' and 'why' by offering detailed insight and understanding that quantitative approaches are unable to provide.

Purposes:

1. We examine the opinions, motivations, and drivers behind people's behavior and purchasing habits in qualitative research, whether it's a focus group, in-depth interview (individual interview), or ethnographic project.

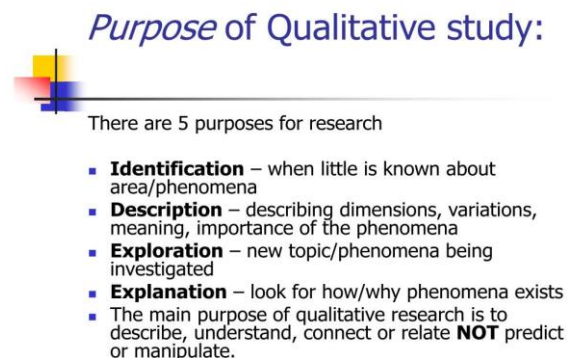
Figure 4.5: Qualitative purpose statement



Writing a Good Qualitative Purpose Statement

- What it includes:
 - Single sentence
 - "The purpose of this study . . ."
 - Central phenomena
 - Qualitative words (e.g. *explore, understand, discover*)
 - Participants
 - Research site

Figure 4.6: Qualitative study



Purpose of Qualitative study:

There are 5 purposes for research

- **Identification** – when little is known about area/phenomena
- **Description** – describing dimensions, variations, meaning, importance of the phenomena
- **Exploration** – new topic/phenomena being investigated
- **Explanation** – look for how/why phenomena exists
- The main purpose of qualitative research is to describe, understand, connect or relate **NOT** predict or manipulate.

Quantative Research:

An overview of quantitative research. The process of collecting and interpreting numerical data is known as quantitative research. It can be used to look for patterns and averages, make predictions, test causal linkages, and extrapolate results to larger groups.

Purpose:

Quantitative research aims to gain a better understanding of the social world through data collection. Quantitative methods are used by researchers to observe conditions or events that have an impact on people. Quantitative research yields objective data that can be expressed effectively using statistics and numbers.

Figure: 4.7: Types of Quantitative Research



Figure: 4.8: Quantative Research method



CHAPTER 6

6.1 Learning Outcome:

Learning outcome from my internship class:

1. To do a literature review.
2. Information collection.
3. Problem solving related with topic.
4. Determinants and factors related with topic.
5. Time management.
6. Reference and citation adding.
7. Microsoft word uses.
8. Skills in writing Project.

6.2 Problems or Challenges:

The problem I face on my internship that as it is totally new to me so at first, I found difficulties and it is hard to work hours on online to find information and it was very challenging. It was very difficult to maintain or to keep patience at that time. As the report are done by online research so there might be some error or mistakes. It was also very difficult to type for hours. But I can say that internship provides a new learning and it could be a great impact on my future.

6.3 Conclusion:

This internship programme is a great opportunity for me as I learn many new things about researches and it also provides a real-life understanding. This programmes had a great impact on my future career. Research is very much important in our life because through the research we can found the risk factors, determinants of a problem and can solve the problem by analyzing, collecting data or information.

From this internship, I learn many things about the research like how to do a literature review, to find factors and determinants related with the topic, how to analyze or design a project.

I am very thankful to Dr. Sabrina Rasheed to supervise me with great knowledge and new things. I am also very grateful to all the staff and management of icddr, b to keep me under careful guidance.

Recommendation:

Because of the covid 19 I done my internship at online as they did not allow to go offline. From this internship, I learn my new things from my supervisor and I think it will be very helpful for my future. My supervisor helps me very much in terms of any problem.

I think it can be very helpful for me if I can get the opportunity to go offline but I am satisfied with the online internship. It is a great opportunity for me to do an internship on icddr, b because it is well known for its research.

References:

- Icddr, b (n.d) About icddr, b. Retrived from <https://www.icddrb.org/about-us> Icddr, b (n.d)
- “Ban Ki-moon hails icddr, b”. The Daily Star. 27 September 2016. Retrieved 6 August2018.
- Drowning kills more children aged 1 to 4 than any disease". icddr, b
- Khan, Rana, and Muhammad Raza. 2014. “Nutritional Status of Children in Bangladesh:Measuring Composite Index of Anthropometric Failure (CIAF) and Its Determinants.” *Pakistan Journal of Commerce and Social Sciences (PJCSS)* 8(1): 11–23.
- Mitra, Dipak K., Sabuj Kanti Mistry, Kaosar Afsana, and Mahfuzar Rahman. 2018. “Demographic, Socio-Economic and Lifestyle Determinants of Under- And Over-Nutrition among Bangladeshi Adult Population: Results from a Large Cross-Sectional Study.” *Journal of Epidemiology and Global Health* 8(3–4): 134–42.
- Monoarul Haque, Md et al. 2014. “Diet Intake Pattern and Nutritional Status of Rural Population in Bangladesh.” *Chattagram Maa-O-Shishu Hospital Medical College Journal* 13(2): 51–54.
- Patrick, Heather, and Theresa A. Nicklas. 2005. “A Review of Family and Social Determinants of Children’s Eating Patterns and Diet Quality.” *Journal of the American College of Nutrition* 24(2): 83–92.
- Prasad, B. G. 1949. “Assessment of Nutritional Status of School Children in Lucknow.” *The Indian Journal of Pediatrics* 16(3): 113–52.
- Rahman, A, and S C Biswas. 2009. “Nutritional Status of Under-5 Children in Bangladesh.” *South Asian Journal of Population and ...* (January 2009). https://www.researchgate.net/profile/Soma_Biswas5/publication/263889336_Nutritional_status_of_under-5_children_in_Bangladesh/links/0f31753c417f336e27000000.pdf.
- Rizhal Ristanto, Siti Zubaidah, Muhamad Amin, Fatchur Rohman. 2015. “International Journal of Research and Review.” *International Journal of Research and Review* 2(6): 343–47.

Tabassum, Farhana. 2019. "Role of Maternal Education with Reference to Child Health and Role of Maternal Education with Reference to Child Health and Survival." (May).