

Knowledge of Diet and Dietary Pattern in Pregnant Women Attending Antenatal Clinic in Community Based Medical College, Bangladesh

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Abstract

A cross-sectional, descriptive study was conducted in Community Based Medical College, Bangladesh (CBMC,B) Hospital during August and September 2018 to identify knowledge, attitude and practice regarding diet among pregnant women attending antenatal checkup. This study was done as a part of Residential Field Site Training by 3rd year MBBS students under Community Medicine curriculum. Data were collected on a predesigned questionnaire by direct interviewing a total of 116 pregnant women. Data analysis was done by SPSS version 20.0. Age distribution of respondents ranged from 18 years to 35 years; mean age 24.45±4.69 years. Most of the respondents 99(85.34%) belonged to age group 18 years to 29 years. Most of them were Muslim 99(85.34%), literate 93(80.17%), and housewives 96(82.76%), belonged to middle class family 65(56.03%). 46(39.66%) were found at risk, based on risk assessment. Knowledge regarding diet and nutrition was found in optimum level. Majority 55(47.41%) had excellent score, while 49(42.24%) had good score and 12(10.34%) were not up to the mark. Attitude of family members regarding care of pregnant woman was positive in most cases, 113(97.41%). Majority 55(47.41%) had excellent dietary practice, 23(19.83%) were good and 38(32.76%) were bad. Barriers of implementation of good dietary practice include lack of knowledge 12(10.34%), poverty 17(14.66%) and lack of cooperation from husband and in-laws 9(7.76%).

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Introduction

Bangladesh has an area of 147,570 square kilometer with estimated population of 164.6 million. Majority 54.6% are in the age group of reproduction (15 to 49 yrs).¹ One of the important components of reproductive population is a pregnant woman. A pregnant woman is a two-in-one. To take care of two existences in a single unit, the pregnant woman should consume extra calorie and nutrients. During the antenatal period, the fetus is part of the mother. The period of development of fetus in mother is about 280 days. During this period, the fetus obtains all the building materials and oxygen from the mother. Currently, the main health problems affecting the health of the mother and child in developing countries revolve around the triad of malnutrition, infection, and the consequences of unregulated

fertility.² The situation in Bangladesh is similar. The adverse effects of maternal malnutrition have been well documented, such as maternal depletion, low birth weight, anemia, toxemias of pregnancy, post-partum hemorrhage, all leading to high mortality and morbidity.³ Intrauterine period of life is very important from the nutritional standpoint. Infants born with adequate birth weight have relatively low mortality even under poor environmental conditions.^{2,3}

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Hence, knowledge on diet and dietary pattern among pregnant women is a very important issue to investigate. The purpose of this study was to make acquainted about knowledge, attitude, and practice regarding diet among pregnant women attending antenatal checkup clinic in Community Based Medical College, Bangladesh (CBMC,B) Hospital.

Methods

This cross-sectional, descriptive study was conducted in Community Based Medical College, Bangladesh (CBMC,B) Hospital during August and September 2018 to identify knowledge, attitude, and practice regarding diet among pregnant women. 116 pregnant women attending antenatal checkup clinic of CBMC,B Hospital, who were selected purposively. Data were collected on a predesigned questionnaire by direct interviewing pregnant women. Knowledge was measured using 5 questions regarding diet and nutrition and practice was measured using 14 questions regarding practice of diet and nutrition during pregnancy. Data analysis was done by SPSS version 20.0. This study was approved by the Department of Community Medicine, CBMC,B.

Results

Age distribution of respondents ranged from 18 years to 35 years; mean age 24.45 ± 4.69 years. Most of the respondents 99(85.34%) belonged to age group 18 years to 29 years. Most of them were Muslim 99(85.34%), literate 93(80.17%), and housewives 96(82.76%), belonged to middle class family 65(56.03%). No mother had given birth to any mentally retarded child and/or deaf child earlier. 48 respondents had duration of marital life less than 5 years, 47 from 5 years to 9 years and 21 had duration more than 10 years.

49 women were primigravida. 67 mothers had given 116 live births. 35 mothers had 1 offspring, 24 mothers had 2 offspring, 2 mothers had 3 offspring, 3 mothers had 4 offspring and 3 mothers had 5 offspring. 72 had their last children had age less than 5 years and 44 had children aged 5 years and above (Table-I). Assessed risk category shows that 46(39.66%) were at risk. The risk categories were elderly primigravida 4(3.45%), grand multipara 3(2.59%), previous stillbirth 3(2.59%), previous abortion 4(3.45%), ankle edema plus raised blood pressure 5(4.31%), pre-pregnancy underweight plus anemia during pregnancy 13(11.21%), overweight and obesity alone 10(8.62%) and pre-pregnancy overweight and obesity plus excessive weight gain during pregnancy 4(3.45%) (Table-II). Knowledge regarding diet and nutrition was found in optimum level. Majority 55(47.41%) had excellent score, while 49(42.24%) had good score and 12(10.34%) were not up to the mark (Fig. 1). Barriers of implementation of good dietary practice include lack of knowledge 12(10.34%), poverty 17(14.66%) and lack of cooperation from husband and in-laws 9(7.76%) (Table-III).

Fig. 1: Multiple Bar Diagram showing knowledge and practice score of pregnant women regarding diet

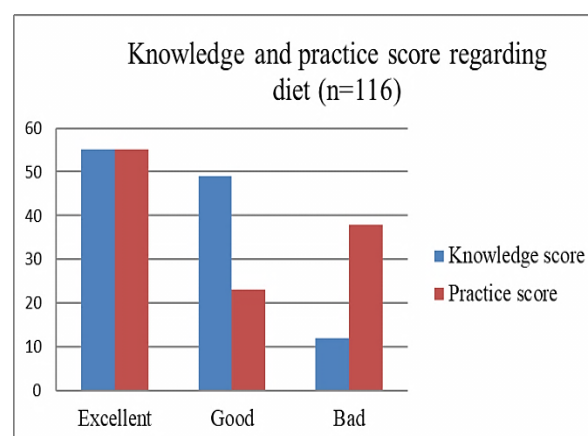


Table-I: Sociodemographic characteristics of the respondents (n=116)

Status	Frequency	Percentage
Age group		
18 years to 29 years	99	85.34
30 years and above	17	14.66
Religion		
Islam	99	85.34
Hindu	15	12.93
Buddhism	2	1.72
Occupation		
Housewife	96	82.76
Business	6	5.17
Laborer	6	5.17
Service holder	8	6.90
Socioeconomic condition		
Poor	31	26.72
Middle class	65	56.03
Rich	20	17.24
Female literacy		
Illiterate	23	19.83
Literate	93	80.17
Number of children		
No children	49	42.24
Have children	67	57.76

Table-II: Risk identification of pregnant women

Risk status of pregnant women	Frequency	Percentage
Elderly primigravida	4	3.45
Grand multipara	3	2.59
Previous still birth	3	2.59
Previous abortion	4	3.45
Ankle edema plus raised blood pressure	5	4.31
Pre-pregnancy underweight plus anemia during pregnancy	13	11.21
Pre-pregnancy overweight and obesity alone	10	8.62
Pre-pregnancy overweight and obesity plus excessive weight gain during pregnancy	4	3.45
No risk	70	60.34
Total	116	100.00

Table-III: Factors influencing bad score of knowledge

Prevalence of bad score	Frequency	Sample population	Percentage
18 years to 29 years	9	99	9.09
30 years and above	3	17	17.65
Islam	12	99	12.12
Hindu	0	15	0.00
Buddhism	0	2	0.00
Housewife	12	96	12.50
Business	0	6	0.00
Laborer	0	6	0.00
Service holder	0	8	0.00
Poor	4	31	12.90
Middle class	7	65	10.77
Rich	1	20	5.00
Illiterate mother	4	23	17.39
Literate mother	8	93	8.60
No children	5	49	10.20
1 to 2 children	5	59	8.47
More than 2 children	2	8	25.00

Discussion

In this study age distribution of respondents ranged from 18 years to 35 years; mean age 24.45 ± 4.69 years. Most of the respondents (99/116) (85.34 percent) belonged to age group 18 years to 29 years. Most of the respondents were Muslim (99/116) (85.34 percent), literate (93/116) (80.17 percent), housewives (96/116) (82.76 percent), belonged to middle class family

(65/116) 56.03 percent. In a Malaysian study, the mean age of the participants was 32.06 ± 5.56 yrs. Majority of participants were 30 years and above (65.90%). Literacy cent percent, majority Malay 96.6 percent and employed 58 percent.⁴

In this study, pregnant women were assessed regarding risk category. 46 mothers (39.66 percent) were at risk. The risk categories were elderly primigravida (4/116) 3.45 percent, grand multipara (3/116) 2.59 percent, previous stillbirth (3/116) 2.59 percent, previous abortion (4/116) 3.45 percent, ankle edema plus raised blood pressure (5/116) 4.31 percent, pre-pregnancy underweight plus anemia during pregnancy (13/116) 11.21 percent, pre-pregnancy overweight and obesity alone (10/116) 8.62 percent and pre-pregnancy overweight and obesity plus excessive weight gain during pregnancy (4/116) 3.45 percent. In a Malaysian study pre-pregnancy underweight 13.6 percent, overweight 21.6 percent and obese 18.2 percent.⁴ In another study done in Bangladesh, 23.5 percent of women were underweight.⁵

In a Nigerian study incidence of elderly primigravida was 2.6 percent. The incidence of anemia, antepartum hemorrhage, hyperemesis gravidarum, malpresentation, intrauterine growth restriction, diabetes mellitus and fibroid were higher in elderly primigravida than young primigravida.⁶ In another Bangladeshi study, incidence of grand multipara was 6.60 percent. Grand multipara was associated with high rate of complications (51.67 percent), increased maternal morbidity 16 percent and perinatal mortality 11 percent.⁷ In an Indian study prevalence of hypertension in pregnancy was found to be 6.9%.⁸ In a Bangladeshi study, 34.7% of the pregnant women had anemia.⁹ In this study majority (55/116) 47.41 percent had excellent

knowledge on diet, (49/116) 42.24 percent good and (12/116) 10.34 percent bad respectively. Bad score of knowledge was influenced by age: 30 yrs and above: 17.65 percent, religion: Islam 12.12 percent, occupation: housewife 12.50 percent, socioeconomic condition: poor 12.90 percent, literacy: illiterate mother 17.39 percent and having more children 25 percent. Majority (55/116) 47.41 percent had excellent dietary practice, (23/116) 19.83 percent had excellent practice and (38/116) 32.76 percent had bad dietary practice. There was evident gap between knowledge and skill. In a Malaysian study 63.6% percent of the antenatal mothers had good nutritional knowledge level. Higher occupational status ($p=0.030$) and monthly household income ($p=0.016$) of participants were significantly associated with higher nutritional knowledge score.⁴ In another Bangladeshi study, knowledge on diet and nutrition during pregnancy was unsatisfactory.⁵

In a study done in Jordan, higher educational level could influence food choices, which highlights the importance of increasing the awareness of women at childbearing age as an essential measure to improve their dietary habits and improve pregnancy outcomes.¹⁰ In an Ethiopian study, nearly half (47%) of the mothers lacked awareness on balanced and diversified diets.¹¹ In a Nepalese study, 59.3 percent of women had moderate knowledge on nutrition whereas only one-fourth pregnant women had high knowledge on nutrition. One-sixth pregnant women had low knowledge.¹² In an Indian study around 98 percent of women were very clear that nutrition is necessary in pregnancy and 53 percent of them told that the quantity of food intake should be increased.¹³ In another Indian study only 22 percent of the women had good knowledge about nutrition during pregnancy.

Most of them were lacking in their knowledge about common local sources of nutrition, adequate weight gain during pregnancy and effects of over and under nutrition.¹⁴ In a Bangladeshi study, animal-source foods and fruits were the least consumed in the women's diet resulting in low dietary diversity; consumption of diversified foods was influenced by access to food at home, while accessibility depended on affordability and availability in the local market or homestead gardens; and even though food was available and accessible at the household level, individual food choice and consumption were subject to personal preference, cultural norms and lack of knowledge about nutritious foods and subsequent health benefits during pregnancy and lactation.¹⁵ In a study done in Nepal, almost 45 percent did not consume a diverse diet. Women with empowerment, better economic condition, joint families, empowerment, and adequate nutrition knowledge influenced good dietary practice.¹⁶

Conclusion

This study highlighted the knowledge, attitude, and practices of pregnant women regarding the healthy diet, psychological support, regular visits and identification of risk mothers who visited our hospital along with different socio-demographic factors.

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