

Title: Anthropometric measurement of nutritional status of educated pregnant women following dietary Assessment attending in hospitals of Dhaka city.



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LETTER OF TRANSMITTAL

Date: 20/12/2018

Dr. Md. Bellal Hossain

Professor & Head

Department of Nutrition and Food Engineering

Faculty of Allied Health Sciences (FAHS) Daffodil International University

Subject: Submission of project work report.

Dear Sir,

It is a great pleasure and honor for me to have the opportunity to submit my project work report on Assessment of Anthropometric measurement of nutritional status of educated pregnant following dietary Assessment attending in hospitals of Dhaka city.

I have prepared this report based on the acquired taste knowledge during my Project Period. It is great achievement to work. Without your help, this report would have been impossible to complete. This report is based on, “: Anthropometric measurement of nutritional status of educated pregnant women following dietary Assessment attending in hospitals of Dhaka city.” I have got the opportunity to work in your University under the supervision of Fouzia Akhter, Senior Lecturer.

I, therefore, request and expect that you will appreciate me with any sort of recommendation and valued suggestion and will cordially receive this report for your kind assessment.

Sincerely Yours,

Saifun naher shika

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CERTIFICATION OF APPROVAL

I do hereby declare that the project report entitled “Anthropometric measurement of nutritional status of educated pregnant women following dietary Assessment attending in hospitals of Dhaka city.”

is a record of original work carried out by me under the supervision of **Fouzia Akhter**, Senior Lecturer, Department of Nutrition and Food Engineering, Daffodil International University, Dhaka-1207, Bangladesh. This project work or any part thereof has not been submitted elsewhere for the award of any degree, diploma, associate ship or fellowship.

.....
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.....
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Abstract

In pregnancy, good nutrition is key to ensure incensement maternal health and prevent the risk of birth defects.it also defended fetal growth and development and prevent health problems both mother and child. My study aimed to investigate the food habits of pregnant women following dietary assessment attending in hospitals of Dhaka city, to assess their nutritional status to determine their socio- economic and dietary practice. To assess the food taboos. To capture the health and nutritional situation of Dhaka city women of reproductive age, I collects70 data on their dietary habits and measures their height, weight through hospital based descriptive cross-sectional study on December 1 to 15 ,2018 at done Maternal and Child Health Training Institute ,Azimpur.

In my data study analysis most of them a big amount of women's education level 1-5 passed(43.2%), and a little bit are highly (21%)educated. among them 7.4% are under weight,35.8% are normal weight and 43.2 are overweight . Socio-economic condition is of them13.6% are bad, 25.9% are good and 33.3% are very good. All of them 19.8% women is same night. I also analyses the co-relation the BMI and economic condition, BMI and parameter, BMI and economic, BMI and food (meat group), BMI and food (fish group), BMI and receive of antenatal checkup and all are co-related positively or negatively but not significant.

I study two journal according to my topic ,one of them are positively significant another one is co-related positively or negatively but not significant .Because one site and sample are not same and another study site is same as my data. Last of all my analysis I think that all the pregnant women are educated in my data so they have little bit knowledge about diet and the also get information from TV nutritional program.so there I can't get significant relation on my topic.

1. Introduction

Bangladesh is the most densely populated country, about 158 million people live in the country. According to the Bangladesh Bureau of Statistics (BBS) in 2014, 1070 number of people live per square kilometer .every 1 year 2 million people are added. The parentage of growth rate 1.37.now day 94 percent women are currently married. Seven in ten respondents (72 percent of women) reside in the rural areas. More than one-third (35 percent) of the respondents live in Dhaka.

Pregnancy is an anabolic process. For the fetal growth of pregnant and providing nutrition and energy of pregnant mother, maternal diet is needed .in developing country major cause of low birth weight baby intake of poor nutritional food during the third trimester of pregnancy anemia and vitamin A deficiency are highly prevalent nutrient deficiencies encountered in pregnant women, affecting 53.8 million (55.8 %) and 7.2 million (6.8 %) on a global scale, respectively. Both deficiencies to result in serious health consequences including increased morbidity and mortality of both mother and child.

. In urban 59% of urban mothers receive antenatal care, rural areas the antenatal care receiving rate is only 28%..

My study aimed to investigate the food habits of pregnant women following dietary assessment attending in hospitals of Dhaka city, to assess their nutritional status to determine their socio- economic and practice. To assess the food taboos. To capture the health and nutritional situation of Dhaka city women of reproductive age, we need to collect data on their dietary habits and measure their height, weight.

ANTHROPOS' means man, 'metrics' is measurement .Measurement of body weight and dimensions, and the subsequent interpretation of the measurements in relation to appropriate reference data.

. Anthropometric measurement should be used to identify acute malnutrition during pregnancy. Monitoring gestational nutritional status by taking anthropometric measurements is a promising means of enhancing fetal growth. The importance of anthropometric measures for assessment of the nutritional *status* of pregnant women is heightened by the fact that they are easy to apply, low-cost, and relatively non-invasive. Some programmers use the normal body mass index (BMI). The BMI is defined as the body mass divided by the square of the body height, and is universally expressed in units of

kg/m², resulting from mass in kilograms and height in meters A traditional measuring tape, and a standard weight measuring scale are used to measure the anthropometric dimensions and weight.

2. OBJECTIVE

2.1 GENERAL ASSESSMENT

- To assess the improvement of the anthropometric measurements of educated pregnant women.

2.2 SPECIFIC ASSESSMENT

- To investigate the food habits
- To assess the adequate nutritional status is essential for of pregnant women.
- To assess the food consuming pattern and intake of macro, micro nutrient during pregnancy
- To assess pregnancy related taboos
- To assess Comparison of our results with other studies in Algeria and other countries.
- Identify psycho-social issues that may affect food intake and nutritional statu

3.Method

3.1 Study design: hospital based descriptive cross-sectional study among pregnant mother. Data were collected by face to face interview.

3.2 Study period: December 1 to 15,2018

3.3 Study site: data collection was done Maternal and Child HealthTrainingInstitute,Azimpur

3.4 Sampling: In this survey random sampling was used. Total 70 respondent were interviewed for the date.

3.5 Data collection method:

- Individuals wishing to participate in the study were invited to attend the study on a pre-arranged date 30.11.2018 after received consent from subject, data were collected through a self-reported information questionnaire.
- Data is collected from 100 pregnant women. To assess the adequate nutritional status which is essential for of pregnant women.
- The study, cross, was conducted between 1 to 15 December 2018, at Maternal and Child HealthTrainingInstitute, Azimpur. It was conducted by questionnaire and includes general information, educational level, occupation, health status, frequency of consumption of major food and anthropometry
- After collecting the data was entered and analyzed using SPSS.

4. Result

Table:4 1 frequency of height of educated pregnant women

Height	Frequency	Percent
124	1	1.2
130	1	1.2
131	1	1.2
132	1	1.2
134	1	1.2
139	1	1.2
139	1	1.2
140	1	1.2
142	2	2.5
144	3	3.7
145	1	1.2
147	3	3.7
149	2	2.5
150	1	1.2
152	16	19.8
154	4	4.9
155	2	2.5
156	1	1.2
157	15	18.5

158	6	7.4
160	1	1.2
162	4	4.9
164	1	1.2
165	1	1.2

Table: 4. 2

Frequency of food (meat) group consume by educated pregnant women

Variable	Category	Frequency	Percent
Beef	Yes	32	39.5
	No	38	46.9
Chicken	Yes	44	54.3
	No	26	32.1
Liver	Yes	29	35.8
	No	41	50.6

Table :4.3**Frequency table of food (fruits) group consumed by educated pregnant women**

Variable	Category	Frequency	Percent
Apple	Yes	50	61.7
	No	17	21.0
Orange	Yes	51	63
	No	18	22.2
broccoli	Yes	34	42
	No	36	44.4
Lentils	Yes	55	67
	No	13	16.24
cauliflower	Yes	53	65.4
	No	17	21.0
Watermelon	Yes	24	29.6
	No	46	56.8
Grapes	Yes	55	67.9
	No	15	18.5
Guava	Yes	62	76.5
	No	8	9.9
Carrot	Yes	52	64.2
	No	18	22.2

Spinach	Yes	51	63
	No	19	23.5

Table:4. 4

Frequency table of BMI of educated pregnant women

BMI	Frequency	Percent
Under weight:(BMI is less than 18.5)	6	7.4
Normal weight:(BMI is 18.5 to 24.5)	29	35.8
Overweight (BMI 25to 29.9)	35	43.2

Table: 4.5

Frequency table of economic status of educated pregnant women

Variable	Category	Frequency	Percent
INCOME	5k-10k taka	11	13.6
	11k-20k taka	21	25.9
	21k-30k taka	27	33.3
OCCUPATION	Housewife	61	75.3
	house made	2	2.5
	Business	2	2.5
	Survive	5	6.2
EDUCATION	1-5 passed	35	43.2
	6-10 passed	18	22.2
	HSC passed	17	21.0

Table: 4. 6

Correlation table of BMI and economic condition of educated pregnant women

Variable	Pearson correlation	Significant p value
BMI	1	
ECONOMIC CONDITION	-.214	0.38

Variables (BMI, economic condition) are positively and negatively co- related

Table: 4. 7

Correlation table of BMI and education of educated pregnant women

Variable	Pearson correlation	Significant p value
BMI	1	.112
EDUCATION	.147	.112

Variables (BMI, economic condition) are positively and negatively co-related

Table:4. 8

Correlation table of BMI and parameter of educated pregnant women

Variable	Pearson correlation	Significant p value
BMI	1	
Weight	.624	.000
Height	-.259	.015

** . Correlation is significant at the 0.01 level (1-tailed).

*Correlation is significant at the 0.05 level (1-tailed).

Variables (BMI, parameter) are positively and negatively co-related

Table: 4. 9

Correlation table of BMI and food (meat group)of educated pregnant women

Variable	Pearson correlation	Significant p value
BMI	1	
Beef	-.122	.157
Chicken	-.035	.385
Liver	.136	.131

*. Correlation is significant at the 0.05 level (1-tailed)

**. Correlation is significant at the 0.01 level (1-tailed).

Variables (BMI , meat group) are positively and negatively co-related

Table: 4. 10

Correlation table of BMI and food (fish group)of educated pregnant women

Variable	Pearson correlation	Significant p value
BMI	1	
Fish	.056	.321
Hilsa	.181	0.67
Kachki	-.027	.412
Shing	-.072	.276
Magur	-.008	.472
Bual	-.250	.018

*P value is significant at the 0.05 level

**P value is significant at the 0.01 level

Variables (BMI , fish group) are positively and negatively co-related

Table: 11

Correlation table of BMI and receive of antenatal checkup of educated pregnant women

VARIABLE	PERSON CORELATION*	SIGNIFICANT P VALUE**
BMI	1	
RECIVE OF ANTINATAL CHECKUP	-.235	.050

*P value is significant at the 0.05 level

Variables (BMI , antenatal checkup) are co-related Significantly

5. Discussion:

I conduct a hospital based descriptive cross-sectional study among pregnant mother. Data were collected by face to face interview on done Maternal and Child Health Training Institute, Azimpur. I think that Anthropometric measurement of nutritional status is significant according to dietary Assessment on educated women attending in hospitals of Dhaka city.

In my data study analysis every pregnant women are educated. most of them a big amount of women's education level 1-5 passed(43.2%), and a little bit are highly (21%)educated. among them 7.4% are under weight,35.8% are normal weight and 43.2 are overweight . Socio-economic condition is of them13.6% are bad, 25.9% are good and 33.3% are very good. All of them 19.8% women is same height. I also analyses the co-relation the BMI and economic condition, BMI and parameter, BMI and economic, BMI and food (meat group), BMI and food (fish group), BMI and receive of antenatal checkup and all are co-related positively or negatively but not significant.

I study two journal according to my topic ,one(4) of them are positively significant another one(3) is co-related positively or negatively but not significant .because one site and sample are not same as us. they study in rural area of Camilla and Dhaka city on 100 women and another one sample(245) is different but site is similar to us .

6. Conclusion

Last of all my analysis I think that all the pregnant women are educated in my data so they have little bit knowledge about diet and they also get information from TV nutritional program. so there I can't get significant relation on my topic.

7.RAFARANCE

DEMOGRAPHIC AND HEALTH SURVEY 2014. National Institute of Population Research and Training Ministry of Health and 1ANGLADESH Family Welfare Dhaka, Bangladesh. March 2016

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4..Akther, L., Hossain, M. B., Awwal, A. A., & Nesa, A. (2015). Anthropometric Assessment of Nutritional Status in Pregnant Women in Different Trimesters Attending at the Antenatal Clinic of DMCH. *Anwer Khan Modern Medical College Journal*, 6(1), 20-24.

Questionnaire
On
Anthropometric measurement of nutritional status of pregnant women following dietary
assessment attending in hospital of Dhaka city.

Questionnaire ID:

Interviewee and interviewer details			
Name of the hospital			
Address:			
Mohallah:			
Thana:			
District			
Name of interviewer:-----			
Type of resident:			
Slum.....			1
Non-slum.....			2
Start time of interview: <input type="text"/> <input type="text"/> : <input type="text"/> <input type="text"/>			
(Use 24 hours format)			
HH		MM	
Date of interview: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			
Day		Month	Year
Results of the interview:			
Complete.....			1
Incomplete			2
Refusals			3
Background characteristics and Socio economic characteristics			
Sl.No	Question	Response	Skip
1	How old are you?	------(Completed years)	
2	What is your religion?	Islam 1 Hindu 2 Christian 3 Buddhist 4 Others(Specify)..... 7	

3	What is your level of educational qualification? (Completed years)	1-5 passed 1 6-10 Passed 2 HSC passed 3 Graduate/Fazi passed 4 Post graduate passed 5	
4	What is your primary occupation?	Housewife1 House maid2 Business.....3 Service(Govt. or Non-Govt.).....4 Daily wager5 Others(Specify).....7	
5	What is the level of education of your husband?	1-5 passed1 6-10 Passed2 HSC passed3 Graduate/Fazi passed4 Post graduate passed5	
6	What is your husband's occupation?	Service (Govt. Non Govt.).....1 Business.....2 Day laborer.....3 Home maker/Household work.....4 Agriculture.....5 Others.....7	
7	How many earning members in your family?	----- (Number)	
8	What is your monthly income?	Tk----- 5k-10k taka (level-1)..... 1 11k-20k taka (level-2)..... 2 21k-30k taka (level-3)..... 3 31k-50k taka (level-4)..... 4 Above 50k taka (level-5)..... 5	
9	Which material is your home made?	Raw house 1 Brick house 2 Tin..... 3 Semi-tilled house..... 4	
10	What is your socioeconomic condition?	Good 1 Very good 2 Bad..... 3 Very bad 4	
Reproductive history			
11	What is your marital status?	Married..... 1 Unmarried 2 Separated 3 Divorce 4	
12	Do you have any child	Yes 1 No 2	
13	If yes, then how many?	Number-----	

14	How many member in your family?	Number-----	
Antenatal related information			
15	Duration your pregnancy did you see anyone for antenatal checkup?	Yes1 No2	
16	During your pregnancy period, what was the duration of your pregnancy at your first antenatal checkup?	----- (Weeks)	
17	During your last pregnancy, total how many times did you receive antenatal checkup?	----- (Number)	
18	During your antenatal checkup, what complication(s) did you face? (Multiple answers are acceptable)	No complication 1 Headache..... 2 Blurring of vision 3 High blood pressure 4 Convulsion..... 5 Anaemia 6 Others (Specify)..... 7	
Food security			
Food Frequency Question			
19			
Meat and Fish	Yesterday during the day or night, did you consume the following food items?		
Lab	Yes-----1	No-----2	Don't know-----8
Chicken or poultry	Yes-----1	No-----2	Don't know-----8
Liver, liver pate	Yes-----1	No-----2	Don't know-----8
Fish	Yes-----1	No-----2	Don't know-----8
Dry fish	Yes-----1	No-----2	Don't know-----8
Prawns	Yes-----1	No-----2	Don't know-----8
Rui fish	Yes-----1	No-----2	Don't know-----8
Hilsa fish	Yes-----1	No-----2	Don't know-----8
Kachki fish	Yes-----1	No-----2	Don't know-----8
Shing	Yes-----1	No-----2	Don't know-----8
Magur	Yes-----1	No-----2	Don't know-----8
Panggas	Yes-----1	No-----2	Don't know-----8
Bual	Yes-----1	No-----2	Don't know-----8
Snacks	Yes-----1	No-----2	Don't know-----8
Bread and biscuits	Yes-----1	No-----2	Don't know-----8
Puff rice	Yes-----1	No-----2	Don't know-----8
Chira	Yes-----1	No-----2	Don't know-----8
Chanachur	Yes-----1	No-----2	Don't know-----8
Homemade snacks (pakora, bora etc)	Yes-----1	No-----2	Don't know-----8
Chalvaja	Yes-----1	No-----2	Don't know-----8

Cereals	Yes-----1	No-----2	Don't know-----8
atta / moyda	Yes-----1	No-----2	Don't know-----8
Suji	Yes-----1	No-----2	Don't know-----8
Chatu	Yes-----1	No-----2	Don't know-----8
Corn	Yes-----1	No-----2	Don't know-----8
Potatoes/rice	Yes-----1	No-----2	Don't know-----8
Potatoes	Yes-----1	No-----2	Don't know-----8
White rice	Yes-----1	No-----2	Don't know-----8
Brown rice	Yes-----1	No-----2	Don't know-----8
Dairy products and fats	Yes-----1	No-----2	Don't know-----8
Sour cream	Yes-----1	No-----2	Don't know-----8
Clotted cream	Yes-----1	No-----2	Don't know-----8
Yogurt	Yes-----1	No-----2	Don't know-----8
Desserts	Yes-----1	No-----2	Don't know-----8
Ice cream	Yes-----1	No-----2	Don't know-----8
Nuts	Yes-----1	No-----2	Don't know-----8
Fats/proteins	Yes-----1	No-----2	Don't know-----8
Eggs	Yes-----1	No-----2	Don't know-----8
Only yolk	Yes-----1	No-----2	Don't know-----8
Only white part of egg	Yes-----1	No-----2	Don't know-----8
Soybean oil / mustard oil / sunflower oil	Yes-----1	No-----2	Don't know-----8
Fruits and Vegetables	Yes-----1	No-----2	Don't know-----8
Apple	Yes-----1	No-----2	Don't know-----8
Orange	Yes-----1	No-----2	Don't know-----8
Hog plum	Yes-----1	No-----2	Don't know-----8
BROCCOLI	Yes-----1	No-----2	Don't know-----8
Cauliflower	Yes-----1	No-----2	Don't know-----8
LANTILS	Yes-----1	No-----2	Don't know-----8
Cabbage	Yes-----1	No-----2	Don't know-----8
Pomegranate	Yes-----1	No-----2	Don't know-----8
BERRIES	Yes-----1	No-----2	Don't know-----8
WATERMELON	Yes-----1	No-----2	Don't know-----8
Coconut	Yes-----1	No-----2	Don't know-----8
BANANNA	Yes-----1	No-----2	Don't know-----8
Grapes	Yes-----1	No-----2	Don't know-----8
Guava	Yes-----1	No-----2	Don't know-----8
Pear	Yes-----1	No-----2	Don't know-----8
Carrot	Yes-----1	No-----2	Don't know-----8
SPINACH	Yes-----1	No-----2	Don't know-----8
Lentils	Yes-----1	No-----2	Don't know-----8

Pulses		Yes-----1	No-----2	Don't know-----8
Physical activities				
35	Did you perform physical activity?	Yes	1	
		No	2	
36	What types of physical activity did you perform?	Light.....		
		Moderate		
		Heavy.....		
37	How did you spend your leisure time?	Watching television.....		
		Listening radio		
		Social network.....		
		Other(Specify)		
38	Do you watch various health nutritional program on television?	Yes	1	
		No	2	
Measurement				
39	Weight of the respondents (Kg)?	__ __ __ .	__ __	
40	Weight of the respondents (Cm)?	__ __ __ .	__	
41	What is your nutritional status?	Underweight: (BMI is less than 18.5)..	1	
		Normal weight: (BMI is 18.5 to 24.9)..	2	
		Overweight: (BMI is 25 to 29.9)	3	
		Obese: (BMI is 30 or more)	4	
42	Blood pressure	Systolic __ __ __	Diastolic	
		__ __ __		
43	Blood group	-----		
44	End time of interview	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	
		HH	MM	
Thanks for giving your valuable time				