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Full Length Research Paper

Knowledge and attitude of pregnant Women towards dietary practices in Yerwa Clinic, Maiduguri Metropolitan Council; Borno State

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ABSTRACT

The health of a pregnant mother and her nutritional status can influence the health and survival of the growing foetus because of the biological link between her and her child. This study was conducted to assess the knowledge and attitude of dietary practices among pregnant women attending Yerwa Clinic. Descriptive design was used for the study. 294 women were selected using systematic random sampling technique. Data was collected using a self structured and validated questionnaire. Analysis was done using frequency distribution, simple percentages and inferential statistics of chi-square was used to test hypotheses at 5% level of significance. Findings reveal that respondent have high (65.3%) knowledge of dietary practices and 63.27% of the respondents have positive attitude towards the practices. Among the factors that impede good dietary practice in the population were cultural belief and poor socio-economic background while regular attendance of ante-natal clinic and good socio economic background enhance good dietary practice among the population. Test of hypotheses showed no association between age and knowledge, attitude and religious affiliation; however occupation and the attitude of the respondent were statistically significant. The study however suggest that intensive health education strategy should be developed and implemented in order to bring about orientation of cultural beliefs.

Keywords: Factors, Dietary practice, Yerwa

INTRODUCTION

Maternal nutrition before and during pregnancy is an important determinant of birth weight. High rate of Low Birth Weight (LBW) in developing countries has been attributed to poor maternal nutrition (Ogunjuyigbe et al., 2008) Pregnancy is a time of tremendous physiological change that demands healthy dietary lifestyle choices. Growing foetus draws a lot of energy and nutrients from the mother to enhance physical and psychological development (Ojo and Briggs, 2010). In developing countries such as Nigeria, it is paramount to states that low birth weight stems primarily from the mother's poor health and nutrition, and inadequate nutrition during pregnancy accounts for a large proportion of growth retardation (Hareyan, 2005). Malnutrition has been recognized as one of the underlying factor for maternal death during the process of procreation. The causes of malnutrition are multidimensional and multi-factorial with poverty, food inadequacy and maternal illiteracy being the main culprit of the menace in developing countries. The health of the mother and her nutritional status can influence the health and survival of the child because of the biological links that exist between her and her child during pregnancy and lactation (Ogunjuyigbe et al., 2008).

In Nigeria, there are some adverse socio-cultural and economical factors that produced negative consequences and reduce women's access to effective ante-natal services needed to reduce maternal morbidity and

mortality. The most important of these are the low socio-economic status of women that deny them access to appreciable decision-making with regard to their reproductive functions, high level of female illiteracy which is a leading cause of poor health seeking behaviour for maternity services among Nigerian women and high rate of poverty that predominantly affects women leading to inadequate dietary intakes, high rate of pregnancy complications and women's reduced access to evidence based maternity services (Ogunjuyibe, 2000).

Maternal diet is an important determinant of outcomes of pregnancy as such malnutrition during pregnancy and its consequence maximally affects the health and long-term outcomes of the population. Recently, high rate of Low Birth Weight (LBW) have been reported in most developing countries. In Nigeria, Low Birth Weight (LBW) accounts for almost 30% of all births with maternal malnutrition as a dominant risk factor (Ali, 2004).

Anecdotal observation during clinical experience at Yerwa Ante-natal clinic showed that most of the pregnant women receiving antenatal care had signs of malnutrition. This research is conducted to assess the knowledge and attitudes of pregnant women towards good dietary practices as well as factors affecting dietary practices among pregnant women attending Yerwa Antenatal Clinic Maiduguri metropolitan council, Borno state.

MATERIALS AND METHODS

Study Design

Descriptive survey was uses for this study because it deals with the accurate and factual description and summary of the actual situation.

Study Setting

The research was restricted to Yerwa ANC Maiduguri Metropolitan Council, in order to assess the knowledge and attitude of pregnant women towards good dietary practices as well as identify the factors affecting dietary practices among pregnant women receiving antenatal care. Yerwa antenatal clinic is one of the oldest clinics in Borno state. The clinic is bounded with notable landmarks, to the north the clinic is bounded by Shehu's Palace, the east by the Maiduguri Monday market, south by the Ramat Square, and west by Kofa Biyu. Services rendered at Yerwa clinic includes; maternal and child welfare and family health programmes. Furthermore, the clinic also served as a training centre for students from various health institutions for their clinical experience. Averagely, Yerwa clinic attends to approximately 220 clients weekly both old and new cases.

Sample and Sampling Technique

The researchers adopted systematic random sampling to select 294 pregnant women receiving antenatal care at the clinic.

Instrumentation

The researchers used self developed questionnaire to collect data from the respondents. The instrument was validated by health experts and ten copies of the questionnaire were pre-tested at state specialist hospital Maiduguri Borno State using test retest method to ensure consistency and reliability of the instrument. Reliability coefficient of 0.75 was obtained which made it fit for use in the study area. The instrument consisted of four sections; section A concerned Demographic/personal data of the pregnant women, section B focused on knowledge and attitude of diet and practices, section C focused on attitude of dietary practices while section D focused on the factors affecting dietary practices.

Procedure for data collection

The researchers obtained a written approval from the management of Yerwa clinic. Sampling frame of women who registered for antenatal clinic was collected. 294 respondents were selected using systematic random sampling. Consent was obtained from the pregnant women after explanation of the purpose and objective of the research. The researchers then administered the questionnaires directly to the literate pregnant women, while those that were uneducated, the questions were interpreted for them to choose the right options. The identities of the women remained anonymous throughout the study period. The questionnaires and responses were treated with confidentiality after retrieval.

Data Analysis

The data collected was analysed using descriptive statistics of frequency counts and percentages while inferential statistics of chi-square was used to illustrate the association between dependent and independent variables.

FINDINGS

In table 1, the result showed that majority of the respondents 144(48.98%) fall within age group of 15-20 years, with mean age of 24(SD= + or – 7.9) only 6(2.04%) were above 40 years. Majority 186 (63.27%) of the respondents were Kanuri, 24 (8.16%) were Shuwa, 42 (14.29%) were Hausa and 14 (14.29%) of the respondents were other tribes.

Table 1. Demographic characteristics of subject

Variable	No.	Percentage (%)
Age		
15-20	144	48.98
21-30	72	24.49
31-40	72	24.49
41and Above	6	2.04
Tribes		
Kanuri	186	63.27
Shuwa	24	8.16
Hausa	42	14.29
Others	42	14.29
Religion		
Islam	282	95.92
Christian	12	4.08
Others	0	0
Occupation		
Petty trader	84	28.57
Farming	6	2.04
Housewife	198	67.35
Civil servant	6	2.04
Husband's occupation		
Trader	162	55.10
Civil servant Farmer	54	18.37
Farmers	30	10.20
Others	48	16.33

Mean age of respondents=24 years (SD=±7.9)

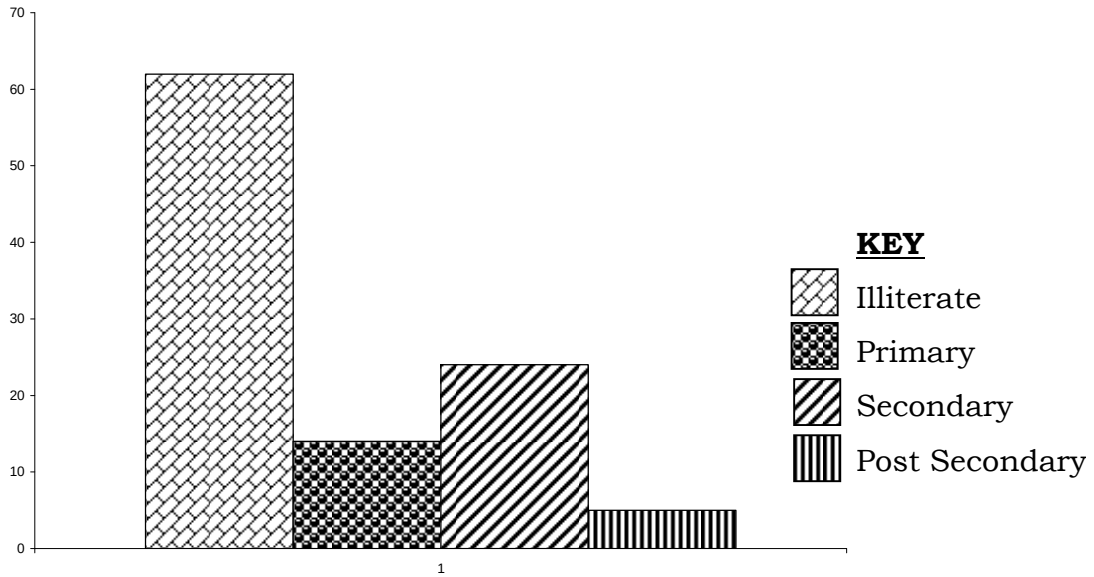

Figure 1. A histogram showing educational status of respondent.

The result from table 1 also showed that majority of the respondent were Muslims 282 (95.92%), only 12 (4.08%) were Christians. Majority of the respondents were full time housewives 198 (67.35%), 84 (28.57%), were petty traders, 6 (2.04%) were farmers, and 6 (2.04%) were civil servants. The table further revealed that majority of husbands of the respondent 162 (55.10%) were trader, while 54 (18.37%) were civil servants, 30 (10.20%) were farmers and 48 (16.33%) were doing other occupations.

Figure 1 illustrate that majority of the respondents were illiterates 186 (63.27%), 36 (12.24%) attended primary school, 66 (22.45%) attended secondary school and only 6 (2.04%) attended post-secondary school.

In figure 2, majority of the husbands 114 (38.78%) were illiterate, 24 (8. 16%) attend primary school, 60

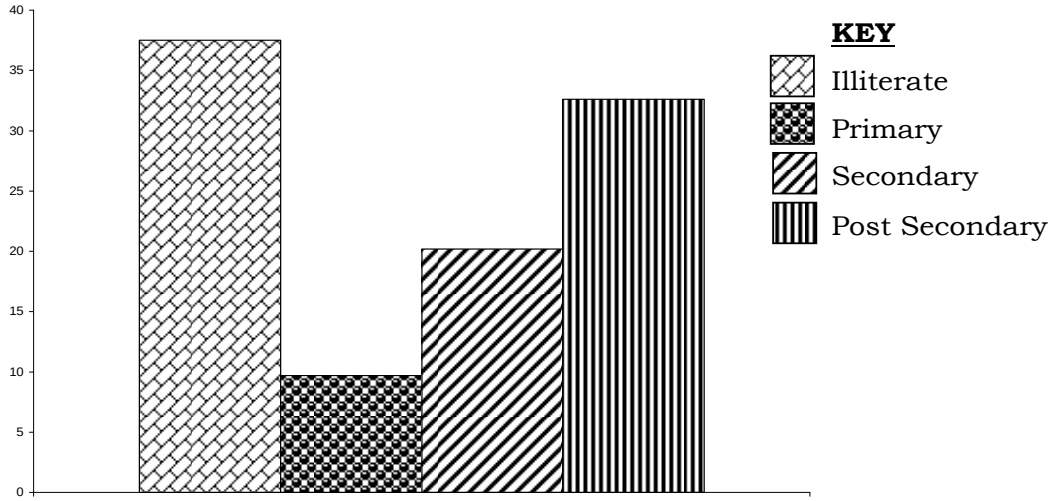

Figure 2. A histogram showing husband's educational status of respondents.

Table 2. Knowledge of pregnant women toward dietary practices.

Variable	No.	Percentage (%)
Do you know about good dietary practice during pregnancy?		
Yes		
No	192	65.31
	102	34.69
Total	**294**	**100**
How do you get to know about good dietary practice during pregnancy?		
Home	54	28.13
Antenatal clinic	114	59.38
Friends	18	9.38
Others	6	3.13
Total	**294**	**100**
Do you increase your diet intake during pregnancy?		
Yes	186	63.27
No	108	36.73
Total	**294**	**100**
Why do you increase your diet intake during pregnancy?		
Concern for baby	76	25.81
Because of stress	9	3.23
Safe delivery	61	20.57
Tradition	148	50.39
Total	**294**	**100**
Do food intakes during pregnancy have influence on pregnancy outcome?		
Yes	267	90.81
No	27	9.18
Total	**294**	**100**
Can maternal nutrition cause low birth weight baby and still birth		
Yes		
No	198	67.35
	96	32.65
Total	**294**	**100**

(20.41%) attend secondary school, and 96 (32.65%) attend post-secondary or tertiary institution.

Table 2 showed that majority of the respondents 192 (65.31%) claimed they have knowledge of good dietary practices in pregnancy while 102 (34.69%) never heard about good dietary practice during pregnancy. Majority of the respondents 114 (59.38%), got their knowledge from antenatal clinic. 54 (28.13%) got their knowledge from

Table 3. Attitude of pregnant women toward dietary practices.

Variable	No.	Percentage (%)
How many times do you eat food daily during pregnancy?		
Once	0	0
Twice	6	2.04
Thrice	216	73.47
When I feel like	72	24.49
Total	**294**	**100**
How often do you eat fruits and vegetables?		
Daily	78	26.53
Once in a week	21	7.14
Twice in a week	12	4.08
Occasionally	183	62.24
Total	**294**	**100**
How often do you eat meat/fish per week		
Twice per week	42	14.29
Trice per week	36	12.24
Four times per week	54	18.37
Daily	162	55.10
Total	**294**	**100**
Do you avoid some good(eggs,fish,fruits,milo drinks) diet during pregnancy		
Yes	180	61.22
No	114	38.78
Total	**294**	**100**

Table 4. Factors affecting dietary practices during pregnancy.

Variable	No.	Percentage (%)
Why do you avoid some diet in pregnancy?		
Cultural belief	118	40
Ignorance	29	10
religion	59	20
Others	88	30
Total	**294**	**100**
What do you think is/are the factor(s) contributing to your good dietary practice?		
Literacy	12	4.08
Good Socio-economic status	132	44.90
Attending antenatal clinic	138	46.94
Others	12	4.08
Total	**294**	**100**
What are the factors that hinder you from taking adequate diet in pregnancy?		
Poverty	180	61.22
Illiteracy	60	20.41
Husband's attitude	24	8.16
Forgetfulness	30	10.20
Total	**294**	**100**

home, 18 (9.38%) heard it from friends and 6 (3.13%) from other sources like radio an televisions. Majority of the respondents 186 (63.27%), increase their dietary intake during pregnancy and 96 (36.73%) do not increase their intake during pregnancy. Majority of the respondent 90 (48.39%) increase their dietary intake during pregnancy because of concern for the foetus, 6(3.23%) possibly due to stress and 36 (19.35%) because they believe they may have safe delivery.

Result from Table 3 showed that majority of the respondents 162 (55.10%) claimed they eat meat/fish daily during pregnancy, while 42 (14.29%) eat meat/fish twice daily, 36 (12.24%) eat only twice per week and 54 (18.37%) eat four times per week. Majority of the respondent 180 (61.22%) avoid some diets like eggs, fish, fruits, Milo drinks in pregnancy while 114 (38.78%) do not avoid any diet during pregnancy.

Majority of the respondents 118 (40%) avoid some good diet during pregnancy because of cultural belief, while 29 (10%) because of their ignorance, 18(20%)

Table 5. The relationship between age and knowledge of the pregnant women towards dietary practice.

Age in years	Knowledge of the pregnant women towards dietary practice.		**Total**	**statistics**	**Remark**
	Yes	**No**			
15-20	104(94.0)	40(50.0)	144		
21-30	42(47.0)	30(25.0)	72	FET=7.0822	
31-40	42(47.0)	30(25.0)	72	DF=3	Not
41 and Above	4(3.9)	2(2.1)	6	Tabular=7.815	significant
Total	192	102	294		

Calculated Fishers exact test= 7.0822, df=3, Tabular value= 7.815 at P- value =0.05.

Table 6. Relationship between attitude of pregnant women and religious affiliation.

Religious affiliation	Attitude of pregnant women towards dietary practices		**Total**	**Statistics**	**Remark**
	Positive	Negative			
Islam	174(172.7)	108(109.4)	282	FET=0.6873	
Christianity	6(7.5)	6(4.7)	12	DF=1	Significant
				Tabular=3.841	
Total	180	114	**294**		

Calculated Fishers exact test=0.6873, df=1, Tabular value= 3.841 at p-value=0.05.

Table 7. Relationship between occupation and attitudes of pregnant women

Occupation of pregnant women	Attitude of pregnant women		Total	statistics	Remarks
	Positive	Negative			
Petty trader	64(54.4)	20(32.6)	84		
Farming	4(3.7)	2(2.3)	6	FET=10.13	
House wife	109(121.2)	89(76.8)	198	DF=3	Significant
Civil servants	3(3.7)	3(2.3)	6	Tabular=7.815	
Total	180	114	**294**		

Calculated Fishers exact test =10.13, df=3, Tabular value =7.815 at p-value= 0.05

because of their religion, 88(30%) avoid some diet during pregnancy because of other reasons.

Majority of the respondents 138 (46.94%) take good diet in pregnancy because they attend antenatal clinic, 12 (4.08%) take good diet during pregnancy because of other reasons.

Majority of the respondents 180 (61.22%) were not taking good diet during pregnancy because of their poor socio-economic status, while 60 (20.41%) because of illiteracy, 24 (8.16%) because of their husband's attitude and 30 (10.26%) of the respondent do not take good diet in pregnancy because of their forgetfulness.

Hypothesis 1: There is no significant association between age and knowledge of the pregnant women.

The Fishers exact test value of 7.0822 at 3 degree of freedom was less than the critical value of 7.815 at P-value of 0.05. Therefore there is evidence to suggest that age has no influence on the knowledge of pregnant women towards dietary practices. Hence the computed Fisher's exact test was not statistically significant and the null hypothesis is accepted.

Hypothesis 2: There is no significant association between attitude of pregnant women attending antenatal clinic at Yerwa clinic towards dietary practice and their religious affiliation.

The Fishers exact test value of 0.6873 at 1 degree of freedom was less than the critical value of 3.841 at P-value of 0.05. Therefore there is evidence to suggest that religious affiliation of the population has no influence on the attitudes of pregnant women towards dietary practices. Hence the computed Fisher's exact test was not statistically significant and the null hypothesis is accepted.

Hypothesis 3 There is no significant association between occupation of pregnant women attending ANC in Yerwa clinic and their attitudes towards dietary practice.

The Fishers exact test value of 10.13 at 3 degree of

freedom was greater than the critical value of 7.815 at P-value of 0.05. Therefore there is evidence to suggest that occupation of the population has influence on the attitudes of pregnant women towards dietary practices. Hence the computed Fisher's exact test was statistically significant and the null hypothesis is rejected.

DISCUSSION OF FINDINGS

From the demographic characteristics of the respondents, it was seen that majority of the respondents 144(48.98%) fall within age group of 15-20 years, with mean age of 24(SD= + or – 7.9) and ideally this is a good child bearing age that has less complications. This gives a good ground for the study to be conducted. It is evident that majority of the respondents 63.27% were Kanuri by tribe while the other tribes ranging from Bura, Ibo and Marghi constituted 36.73% of the population. Majority of the respondents 95.92% were from Islamic background and 4.08% were Christians. 67.35% of the respondents were full time house wives; this was inline with the work of Yassin et al., (2004), in their study on dietary practices among adolescent pregnant women in Alexandria where the researchers discovered that 62.6% of the respondents were housewives. It was also discovered that majority of the respondents 63.27% were illiterate.

Despite high level of illiteracy among the respondents, it was discovered that 65.31% of the respondents showed a high knowledge about dietary practices during pregnancy; only 34.69% of the respondents showed low knowledge about dietary practice during pregnancy. The high knowledge about dietary practice may possibly be attributed to the fact that the women were good listeners during ante-natal health talks which were always delivered in Hausa and translated to Kanuri languages. This finding is in consonant with that of Zeng (2005) on the knowledge of nutrition and related dietary behaviours among pregnant women, where the researcher discovered that 74.9% of the respondents showed good knowledge of dietary practices during pregnancy. However, contrary to this finding is the finding of Yassin et al., (2004) in Alexandria, Egypt where 61.7% of the respondents were found to have poor knowledge of dietary practices in pregnancy.

Majority of the respondents 63.27% had positive attitude towards dietary intake during pregnancy which was demonstrated by a qualitative and quantitative increase in their dietary intake, only 36.73% do not increase their dietary intake. This finding is at variance with the finding of Zobairi (1998) in Karachi, Pakistan during his study to determine the knowledge, attitude and practice of diet and nutrition in pregnancy among pregnant women. Zobairi discovered that 68% of the respondents did not increase their food intake during pregnancy. The reason for the increase in food intake by majority of the respondents may possibly be due to their high level of knowledge which was acquired during ante natal visits, concern for the baby and to facilitate safe delivery. These reasons were partly synchronized by Guitierrez (1999) during his study on cultural factors affecting diet and pregnancy outcome of Mexican American Adolescents. Guitierrez discovered that 61.22% of the respondents avoided some food during pregnancy because of their tradition. Majority of the respondents 183 (62.24%) do not eat adequate fruits and vegetables; a good number of the women 180(61.22%) avoid intake of food substances such as eggs, Milo beverages and fish. The avoidance of these food substances may be because; the general belief of women in the study area is that when these food substances are consumed during pregnancy; there is a likely hood of having a (macrosomal baby) fat baby which may predispose the woman to prolonged labour and eventual Caesarean section. The avoidance may also be partly due to low socio-economic background of the women and their spouses who may not be able to afford these items from the market due to high cost considering the high cost of vegetables and fruits in the area. This finding is in line with the report of Zobairi (1998) where many of the women had negative attitude towards dietary practices during pregnancy because of their tradition.

Findings showed that cultural beliefs, poor socio-economic background and attitudes of the husbands were top most on the list of factors that impede good dietary practice of the respondents during pregnancy. These findings were partly in agreement with that of Gina et al, (2011) in Canada and Yassin et al (2004) in Alexandria who asserted that, respondents were not able to take adequate diet in pregnancy because of ethno cultural believe and low-socio economic status of the respondents and their families. However on the contrary was the findings of Musaiger (2006) in his study on Socio-Cultural and Economic Factors Affecting Food Consumption Pattern in the Arab Countries where he discovered that the respondents practiced good dietary intake during pregnancy because of their socio-economic status. This may possibly be owing to the fact that the respondents and their families were financially buoyant, and as such can afford to purchase the food stuff from the market despite the financial cost. Top on the list among the factors that support adequate intake of dietary regimen by the respondents during pregnancy is regular antenatal visit and good socio-economic status. This may be sequel to the fact that the respondents usually attend antenatal clinics and listens to the health education delivered by nurses during their visit.

Implication for Nursing and Midwifery

1) As members of health team nurses and midwives are in better position to bring awareness to pregnant women on the importance of healthy eating during pregnancy. Although it is the tradition of nurses

and midwives to give health talk to pregnant women attending antenatal clinic but it is very important to put more emphasis on dietary practice during pregnancy.

2) The nurses should teach pregnant women simple techniques such as food complementation in order to have a complete protein from their local food sources in substitute of expensive food sources such as meat and egg.

3) Nurses and midwives should be knowledgeable and skilful enough on the assessment of nutritional status of the pregnant women for early detection of signs of malnutrition using ABCD, i.e. A for anthropometric measurement which include height, weight, skin fold measurement. B for Biochemical assessment which includes estimation of serum albumin, C for clinical observations which includes skin colours, hair texture, finger nail shape, eyes, lips mouth, joint, etc, D for dietary intake which includes diet history food record, etc.

SUMMARY AND CONCLUSION

Pregnancy is a time of tremendous physiological changes that demand healthy dietary and lifestyle choices. During pregnancy there is increase demand for nutrient and energy by the mother because of the growing foetus.

The findings showed that most of the women attending Yerwa Antenatal Clinic were full time housewives and majority of the pregnant women were illiterate. It was discovered that many factors affects the dietary practices among pregnant women attending Yerwa Antenatal Clinic. Most respondents increase their dietary intake in pregnancy while some avoid certain diets in pregnancy because of traditional belief. However, some of the respondents practice good dietary intake during pregnancy because of their high socio-economic status.

In conclusion a good knowledge of dietary practice during pregnancy among pregnant women will reduce the rate of intrauterine death of foetus, low birth weight (LBW) and maternal mortality.

RECOMMENDATION

Based on the research findings, the following recommendations were made:

1) Health talk should be encouraged on each antenatal day and nurses should put more emphasis on nutrition.

2) Pregnant women should attend antenatal clinic regularly during pregnancy in other to know their nutritional status in pregnancy.

3) Pregnant women that can not afford meat, egg and other sources of protein should resort to local sources of protein such as beans.

4) Government should provide public awareness for girl child education as illiteracy is a major factor that affects dietary practice during pregnancy.

5) Maternal and child health centres should be made accessible to our communities to help in educating and preventing malnutrition among pregnant women.

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