IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 15, Issue 2 Ser. 3 (Mar. – Apr. 2026), PP 23-30
www.iosrjournals.org

A Study to Assess the Knowledge and Attitude of Antenatal Mothers Regarding Appropriate Dietary Practices during Pregnancy in a Selected Hospital, Durtlang, Mizoram.

Ruth Laldinpuii[1], Christina Lawmsangpuii[2], Lalrinawmi[3], Laltlanzuala[4]
[1](*Tutor, College of Nursing, Synod Hospital, Durtlang, Aizawl, Mizoram*)
[2, 3, 4](*VIII[th] Semester B.Sc. Nursing Students at College of Nursing, Synod Hospital, Durtlang, Aizawl, Mizoram*)

Abstract:
Background*: Nutrition defined as the consumption of a healthy, balanced meal and is the foundation of human life and most important requirement for living. So in pregnancy, the nutritional demands increases significantly to ensure optimal maternal and fetal outcomes; women must eat the right amount of food for her health as well as the health of the baby. Despite the importance of balance diet during pregnancy, many antenatal mothers have inadequate knowledge regarding appropriate dietary practices due to lack of awareness, cultural beliefs, and socioeconomic factors. The findings of this study can help in findings gaps in knowledge, cultural barriers, or misunderstandings and developing effective health education programs to promote maternal and fetal health***.***
Materials and Methods*: A descriptive research design was adopted to assess the knowledge and attitude regarding appropriate dietary practices during pregnancy among antenatal mothers. This study was conducted at a selected hospital in Durtlang, Mizoram. The sample consisted of 30 antenatal mothers attending the antenatal outpatient department selected using non-probability sampling technique. Data were collected using, demographic variables, and self-structured questionnaire (knowledge regarding antenatal diet), Likert scale (attitude towards antenatal diet).Data was analyzed using descriptive and inferential statistics. Chi-Square is also used to find out the association between the knowledge and attitude with the demographic variables of antenatal mothers.*
Results*: The majority of the participants 30% were 26-30 years of age, 26.7% were 31-35 years of age, 23.3% were*
>35 years of age, and 20% were21-25 years of age. In the first objective, it was found out that 80% have adequate knowledge regarding antenatal diet, 20% have moderate knowledge and none of them are lack in knowledge regarding antenatal diet. In the second objective, it was found out that 3.3% have very high attitude regarding antenatal diet, 80% have high attitude, 16.7% have moderate attitude and none of them have low or very low attitude regarding antenatal diet. In the third objective, as the p-value is more than 0.05, we found out that there is no association between demographic variables and their knowledge and attitude regarding antenatal diet.
Conclusion: *The present study concluded that majority of antenatal mothers had adequate knowledge and high attitude regarding appropriate dietary practices during pregnancy. No significant association was found between knowledge, attitude and their demographic variables. Continuous nutritional counseling during antenatal period is needed to maintain and strengthen maternal and fetal health.*
Key Word*: Assess knowledge, attitude, antenatal mother, dietary practices, and pregnancy.*

Date of Submission: 20-04-2026 Date of Acceptance: 30-04-2026

I. Introduction

The foundation of human life is nutrition and is the most important requirement for living.

During pregnancy, the nutritional demands are particularly high; women must eat the right amount of food for her health as well as the health of the baby. A balanced diet during pregnancy reduces the risk of anemia, low birth weight, preterm birth, birth defects, and pregnancy complications.

Despite available healthcare services, information and awareness, many antenatal mothers continue to follow in adequate dietary practices due to lack of knowledge, cultural beliefs, and socioeconomic factors and these practices are still prevalent in many communities and can contribute to nutritional deficiencies despite the availability of food resources.

Assessing the knowledge and attitude of antenatal mothers towards antenatal diet is essential for identifying gaps and maternal health education programs. Understanding these factors will help healthcare professionals, especially nurses, to design effective health education interventions. This study focuses on antenatal mothers in a selected hospital Durtlang, Mizoram, with the aim of identifying gaps in knowledge and

attitudes towards antenatal diet and promoting better maternal and child health outcomes.

II. Material And Methods

Study Design: A descriptive research design was adopted to assess the knowledge and attitude regarding appropriate dietary practices during pregnancy among antenatal mothers.
Study Location: This study was conducted at a selected hospital in Durtlang, Mizoram.
Study Duration: 1st September-6th September

Sample size: 30 antenatal mothers.

Subjects and selection method: The subjects of the study comprised 30 antenatal mothers attending a selected hospital in Durtlang, Mizoram. The participants were selected using a non-probability sampling technique, based on their availability during the data collected period.

Inclusion criteria:
1. Antenatal mothers who attend antenatal check-up at Synod Hospital Durtlang, Mizoram.
2. Antenatal mother present during data collection.
3. Antenatal mothers, who can read, write and understand Mizo.

Exclusion criteria:
1. Antenatal mothers who have medical conditions like GDM and PIH.
2. Antenatal mothers who are not willing to participate in the study.
3. Antenatal mothers who are illiterate.

Procedure methodology

Prior to data collection, written consent was obtained from the concern authority of the selected hospital in Durtlang, Mizoram. The purpose of the study was clearly explained to the antenatal mothers and informed consent was obtained from each participant, a self-structured questionnaire and Likert scale was used to collect the data of the recruited patients respectively. The demographic variables such as age, educational level, and occupation, trimester of pregnancy, parity and source of dietary information were collected and self-structured questionnaire is used to assess the knowledge regarding antenatal diet of antenatal mothers and Likert scale was used to assess the attitude toward antenatal diet.

Statistical analysis

Both descriptive (frequency, percentage, mean and standard deviation) and inferential statistic (Chi-square test) were employed

III. Result

SECTION I: ASSESSMENT OF FACTORS INFLUENCING KNOWLEDGE OF ANTENATAL MOTHER'S REGARDING ANTENATAL DIET

Table No. 1.1

Frequency and percentage wise distribution of antenatal mothers with their demographic characteristics

n =30

Characteristics	Category	Frequency (f)	Percentage (%)
AGE	<20 Years	0	0
	21-25 Years	6	20%
	26-30 Years	9	30%
	31-35 Years	8	26.70%
	>35 Years	7	23.30%

Table 1.2: Frequency and percentage wise distribution of antenatal mothers according to their educational level.

Characteristics	Category	Frequency (f)	Percentage (%)
EDUCATION	No formal education	0	0%
	Primary	0	0%
	Middle	1	3.30%
	HSLC	8	26.70%
	HSSLC	10	33.30%
	Graduate and above	11	36.70%

Table 1.3: Frequency and percentage wise distribution of antenatal mothers according to their occupation.

Characteristics	Category	Frequency (f)	Percentage (%)
OCCUPATION	Homemaker	21	70%
	Self employed	4	13.30%
	Medical professional	1	3.30%
	Others	4	13.30%

Table 1.4:

Characteristics	Category	Frequency (f)	Percentage (%)
TRIMESTER	First	7	23.30%
	Second	5	16.70%
	Third	18	60%

Table 1.5 Frequency and percentage wise distribution of antenatal mothers according to their parity

Characteristics	Category	Frequency (f)	Percentage (%)
PARITY	Nullipara	16	53.30%
	Primipara	3	10%
	Multipara	11	36.70%

Table 1.6 Frequency and percentage wise distribution of antenatal mothers according to their gravida

Characteristics	Category	Frequency (f)	Percentage (%)
GRAVIDA	Primigravida	16	53.30%
	Multigravida	12	40%
	Grand Multipara	2	6.70%

Table 1.7 Frequency and percentage wise distribution of antenatal mothers according to their information on antenatal diet

Characteristics	Category	Frequency (f)	Percentage (%)
	Yes	29	96.70%

ANY INFO ON ANTENATAL DIET	No	1	3.30%

SECTION II: ASSESSMENT OF KNOWLEDGE OF ANTENATAL MOTHER'S REGARDING ANTENATAL DIET

Table No. 2:

Assessment of factors influencing knowledge of antenatal mother's regarding antenatal diet

Level of knowledge	Frequency (f)	Percentage (%)
Inadequate knowledge	0	0
Moderate knowledge	6	20%
Adequate knowledge	24	80%

Interpretation:

All of the mothers have a **good level of knowledge** about antenatal diet among the study participants. However, targeted educational interventions could be beneficial to raise those with moderate knowledge to an adequate level, ensuring all expectant mothers have comprehensive understanding for optimal maternal and fetal health

SECTION III: ASSESSMENT OF ATTITUDE TOWARDS ANTENATAL DIET

Table No. 3:

Assessment of level of mothers' attitude regarding antenatal diet

Level of attitude	Frequency	Percentage
Very High	1	3.3%
High	24	80%
Moderate	5	16.7%
Low	0	0%
Very Low	0	0%

INTERPRETATION

The findings reveal that majority of the antenatal mothers (80%) had a high attitude towards antenatal dietary practices, 16.7% has moderate attitude and 3.3% has very high attitude and none of them has low or very low attitude regarding antenatal dietary practices.

SECTION IV: ASSOCIATION BETWEEN LEVEL OF KNOWLEDGE WITH SELECTED DEMOGRAPHIC VARIABLES

Table No. 4:

Association between level of knowledge with selected demographic variables

Demographic variable	Knowledge			Total	df	χ^2	Tab Val	Remarks
	Adequate	Moderate	Inadequate					
Age								
<20	0	0	0	0	8	5.54563	15.51	NS
21-25	5	1	0	6				
26-30	8	0	0	8				
31-35	5	4	0	9				
>35	6	1	0	7				
Total	24	6	0	30				
Education								
No formal	0	0	0	0				
Primary	0	0	0	0				

Middle	0	1	0	1	10	4.65278	18.31	NS
HSLC	7	2	0	9				
HSSLC	8	2	0	10				
Graduate and above	9	1	0	10				
Total	24	6	0	30				
Occupation								
Homemaker	17	4	0	21	6	0.3869	12.59	NS
Self-employed	3	1	0	4				
Medical professional	1	0	0	1				
Others	3	1	0	4				
Total	24	6	0	30				
Trimester								
First	5	2	0	7	4	2.46032	9.488	NS
Second	3	2	0	5				
Third	16	2	0	18				
Total	24	6	0	30				
Parity								
Nullipara	15	2	0	17	4	3.0615	9.488	NS
Primipara	2	0	0	2				
Multipara	7	4	0	11				
Total	24	6	0	30				
Gravida								
Primigravida	15	1	0	16	4	7.73908	9.488	NS
Multigravida	6	5	0	11				
Grand Multigravida	3	0	0	3				
Total	24	6	0	30				
Any info on antenatal diet								
Yes	23	6	0	29	2	0.25862	5.991	NS
No	1	0	0	1				
Total	24	6	0	30				

p<0.05 level of significance S-Significant NS-Non significant

Findings presented on table 4 shows the chi square (χ^2) computation between the knowledge regarding antenatal diet and the selected baseline variables

A) The Chi-square (χ^2) computation between the knowledge regarding antenatal and age of the antenatal mother diet showed that the χ^2 value for df (8) was 5.54563 and it was found to be smaller than the tabulated value at 0.05 level of significance (i.e. χ^2=15.51). therefore there is no significant association between the knowledge regarding antenatal diet and age of the antenatal mother

B) The Chi-square (χ^2) computation between the knowledge regarding antenatal diet and education of the antenatal mother showed that the χ^2 value for df (10) was 4.65278 and it was found to be smaller than the tabulated value at 0.05 level of significance (i.e. X^2=18.31). Therefore there is no significant association between the knowledge regarding antenatal diet and education of the antenatal mother.

C) The Chi-square (χ^2) computation between the knowledge regarding antenatal diet and occupation of antenatal mother showed that the X^2 value for df (6) was 0.3869 and it was found to be smaller than the tabulated value at 0.05 level of significance (i.e. X^2=12.59). Therefore there is no significant association between the knowledge regarding antenatal diet and occupation of antenatal mother

D) The Chi-square (χ^2) computation between the knowledge regarding antenatal diet and trimester of pregnancy of antenatal mother showed that the χ^2 value for df (4) was 2.46032 and it was found to be smaller than the tabulated value at 0.05 level of significance (i.e. χ^2=9.488). Therefore there is no significant association between the knowledge regarding antenatal diet and trimester of pregnancy of antenatal mother.
E) The Chi-square (χ^2) computation between the knowledge regarding antenatal diet and parity of antenatal mother showed that the χ^2 value for df (4) was 3.0615 and it was found to be smaller than the tabulated value at 0.05 level of significance (i.e. X^2=9.488). Therefore there is no significant association between the knowledge regarding antenatal diet and parity of antenatal mother.
F) The Chi-square (χ^2) computation between the knowledge regarding antenatal diet and gravida of antenatal mother showed that the χ^2 value for df (4) was 7.73908 and it was found to be smaller than the tabulated value at 0.05 level of significance (i.e. χ^2=9.488). Therefore there is no significant association between the knowledge regarding antenatal diet and gravida of antenatal mother.
G) The Chi-square ($\chi^{2)}$ computation between the knowledge regarding antenatal diet and any info on antenatal diet of antenatal mother showed that the χ^2 value for df (2) was 0.25862 and it was found to be smaller than the tabulated value at 0.05 level of significance (i.e. χ^2=5.991). Therefore there is no significant association between the knowledge regarding antenatal diet and any info on antenatal mother.

The result showed that there is no significant association between the knowledge regarding antenatal diet of the antenatal mother with the selected variables. Therefore, null hypothesis stating that there will be no significant variables. Therefore Null Hypothesis is accepted.

SECTION IV: ASSOCIATION BETWEEN ATTITUDES TOWARDS ANTENATAL DIET WITH SELECTED DEMOGRAPHIC VARIABLES

Table No. 5: Association between attitudes towards antenatal diet with selected demographic variables

Demographic variable	Attitude					Total	df	χ^2	Tab Val	Remarks
	Very High	High	Moderate	Low	Very Low					
Age										
<20	0	0	0	0	0	0	16	5.02084	26.296	NS
21-25	0	5	1	0	0	6				
26-30	0	7	2	0	0	9				
31-35	0	6	2	0	0	8				
>35	1	6	0	0	0	7				
Total	1	24	5	0	0	30				
Education										
No formal	0	0	0	0	0	0	20	3.59713	31.41	NS
Primary	0	0	0	0	0	0				
Middle	0	1	0	0	0	1				
HSLC	1	5	1	0	0	7				
HSSLC	0	9	2	0	0	11				
Graduate and above	0	9	2	0	0	11				
Total	1	24	5	0	0	30				
Occupation										
Homemaker	1	17	3	0	0	21	12	1.07731	21.026	NS
Self-employed	0	3	1	0	0	4				
Medical professional	0	1	0	0	0	1				
Others	0	3	1	0	0	4				
Total	1	24	5	0	0	30				

Trimester										
First	0	5	2	0	0	7	8	2.42057	15.507	NS
Second	0	5	0	0	0	5				
Third	1	14	3	0	0	18				
Total	1	24	5	0	0	30				
Parity										
Nullipara	0	15	3	0	0	18	8	2.05679	15.507	NS
Primipara	0	1	0	0	0	1				
Multipara	1	8	2	0	0	11				
Total	1	24	5	0	0	30				
Gravida										
Primigravida	0	14	2	0	0	16	8	15.3746	15.507	Ns
Multigravida	0	9	3	0	0	12				
Grand Multigravida	1	1	0	0	0	2				
Total	1	24	5	0	0	30				
Any info on antenatal diet										
Yes	1	23	5	0	0	29	4	0.25859	9.488	NS
No	0	1	0	0	0	1				
Total	1	24	5	0	0	30				

p<0.05 level of significance S-Significant NS-Non significant

Findings presented on table 4 shows the chi square (χ^2) computation between the knowledge regarding antenatal diet and the selected baseline variables

A) The Chi-square (χ^2) computation between the attitude regarding antenatal and age of the antenatal mother diet showed that the χ^2 value for df (16) was 5.0284 and it was found to be smaller than the tabulated value at 0.05 level of significance (i.e. χ^2=26.296). therefore, there is no significant association between the knowledge regarding antenatal diet and age of the antenatal mother

B) The Chi-square (χ^2) computation between the attitude regarding antenatal diet and education of the antenatal mother showed that the X^2 value for df (20) was 3.59713 and it was found to be smaller than the tabulated value at 0.05 level of significance (i.e. χ^2=31.41). Therefore there is no significant association between the attitude regarding antenatal diet and education of the antenatal mother.

C) The Chi-square (χ^2) computation between the attitude regarding antenatal diet and occupation of antenatal mother showed that the χ^2 value for df (12) was 1.07731 and it was found to be smaller than the tabulated value
at 0.05 level of significance (i.e. χ^2=21.026). Therefore there is no significant association between the attitude regarding antenatal diet and occupation of antenatal mother

D) The Chi-square (χ^2) computation between the attitude regarding antenatal diet and trimester of pregnancy of antenatal mother showed that the χ^2value for df (8) was 2.42057 and it was found to be smaller than the
tabulated value at 0.05 level of significance (i.e. χ^2=15.507). Therefore, there is no significant association between the attitude regarding antenatal diet and trimester of pregnancy of antenatal mother.

E) The Chi-square (χ^2) computation between the attitude regarding antenatal diet and parity of antenatal mother showed that the χ^2 value for df (8) was 2.05679 and it was found to be smaller than the tabulated value at
0.05 level of significance (i.e. χ^2=15.507). Therefore, there is no significant association between the attitude regarding antenatal diet and parity of antenatal mother.

F) The Chi-square (χ^2) computation between the attitude regarding antenatal diet and gravida of antenatal mother showed that the χ^2 value for df (8) was 15.3746 and it was found to be smaller than the tabulated value at
0.05 level of significance (i.e. χ^2=15.507). Therefore, there is no significant association between the attitude regarding antenatal diet and gravida of antenatal mother.

G) The Chi-square (χ^2) computation between the attitude regarding antenatal diet and any info on antenatal diet of antenatal mother showed that the χ^2 value for df (4) was 0.25859 and it was found to be smaller than the tabulated value at 0.05 level of significance (i.e. χ^2=9.488). Therefore, there is no significant association between the attitude regarding antenatal diet and any info on antenatal mother.

The result showed that there is no significant association between the attitudes regarding antenatal diet of the antenatal mother with the selected variables. Therefore, null hypothesis stating that there will be no significant variables. Therefore, Null Hypothesis is accepted

IV. Discussion

The present study assessed the knowledge and attitude of antenatal mothers regarding appropriate dietary practices during pregnancy in a selected hospital, Durtlang, Mizoram. The finding shows that majority of antenatal mothers had adequate knowledge and high attitude towards appropriate dietary practices during pregnancy and there is no significant association found between knowledge and attitude and selected demographic variables.

These findings are comparable with previous studies which reported improved nutritional awareness among antenatal mother attending antenatal clinics, health education, awareness and counseling may have contributed to this positive outcome.

The study highlights the importance of continued nutritional counseling during antenatal period to maintain and strengthen maternal and fetal health.

V. Conclusion

The present study concluded that majority of antenatal mothers had adequate knowledge and high attitude regarding appropriate dietary practices during pregnancy. No significant association was found between knowledge, attitude and their demographic variables. Continuous nutritional counseling during antenatal period is needed to maintain and strengthen maternal and fetal health.

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