A Thesis Report

On

“Effect on Ante natal care on neonatal Health”

At MFSTC (MA o Shishu) Hospital

Submitted To

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Date of Submission : 18-12-19

LETTER OF TRANSMITTAL

Date: 18-12-2019

Prof. Dr. Md. Bellal Hossain

Head

Department of Nutrition and Food Engineering

Daffodil International University.

Subject: Submission of thesis report.

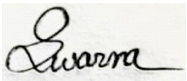
Dear Sir,

I would like to take this opportunity to thank you for the guidance and support that you have provided me during this thesis work. Without your help, this report would have been impossible to complete.

To prepare the report I collected what I believe to be most relevant information to make my report as analytical and reliable as possible. I have concentrated my best effort to achieve the objectives of the report and hope that my endeavor will serve the purpose. The practical knowledge and experience gathered during report preparation will immeasurably help in my future professional life. I request you to excuse me for any mistakes that may occur in the report despite my best effort.

I would really appreciate if you enlighten me with your thoughts and views regarding the report. In addition, if you wish to enquire about an aspect of my report, I would gladly answer your queries. Thank you again for your support and patience**.**

Yours Sincerely**,**



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LETTER OF AUTHORIZATION

Date: 18-12-19

Prof. Dr. Md. Bellal Hossain

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Subject: Declaration regarding the validity of the thesis work report.

Dear Sir,

This is my truthful declaration that the “Thesis Report” I have prepared is not a copy of any thesis Report previously made by any other students.

I also express my honest confirmation in support to the fact that the said project work report has neither been used before to fulfill my other course related nor it will be submitted to any other person in the future.

Yours sincerely,

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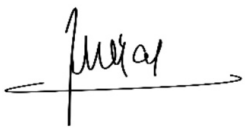
Approval Certification

This is to certify that Farhana Ahamed being ID-153-34-469, Program B.Sc. in Nutrition & Food Engineering is a regular student Department of Nutrition & Food Engineering, Faculty of Allied Health Science Daffodil International University. She has successfully completed her thesis work within 30 days November 01 to December 01 at MFSTC Hospital in Bangladesh, under my direct report is a worthy of fulfilling the partial requirements of NFE program.

Your performance sets a benchmark, go set it once again. Good Luck **!**

Teachers sign



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I would also like to express my great respect & warmest thanks to co-operate my project work supervisor**, Tasmia Tasnim** , Lecturer of Department of Nutrition & Food Engineering for her whole-hearted help and supervision during my project work and organizational attachment period**.**

Dedication

I dedicate this report to my beloved parents and all of my respectable Teachers.

Summary

Give primary, and in service training to health and family planning medical staff working at a different balance. Different operational research and observation works on different contraceptive action to process their effects. The mother and child health issues verifying and provide nutritional advice of all trimesters of pregnancy, and Maternity women and baby care in 100 bedded mother and child hospital. This was the first center of this primary character. According, to the government policy this center represented, the 4000 MR (abortion) and follow-up 5000 cases per year. The lower and middle rural and urban peoples miscellaneous are 85% of the Income source. Which syndrome of good circulation and good achievement of poor people, Quality Counsel, record keeping and follow up service and Provide to the center. The new born baby has service has a capacity of utilization of 73 beds for midwifery and 29 beds for neonatal baby care. Especially the most common thing in these days are “Infertility” problem which service are included in this center for birth control. Because in our country, towards 15% of couple, suffering infertility problem so they need this treatment. That is why they try to give all advice of treatment of the authority to give an advance to the patient day by day.

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Chapter-01

Introduction

AIM : To study the Effect on Ante natal service on neonatal health, to find out prevalent of low birth weight.

Objectives :

- Find out and collection of subject
- Selection of Ante natal care of pregnancy information of during and third trimester of pregnancy and neonatal health counseling.
- Search the main factor connected with all problem solving and provide methods.
- Ensure a normal pregnancy with delivery of a healthy baby and healthy mother.

- **What is ANC (Ante natal Care)** :

Ante natal care refers to the care that is given to an expected mother from the time of conception is confirmed until the beginning of labor. And the Ante natal care is a routine health control of presumed healthy pregnant women without symptoms in order to diagnose diseases and complicating obstetric conditions without symptoms and provide information about their lifestyle pregnancy and delivery. planned examination and observation for the women from conception till the birth.

In Norway, basic and primary health care (community care) is responsible for antenatal care. Each community should have a plan for antenatal care, and the communities are grateful by law to offer antenatal care provided by midwife. Specialists in obstetrics and gynecology also offer antenatal care to healthy pregnant women.

1.2 Goals of Antenatal care

- To improve the physical and mental health of women and children
- To reduce the maternal mortality and morbidity rates
- To decrease the financial resources for the care of the mothers
- To prevent identify and the maternal and fetal abnormality that can affect the pregnancy outcome.

1.3 Why ANC is important

For the Good ante natal care includes regular screening which can detect and prevent early complications such as gestational hypertension, gestational pregnancy diabetes, anemia, maternal infection or sepsis and both of which can dramatically affect the foetus and early detection it is means regular monitoring and treatment.

1.4 comprises of ANC

- laboratory investigations
- registration of pregnancy
- history taking
- health education
- general and obstetric ante natal examinations

1.5 The first visit of ANC the assessment and physical examination must be completed to including

- history taking
- laboratory data
- physical examination
- health taking during pregnancy

- **The history taking :**

The history taking is the most important thing for the antenatal care of pregnancy women.

- particular of the patient data
- family history taken
- menstrual history taken
- socio-economic history
- drug history
- immunization history
- chief complaints with duration history
- history of contraceptive
- history of past
- history of obstetric
- Complication history
- Current problem of pregnancy
- Medical and surgical history
- Personal and social history

- **Laboratory data**

- Ultrasounds and is it performed to the:
- check the position of placenta
- check to the amniotic fluid volume
- estimate the gestational age
- the position of the body
- detect the multiple pregnancy and congential malformation

- **LAB is the performed as the**

- Specific test
- Routine test

- **Physical examination**

- Established to the baseline levels that will guide the treatment to the mother of expectant and the fetus pregnancy of throughout
- To detect the previously undiagnosed to the physical problem that may effect to the pregnancy outcome.

- **Health teaching during the pregnancy**

  - **Breast care** : wash breast with clean tap water, it is recommended to massage the breast this may stimulate the oxytocin hormone secretion and possibly to the lead to contraction and they advice to the mother for prepared breastfeeding.
  - **Dental care** : should brush carefully after every meal and tooth can be extracted during the pregnancy but local anesthesia is recommended.
  - **Hygiene :** necessary to wash all over things and stay clean because it is stimulating and refreshing and relaxing. To avoid the hot bath water because they may cause of fatigue.
  - **Dressing:** to avoid tight clothes and shoes wearing because this could be impede lower extremity circulation.
  - **Travel:** the most important thing is to avoid the long journey during pregnancy. It is the cause of most complications.
  - **Sexual activity:** obviously avoid this physical activity to stay safe and normal during this period of pregnancy.
  - **Sleep :** sleep for 1 and 2 hours during the afternoon and at least 8 hours of sleep should be obtained every night because the highest level of hormone secretion can be growth during sleep of pregnancy.

1.6 ANC visit

The most important thing is to visit ante natal care during pregnancy and this part of

1. Ideally visit of ANC visit
2. Minimum types four of the ANC visit

- **Ideally visit of ANC**

- Once a month for the first 28 weeks of pregnancy
- Twice a month is up to 36 weeks of pregnancy
- Thereafter weekly till delivery.

- **Minimum types four of ANC visit**

- Around 16 weeks- 1st visit of ANC visit
- Between 24 and 28 weeks of pregnancy- 2nd visit
- At 32 weeks of pregnancy- 3rd visit
- At 36 weeks of pregnancy it is-4th visit

- **Around 16 weeks- 1st visit of ANC visit**

Around the 16 weeks of pregnancy is it the 1st visit of abdominal examination of pregnancy outcome. Measurement of the fundal, height and weight for knowing health problem The fatal heart sounds and fatal part of the movement test, multiple pregnancy, fetal lie and presentation, inspection of abdominal scar and any other relevant findings.

- **Between 24 and 28 weeks of pregnancy- 2nd visit**

For this 2nd visit they try to know their body conditions baby and mothers' things of SFH measurement and to the detection of multiple pregnancy. And check-up for gestation in week.

- **At 32 weeks of pregnancy- 3rd visit**

The risk of anemia that is why they try to find out this thing of the 32 weeks of pregnancy and multiple pregnancy, preeclampsia and IUGR test.

- **At 36 weeks of pregnancy it is-4th visit**

The information is identification of the birth weight, position, presentation of the mother care of the last visit of ANC visit. More frequent visits may be required if there are abnormalities and complications if it danger sign of arise during the pregnancy.

1.7 Neonatal health care

this neonatal means newborn baby of the first 28 days the life of baby. it is a child under 28 days of age during these first 28 days baby have highest risk of dying. from the birth to until 3 months of age depending on how many weeks gestation at birth it is turn to the premature, post-mature and full term of baby care. they provide extra treatment of the babies care are

- breast feeding care : the most important part of baby they provide the preparation of breast feed and all lacking of feed
- kangaroo mother care : for low birth weight baby they provide skin convert and mothers skin to skin contact care for babies.
- high dependency care : it is important to less serious illness of babies
- intensive care : for 3 months of low birth weight less than 1500 grams of babies and for genetic illness.
- low birth care: they provide to stay the observation of neonatal unit.

Babies are admitted into the neonatal care for many others and different reasons the main reason for -

- they have and need to specific medical condition for treatment in hospital.
- for low birth weight
- because of they born prematurely

1.8 what is premature birth ?

Before 37 weeks of pregnancy will be called premature baby. The different level of pregnancy of premature birth it is also called "preterm" is about your baby being born early.

This premature term has different ways :

- **extreme preterm** : the baby born before 28 weeks of gestation.
- **term** : that has spent at least 37 weeks inside the womb of gestation.
- **very preterm** : between 28 and 32 weeks of gestation
- **preterm** : between 37 weeks
- **moderate to late preterm** : a baby born 32-37 weeks of gestation.

1.9 : what is the normal low birth weight of neonatal baby ?

most of the babies born at 37 to 40 weeks it is between 5 to 8 pounds of 2500grams and 4000 grams of 8 pounds of baby weight

Chapter-02

2.0 Methods and materials

Study area and period

This hospital based prospective study was done in Obstetric unit of Ma o Shishu Hospital, Mohammadpur, Dhaka Bangladesh.

Study design

Prospective cohort design was employed.

2.1 Source population

All women who gave birth in Mohammadpur Ma o Shishu Hospital.

Study population: Women's who fulfill the criteria and selected in the study period. Exposed group Are mothers coming to the health facility for delivery services where their ANC visit was complete. Non-exposed group Are mothers coming to the health facility for delivery services where their ANC visit was incomplete.

2.2 Eligibility criteria

Inclusion criteria All women coming for delivery services in the Mohammadpur Ma o Shishu Hospital.

Exclusion criteria : Non pregnant women and women not for delivery purpose

Sample size determination

Sample size was calculated using formula for cohort study considering the following assumptions:

CL = 95%.

Power-80%.

Prevalence of pregnancy complication (PIH/preeclampsia–eclampsia) among the mothers in this hospital setting: 9 %.

$$n_1 = \frac{\left[Z_{\alpha/2}\sqrt{\left(1+\frac{1}{r}\right)\bar{p}(1-\bar{p})} - Z_{\beta}\sqrt{p_1(1-p_1)+\frac{p_2(1-p_2)}{r}}\right]^2}{(p_1-p_2)^2}$$

The final total sample size is 928.

464 participants in each group.

2.3 Sampling technique

All women enrolled in the post delivery or post natal care unit were targeted for inclusion. Women were selected based on convenience sample technique according to the eligibility criteria. Women who have full visits were considered as exposed group whereas those with incomplete follow up will be considered as non exposed group. Exposed and non exposed mothers who fulfill the inclusion criteria were enrolled in the cohort

Chapter-03

2.4 Data collection technique and process

Women who come for delivery services in the public health institutions who met the criteria for the cohort study were enrolled and followed till the end of the postpartum period. Subsequent to auditing the women's document dependent on their ANC recurrence they were enlisted to exposed and non exposed groups, those with complete adherence ANC visits were considered as exposed groups and those incomplete ANC visits were considered as non-exposed groups. Questioner was prepared from various written works and WHO proposals for pregnancy, conveyance and post conveyance continuum of care.

Pregnancy weight was gathered reflectively and tentatively. Prior to 28 weeks of development, month to month weight was gathered reflectively from mother's ANC card and afterward, moms were followed-up until the hour of conveyance to record the BW. The weight of mothers was measured while they were going to ANC administrations. BW was collected from the institution where each mother delivered her baby. The height of the mother was estimated on barefoot using height measuring board in a standing position and recorded to the nearest 0.1 centimeters. Maternal weight was estimated utilizing computerized weight estimating scale.

The Household Food Insecurity Access Scale (HFIAS) was used to assess the situation of food security among mothers giving birth. It is a standardized questionnaire composed of a set of nine questions to distinguish food insecure from food secure population.

2.5 Data analysis

After the questionnaire was coded, data were entered and exported to SPSS—21 for analysis. It was cleaned by sorting and tabulating simple frequency tables. Total weight gain was determined as the difference between the weight of each woman at the last visit (at around a ninth month) and weight was recorded at the first visit (at around 12 weeks). Variables were described using frequency and mean ± standard deviation. The relationship between BW and maternal weight gain were assessed using a linear model.

Chapter-04

2.6 Results

Participants' baseline characteristics

A total of 51 women participated in the study who were admitted in postpartum care of the health institution.

Table 1: general characteristics of participants

Variable	Frequency	Percentage
Religion		
Muslim	27	
Hindu	24	
Ever attended school		
Yes	40	
No	11	
Total family member		
4 or less	20	
>4	31	
Received TT injection		
Yes	50	
No	1	
Place of residence		
Urban	25	
Rural	26	
Husband's occupation		
Governmental	5	
Non-governmental or others	46	
Number of ANC visit		
4 or more	18	
3 or less	33	

Majority of participants in the study were housewives and had a mean age of 25. Most of them belonged to large family that had more than 4 members. Their husbands are mostly doing non-governmental job or businesses. There was an equal distribution of patients from both rural and urban districts. All the women had received TT injection. Proportion of women less than 3 ANC visits were higher compared to those who had completed the antenatal care procedure.

2.7 Incidence of maternal and neonatal complications

Table 2: effect of ANC counselling on Antepartum complications

		Ante_Partum_(Just_Before_Delivery)_Complication_						
		Anemia	Gestational diabetes	Gestational hypertension	Antepartum hemorrhage	Mild preeclampsia	Severe preeclampsia	Preterm labor
Number Of ANC_Visit	4 or more	3	0	10	0	1	1	0
	three or less	2	1	20	1	4	1	3

The above table shows a comparison of maternal complications among women who had optimum number of ANC visits and those who did not. It is seen that the incidence of problems such as gestational diabetes, hypertension, Antepartum hemorrhage (bleeding in the genital tract from 24 weeks of pregnancy), mild preeclampsia and preterm labor were all higher for those who had less than 3 number of visits to antenatal care services.

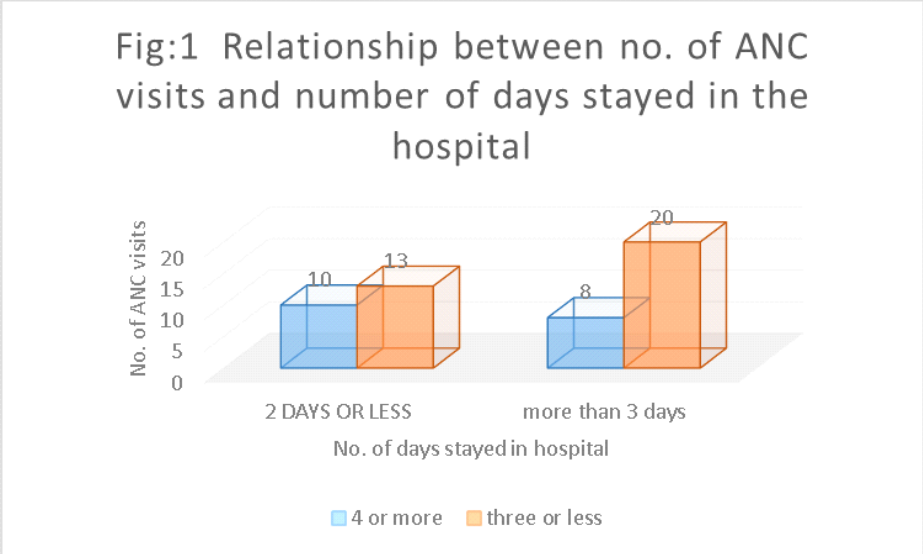
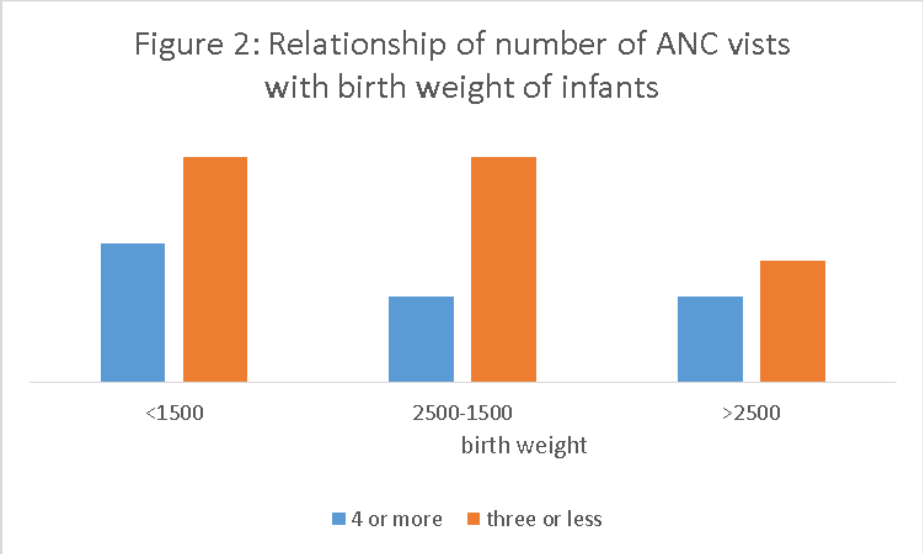


Table 3: Effect of ANC on neonatal health outcomes

		Neonatal_Complication_				
		STILL BIRTH	NEONATAL SEPSIS	Early neonatal death	Low birth weight	No complication
Number_Of_ANC_Visit	4 or more	9	1	0	5	2
	three or less	17	1	1	10	0

The above table shows that the incidence of all types of neonatal complications were higher for women who did not avail the ANC services fully. The incidence of stillbirth and low birth weight were the highest for the latter group.



The above figure shows three or less number of ANC visits was associated with birth weights of <2500 gm

Chapter-05

2.8 Discussion

Several studies have shown the positive effect of antenatal care services on perinatal outcome, thereby stressing the difference with women's adherence to antenatal visit and its effect on perinatal outcome is timely and important as a single-visited patient and there will be no related complications for four visits.

Overall only 33% of participants were shown to have four or more number of visits to the ANC services.

This study shows that the frequency of neonatal complications with inadequate adherence to antenatal visit among women's neonates is higher. The rate of stillbirth among women with inadequate adherence is four folds of women with total adherence to antenatal visit, respectively 3.6 and 0.9 percent. The incidence of early neonatal death among women with total neonatal death.

Several research from what we had been searching for indicated the prevalence and deciding variable for the use of ANC, less emphasis was placed on the rate of adherence of women to ANC visits and their effect on perinatal outcome.The occurrence of postpartum hemorrhage among women with total adherence to antenatal care visit was approximately 1.6% while, as in women with inadequate adherence, it was 6.9% and inc.

Chapter-06

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