



## NUTRITIONAL KNOWLEDGE AND PRACTICES AMONG PREGNANT WOMEN ATTENDING ANTENATAL CLINICS IN HEALTH FACILITIES IN NNEWI-SOUTH LOCAL GOVERNMENT AREA, ANAMBRA STATE

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**ABSTRACT:** *Inadequate nutrition by pregnant women could lead to complications like anemia and birth defects. This cross-sectional descriptive study was carried out to investigate the nutritional knowledge and practices among pregnant women attending antenatal clinics in health facilities in Nnewi-South Local Government Area (LGA) of Anambra State, Nigeria. The objectives of the study were to determine the nutritional knowledge of pregnant women and the sources of nutritional knowledge among pregnant women attending antenatal clinics in health facilities in Nnewi-South LGA. A sample size of 207 pregnant women was recruited using total population sampling technique. Questionnaire titled Nutritional Knowledge and Practices among Pregnant Women was administered to the respondents to elicit information. The reliability of the instrument was established using the test-retest method and Cronbach's alpha showed correlational score of 0.876. Descriptive and inferential statistics were used in the data analyses. The result showed that the overall score for knowledge level of nutrition among the respondents was good (92.3%); the majority of the respondents had sources of nutritional knowledge from ANC classes (95.2%) and midwives (94.2%). There was a significant association between the pregnant women's practice of nutrition and their educational qualification (P-value 0.004). In addition, myths and taboos as well as nutritional knowledge of pregnant women had no significant influence on nutritional practices among the pregnant women respectively (P=0.12; P=0.123). Based on the findings, the researchers recommended that nurses should intensify health education on nutrition in pregnancy in antenatal clinics, information about nutrition in pregnancy should be disseminated to all the communities in Nnewi-South Local Government Area, and teaching aids like food items should be used during health education on nutrition to the pregnant women.*

**KEYWORDS:** Antenatal Clinics, Nutritional Knowledge, Nutritional Practice, Pregnant women, Health Facilities.



## INTRODUCTION

Adequate nutrition is necessary for the body to function properly in all humans, as it is the foundation for human existence, health and development throughout the lifespan (Tenaw, Arega & Tachbele, 2018). Adequate nutrition is therefore necessary for both the expected weight gain of the pregnant woman, as well as growth and development of the foetus (Razzaq, Zohaib & Sohaib, 2018). Sufficient dietary intake throughout pregnancy has been found to be crucial for both healthy pregnancy and the intended outcome of birth (Mirsanjar, Muda, Ahmad, Othma, Mosavat & Mirasanjari 2016). Preterm births, congenital malformations, poor intrauterine growth and development, and some other pregnancy problems could be caused by fetal suboptimal micro- and macronutrient deficiencies throughout pregnancy (Mirasanjari et al., 2016).

Food taboos and misconceptions contribute to the main causes of under-nutrition, and significantly have associated adverse effects on pregnant women and the unborn child (Zerfu, Umeatu & Baye, 2016). The nutritional status of women before and during pregnancy can be influenced by maternal knowledge, attitudes, and perceptions towards certain food (Zerfu, Umeatu & Baye, 2016). Pregnancy-related behaviors are governed by cultural norms and customs in many traditional societies (Zerfu, Umeatu & Baye, 2016). Pregnant women who live in places where there are food taboos do not fulfill the increased demand, which increases the likelihood that their pregnancy could not end well (Mahmoud & Ghaly 2019). In some communities, pregnant women are not allowed to eat certain types of fruits, vegetables, snails, grass cutter meat, or other items, which limit their ability to make decisions and increase their risk of unfavorable pregnancy outcomes (Zerfu et al., 2016). Maternal nutrition is crucial because a pregnant woman's diet affects the fetal growth, the newborn birth weight, and the baby's health after birth and the pregnancy outcomes. Serious conditions like stillbirths and premature births arise from the mother's acute malnutrition and anaemia throughout pregnancy, and this affects the fetus as well as the mother (Zerfu et al., 2016). Great attention should be paid in assessing the nutritional intake of pregnant women during pregnancy, hence the need to determine nutritional knowledge and practices among pregnant women in Nnewi-South LGA in this study.

### Objectives

1. To determine the nutritional knowledge of pregnant women attending antenatal clinics in health facilities in Nnewi-South Local Government Area.
2. To determine sources of nutritional knowledge among pregnant women attending antenatal clinics in health facilities in Nnewi-South Local Government Area.

### Hypotheses

1. Myths and taboos of nutrition in pregnancy do not significantly influence the nutritional practices of pregnant women attending ANC in the health facilities in Nnewi-South LGA.
2. Level of education of pregnant women attending antenatal clinics in health facilities in Nnewi-South LGA does not significantly influence their nutritional practices.
3. Nutritional knowledge of pregnant women attending antenatal clinics in Nnewi-South LGA does not significantly influence their nutritional practices.



## MATERIALS AND METHOD

**Design:** Cross-sectional descriptive design was used for the study.

**Area of the Study:** The study was conducted at Nnewi-South Local Government Area in Anambra, Nigeria. Nnewi South LGA is made up of ten communities, namely Ukpok, Ekwulumili, Amichi, Azigbo, Unubi, Osumenyi, Ebenator, Utuh, Ezinifite and Akwaihedi. There are 22 health facilities in Nnewi-South LGA including two mission-owned facilities (Amichi Diocesan Hospital and Visitation Hospital), one secondary health facility (General Hospital, Ukpok), two comprehensive health centers (Osumenyi and Comprehensive Health Centre, Akwaihedi), and 17 primary health facilities.

**Population for the Study:** The target population comprised pregnant women attending prenatal clinics in health facilities in Nnewi-South LGA in Anambra State. The number of women that attended prenatal clinics at these facilities within a three month period was 207 from the month of August to October 2022.

### Sample and Sampling Technique

The sampling method used for this study was total population sampling technique. It is a type of purposive sampling technique that involves examining the entire (total) population that have common attributes/traits and experience etc, and it is used in situations where the entire population is relatively small (Laerd, Dissertation). The step adopted in the sampling technique in this study was as follows:

**Stage 1** – Purposive sampling technique was used to select the health facilities where pregnant women attend and were available for selection. Those health facilities were viz : Amichi Diocesan hospital, Visitation hospital Osumenyi, Ukpok General Hospital, Primary Health Centre Amichi and Primary Health Centre Utuh.

**Stage 2** - Using purposive sampling technique all the pregnant women available in the selected facilities were selected. The total number of respondents selected for the study was 207

**Instrument for Data Collection:** The instrument for data collection was a questionnaire titled nutritional knowledge and practices among pregnant women. The questionnaire had 6 sections: Section A elicited information on the socio demographic characteristics of the respondents such as Age, Religion, Ethnicity, Marital status, Number of children, etc; Section B elicited information on nutritional knowledge of pregnant women (for example, Have you heard about adequate diet?, Balanced diet is essential for optimal growth and development of the baby, Eating fruits and vegetables during pregnancy helps to improve the iron status of pregnant women, etc); Section C elicited information on sources of nutritional knowledge such as midwife, obstetrician, social media, antenatal classes, family and friends, etc; Section D elicited information on nutritional practices of pregnant women, for example, How often do you eat fruits and vegetables during pregnancy?, How often do you skip meals during pregnancy?, How often do you avoid certain foods such as snail, okro, plantain, etc?; Section E elicited information on cultural beliefs affecting nutritional practice of pregnant women, e.g., I cannot eat snail during pregnancy because it will make my baby to be sluggish in life and spit too much saliva, I cannot eat bush meat like a grasscutter when I am pregnant because it will cause my labour to be difficult and prolonged, during delivery, etc; Section F



obtained information on food avoided in pregnancy based on myths and taboos, e.g., meat from monkey, snake, rabbit or pig should not be eaten by pregnant women to avoid giving birth to a monster-looking baby; fruits like walnut should not be eaten by pregnant women because it causes regurgitation and vomiting in children; avocado pear is not eaten because it causes pemphigus, etc. The total number of items in the instrument is 54. The responses were measured using 'Yes/No' options and 4-point scale. For the 'Yes/No' options, 1 point for any yes or no response. For the 4-point scale, Practice Always/SA = 4 points, Practice Sometimes/Agree = 3 points, Rarely Practice/Disagree = 2 points, Do Not Practice/SD = 1 point. Reliability test was established for the instrument using the test-retest method. The result shows that the instrument was reliable with a correlational score of 0.876.

**Ethical Consideration:** Ethical clearance was obtained from the Ethical Committee and written approval obtained from the medical research ethical committee. The safety and confidentiality of the participants was ensured, and participation was voluntary.

**Data Collection:** Two hundred and seven (207) copies of the questionnaire were administered to the respondents by the researchers on days of antenatal clinics through the help of two assistants for each of the facilities. The researchers and the assistants ensured clarification of doubts; filled copies of the questionnaire were collected on the spot on completion each day for a period of four months. 207 copies were returned, and the return rate of the questionnaire was 100%.

**Method of Data Analysis:** Data obtained from this study was analyzed using SPSS Version 25.0. Socio-demographic characteristics were analyzed in frequencies, percentages, means and standard deviation. The results of the level of nutritional knowledge, sources, beliefs, myths, taboos and practice were presented in frequency and percentages. Chi-square analysis was used to test the null hypothesis at 0.05 level of significance.

## RESULTS

### Sociodemographic Characteristics of the Respondents

**TABLE 1: Showing Sociodemographic Characteristics of the Respondents**

Variable	Frequency (n=207)	Percentage (%)	Mean age
<b>Age (years)</b>			32.32±6.94 years
14-23 years	18	8.7	
24-30 years	78	37.7	
31-37 years	63	30.4	
38-44 years	39	18.8	
Above 45 years	9	4.4	
<b>Total</b>	<b>207</b>	<b>100.0</b>	
<b>Religion</b>			
Christianity	199	96.1	
Islam	1	0.5	
Traditional	7	3.4	
<b>Total</b>	<b>207</b>	<b>100.0</b>	



<b>Ethnicity</b>		
Hausa	4	1.9
Idiom	1	0.5
Igbo	200	96.6
Yoruba	2	1.0
<b>Total</b>	<b>207</b>	<b>100.0</b>
<b>Marital status</b>		
Divorced	10	4.8
Married	185	89.4
Separated	1	0.5
Single	11	5.3
<b>9</b>	<b>207</b>	<b>100.0</b>
<b>Educational qualification</b>		
No formal education	9	4.4
Primary	12	5.8
Secondary	103	49.8
Tertiary	83	40.
<b>Total</b>	<b>207</b>	<b>100.0</b>
<b>Number of children</b>		
0-2 children	96	46.4
3-5 children	103	49.7
Above 6 children	8	3.9
<b>Total</b>	<b>207</b>	<b>100.0</b>
<b>Duration of present pregnancy in months</b>		
First trimester (1-3)	46	22.2
Second trimester (4-6)	89	43.0
Third trimester (7-9)	72	34.8
<b>Total</b>	<b>207</b>	<b>100.0</b>
<b>Occupation</b>		
Artisan	30	14.5
Business	80	38.7
Civil servant	75	36.2
None	22	10.6
<b>Total</b>	<b>207</b>	<b>100.0</b>
<b>Level of income</b>		
#10,000 - #30,000	100	48.3
#31,000 - #50,000	40	19.3
#51,000 and above	35	16.9
Below #10,000	32	15.5
<b>Total</b>	<b>207</b>	<b>100.0</b>

Table 1 on sociodemographic data shows that 8.7% of the respondents were 14-23 years of age, 37.7% were 24-30 years, 30.4% were 31-37 years, 18.8% were 38-44 years and 4.4% were above 45 years of age. The mean age of the respondents was  $32.32 \pm 6.94$ . Two hundred (200) (96.62%) of the respondents were of Igbo descent. Nine (9) (4.4%) of the respondents



had no formal education, 83 (40%) of them had tertiary level education, 49.8% had secondary level education, and 5.80% had primary level education. Ninety-six (96) (46.4%) of the respondents had 0-2 children, 103 (49.7%) had 3-5 children, and 8 (3.9%) had above 6 children.

Forty-six (46) (22.2%) were in the first trimester of their pregnancy, 89 (43.0%) in the second trimester and 72 (34.8%) in the third trimester of their current pregnancy at the time.

One hundred (100) (48.3%) earned between #10,000 - #30,000, 40 (19.3%) between #31,000 - #50,000; 35 (16.9%) earned #51,000 and above, while 32 (15.5%) earned below #10,000.

### **Objective 1: To Determine The Nutritional Knowledge Of Pregnant Women Attending Antenatal Clinics In Health Facilities In Nnewi-South Local Government Area**

**TABLE 2: Showing Nutritional Knowledge among Pregnant Women in Health Facilities in Nnewi-South LGA**

<b>VARIABLE</b>	<b>Frequency (%) Yes</b>	<b>Frequency (%) No</b>
Have you heard about adequate diet?	201 (97.1)	6 (2.9)
Eating adequate/Balanced diet is vital to the mother and the baby in the womb during pregnancy	200 (96.6)	7 (3.4)
Balanced diet is essential for optimal growth and development of the baby	203 (98.1)	4 (1.9)
Balanced diet in pregnancy helps in boosting immunity of the mother and the baby	200 (96.6)	7 (3.4)
Taking food rich in calcium helps the baby to develop strong bones and teeth	203 (98.1)	4 (1.9)
Taking food rich in vitamins and minerals during pregnancy is essential for proper growth and development of the baby	201 (97.1)	6 (2.9)
Eating food rich in folate during pregnancy can help to prevent birth defects	196 (94.7)	11 (5.3)
Balanced diet during pregnancy can help to prevent low birth weight	183 (88.4)	24 (11.6)
Skipping of meals during pregnancy is harmful to the mother and the baby in the womb	180 (87)	27 (13.0)
Pregnant women should eat more than three meals a day	178 (86)	29 (14.0)
Eating fruits and vegetables during pregnancy helps to improve the iron status of pregnant women	199 (96.1)	8 (3.9)
It is beneficial for expectant mothers to reduce their salt intake during pregnancy	155 (74.9)	52 (25.1)
It is unsafe to eat fresh fruits and vegetables sprayed with pesticides even after they have been washed	141 (68.1)	66 (31.9)

**NB: Overall knowledge level of nutrition among pregnant women:**

Fair knowledge = 13 (6.3%)

Good knowledge = 191 (92.3%)

Poor knowledge = 3 (1.4%)





Table 2 above shows the nutritional knowledge among pregnant women. The result shows that 201 (97.1%) of the respondents had heard about adequate diet, 6 (2.9%) had not heard of adequate diet. Two hundred (200) (96.6%) of them indicated that eating balance diet is vital to the mother and the baby in the womb during pregnancy while 3.4% disagreed. Two hundred and three (203) (98.1%) of them indicated that balanced diet is essential for optimal growth and development of the baby. Two hundred (200) (96.6%) indicated that balanced diet in pregnancy helps in boosting immunity of the mother and the baby. Two hundred and three (203) (98.1%) indicated that taking food rich in calcium helps the baby to develop strong bones and teeth. Two hundred and one (201) (97.1%) indicated that taking foods rich in vitamins and minerals during pregnancy is essential for proper growth and development of the baby. One hundred and ninety-six (196) (94.7%) indicated that eating food rich in folate during pregnancy can help to prevent low birth weight. One hundred and eighty-three (183) (88.4%) indicated that balanced diet during pregnancy can help prevent low birth weight. One hundred and eighty (180) (87%) indicated that skipping of meals during pregnancy is harmful to the mother and the baby in the womb. One hundred and seventy-eight (178) (86%) indicated that pregnant women should eat more than three meals a day. One hundred and ninety-nine (199) (96.1%) indicated that eating fruits and vegetables during pregnancy helps to improve the iron status of pregnant women. One hundred and fifty-five (155) (74.9%) indicated that it is beneficial for expectant mothers to reduce their salt intake during pregnancy. One hundred and forty-one (141) (68.1%) indicated that it is unsafe to eat fresh fruits and vegetables sprayed with pesticides even after they have been washed. Overall knowledge level of nutrition among the respondents was good (191, 92.3%).

**Objective 2: TO DETERMINE THE SOURCES OF NUTRITIONAL KNOWLEDGE AMONG PREGNANT WOMEN ATTENDING ANTENATAL CLINICS IN HEALTH FACILITIES IN NNEWI-SOUTH LGA.**

**TABLE 3: Showing Sources of Nutritional Knowledge among Pregnant Women Attending Antenatal Clinics in Health Facilities in Nnewi-South LGA**

ITEMS	YES (%)	NO (%)
Information was from midwives	195 (94.2)	12 (5.8)
Information was from obstetrician	126 (60.9)	81 (39.1)
Information was from leaflets from care providers	102 (49.3)	105 (50.7)
Information was from antenatal classes	197 (95.2)	10 (4.8)
Information was from family/friends	169 (81.6)	38 (18.4)
Information was from radio/television	124 (59.9)	83 (40.1)
Information was from a medical doctor	162 (78.3)	45 (21.7)
Information was from the hospital website	64 (30.9)	143 (69.1)
Information was from church/mosque	73 (35.3)	134 (64.7)
Information was from traditional birth attendants	104 (50.2)	103 (49.8)
Information about food from books/journals	100 (48.3)	107 (51.7)

Table 3 on sources of nutritional knowledge among pregnant women shows that 195 (94.2%) got their information about food from the midwives while 126 (60.9%) affirmed that they got



their information from obstetricians, 102 (49.3%) from leaflets they collected from caregivers, and 197 (95.2%) from antenatal classes. One hundred and sixty-nine (169) (81.6%) indicated that they got their information from family and friends. One hundred and twenty-four (124) (59.9 %) indicated that they got theirs about nutrition in pregnancy from radio/television. One hundred and sixty-two (162) (78.3%) got their information about food from a medical doctor, while 64 (30.9%) indicated that they got theirs from a hospital website. Seventy-three (73) (35.3%) got theirs from church/mosque, 104 (50.2%) from traditional birth attendants and 100 (48.3%) from books/journals.

## TEST OF HYPOTHESES

**Hypothesis 1: Myths and taboos of nutrition in pregnancy do not significantly influence the nutritional practices of pregnant women attending ANC in the health facilities in Nnewi-South LGA**

**Table 4: Showing the Result of Cross-tabulation Using Chi-square to Determine the Influence of Myths and Taboos on Nutritional Practice among Pregnant Women**

Myths and taboos	Nutritional practice among pregnant women			Total (%)	X value	P-value
	Fair practice (%)	Good practice (%)	Poor practice (%)			
<b>Snail meat should be avoided to prevent excessive salivation in the baby and baby being sluggish in life</b>						
Not avoid	4 (30.6)	96 (50.3)	1 (33.3)	101 (48.8)	2.14	0.343
Avoid	9 (69.2)	95 (49.7)	2 (66.7)	106 (51.2)		
<b>Meat from monkey, snake, rabbit, or pig should not be eaten by pregnant women to avoid giving birth to a monster looking baby</b>						
Not avoid	1 (7.7)	63 (32.9)	0 (0.0)	64 (30.9)	5.01	0.082
Avoid	12 (92.3)	128 (67.0)	3 (100.0)	143 (69.1)		
<b>Certain fruits such as walnut should not be eaten by pregnant women because they cause regurgitation and vomiting</b>						
Not avoid	8 (61.5)	147	0 (0.0)	155		





Avoid	5 (38.5)	(77.4) 42 (22.1)	3 (100.0)	(75.2) 50 (24.3)	11.31	0.023*
<b>Ogbono soup is not eaten by pregnant because it causes baldness in children</b>						
Not avoid	7 (53.9)	131 (68.6)	0 (0.0)	138 (66.7)		
Avoid	6 (46.2)	60 (31.4)	3 (100.0)	69 (33.3)	7.28	0.026*
<b>Okro (<i>Abelmoschus esculentus</i>) should not be eaten by pregnant women because it cause baldness</b>						
Not avoid	9 (69.2)	156 (81.7)	1 (33.3)	166 (80.2)		
Avoid	4 (30.8)	35 (18.3)	2 (66.7)	41 (19.8)	5.39	0.067
<b>Avocado pear are not eaten because it cause malaria and pen figures (boils) in the body of the baby</b>						
Not avoid	4 (30.8)	111 (58.1)	2 (66.7)	117 (56.5)		
Avoid	9 (69.2)	80 (41.9)	1 (33.3)	90 (43.5)	3.83	0.147
<b>Grasscutter (<i>Thryonomys swinderianus</i>) should be avoided in pregnancy because it causes prolonged labour</b>						
Not avoid	2 (15.4)	72 (37.7)	1 (33.3)	75 (36.2)		
Avoid	11 (84.6)	119 (62.3)	2 (66.7)	132 (63.8)	2.63	0.268
<b>Catfish should be avoided by pregnant women because it causes worm</b>						
Not avoid	8 (61.5)	164 (85.9)	1 (33.3)	173 (83.6)		
Avoid	5 (38.5)	27 (14.1)	2 (66.7)	34 (16.4)	10.84	0.004*

Significant at 0.05 level,

Overall P-value 0.12.



According to Table 4 above, avoiding snail meat did not have any significant influence on the nutritional practices of pregnant women; the calculated P-value being 0.343 is greater than the P-value 0.05. Also, avoiding meat from monkeys, snakes, rabbits, or pigs does not have any significant influence on the nutritional practices of pregnant women as the calculated P-value is 0.082 which is greater than P-Value of 0.05. On certain fruits, such as, walnuts should not be eaten by pregnant women, the result shows a calculated P-value of 0.023 which is less than P-value 0.05, and it is statistically significant. Again, Ogbono soup should not be eaten by pregnant women has a calculated P-value of 0.026 which is less than 0.05, and so, it is statistically significant. Catfish should be avoided by pregnant women has a calculated P-value of 0.004 and it is statistically significant. The overall P-value for influence of myths and taboos of nutrition in pregnancy on nutritional practices was  $P = 0.12$ . Therefore, the null hypothesis was accepted.

**Hypothesis 2: Level of education of pregnant women attending ANC in Nnewi-South health facilities does not significantly influence their nutritional practices.**

**Table 5: Showing Chi-square Cross-tabulation of Educational Qualification Influence on Pregnant Women Attending Antenatal Clinics in Health Facilities in Nnewi-South LGA on Their Nutritional Practices**

<b>Educational qualification</b>	<b>Fair practice (%)</b>	<b>Good practice (%)</b>	<b>Poor practice (%)</b>	<b>Total (%)</b>	<b>X value</b>	<b>P- value</b>
No formal Education	4 (9.1)	4 (2.9)	1 (3.7)	9 (4.4)	18.96	0.004*
Primary Education	2 (4.6)	8 (5.9)	2 (7.4)	12 (5.8)		
Secondary	28 (63.6)	56 (41.2)	19 (70.4)	103 (49.8)		
Tertiary	10 (22.7)	68 (50.0)	5 (18.5)	83 (40.1)		

Significant at 0.05 level

From Table 5 above, Chi-square test of association shows that educational level of pregnant women has a significant influence on the pregnant women's practice of nutrition with a P-value of 0.004 which is less than the P-value of 0.05. Therefore, the null hypothesis is rejected.

**Hypothesis 3: Nutritional knowledge of pregnant women in Nnewi-South LGA does not significantly influence their nutritional practices.**

**Table 6: Showing the Result of Cross-tabulation Using Chi-square to Determine the Influence of Nutritional Knowledge on the Nutritional Practices among Pregnant Women**

<b>Nutritional knowledge</b>	<b>Nutritional practice among pregnant women</b>	<b>Total (%)</b>	<b>X value</b>	<b>P-value</b>
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	<b>Fair practice (%)</b>	<b>Good practice (%)</b>	<b>Poor practice (%)</b>			
<b>Have you heard about an adequate diet?</b>						
<b>Knowledge</b>	44 (100.0)	133 (97.8)	24 (88.9)	201 (97.1)		
<b>No knowledge</b>	0 (0.0)	3 (2.2)	3 (11.1)	6 (2.9)	8.0	0.018*
<b>Eating adequate/Balanced diet is vital to the mother and the baby in the womb during pregnancy</b>						
<b>Knowledge</b>	43 (97.7)	133 (97.8)	24 (88.9)	200 (96.6)		
<b>No knowledge</b>	1 (2.3)	3 (2.2)	3 (11.1)	7 (3.4)	5.67	0.058
<b>Balanced diet is essential for optimal growth and development of the baby</b>						
<b>Knowledge</b>	44 (100.0)	134 (98.5)	25 (92.6)	207 (100.0)		
<b>No knowledge</b>	0 (0.0)	2 (1.5)	2 (7.4)	4 (1.9)	5.29	0.071
<b>Balanced diet in pregnancy helps in boosting immunity of the mother and the baby</b>						
<b>Knowledge</b>	44 (100.0)	132 (97.1)	24 (88.9)	207 (100.0)		
<b>No knowledge</b>	0 (0.0)	4 (2.9)	3 (11.1)	7 (3.4)	6.56	0.038*
<b>Taking food rich in calcium helps the baby to develop strong bones and teeth</b>						
<b>Knowledge</b>	43 (97.7)	134 (98.5)	26 (96.3)	203 (98.1)		
<b>No knowledge</b>	1 (2.3)	1 (0.7)	1 (3.7)	3 (1.5)	2.17	0.705
<b>Taking food rich in vitamins and minerals during pregnancy is essential for proper growth and development of the baby</b>						
<b>Knowledge</b>	42 (95.5)	134 (98.5)	25 (92.6)	201 (97.1)		
<b>No knowledge</b>	2 (4.6)	2 (1.5)	2 (7.4)	6 (2.9)	3.36	0.186
<b>Eating food rich in folate during pregnancy can</b>						



### help to prevent birth defects

<b>Knowledge</b>	41 (93.2)	132 (97.1)	23 (85.2)	196 (94.7)		
<b>No knowledge</b>	3 (6.8)	4 (2.9)	4 (14.8)	11 (5.3)	6.56	0.038*

### Balanced diet during pregnancy can help to prevent low birth weight

<b>Knowledge</b>	38 (86.4)	127 (93.4)	18 (66.7)	183 (88.4)		
<b>No knowledge</b>	6 (13.6)	9 (6.6)	9 (33.3)	24 (11.6)	15.91	0.001*

### Skipping of meals during pregnancy is harmful to the mother and the baby in the womb

<b>Knowledge</b>	38 (86.4)	122 (89.7)	20 (74.1)	180 (86.9)		
<b>No knowledge</b>	6 (13.6)	14 (10.3)	7 (25.9)	27 (13.0)	4.87	0.088

### Pregnant women should eat more than three meals a day

<b>Knowledge</b>	35 (79.6)	123 (90.4)	20 (74.1)	178 (85.9)		
<b>No knowledge</b>	9 (20.5)	13 (9.6)	7 (25.9)	29 (14.0)	6.94	0.031*

Significant at 0.05 level, Overall P- value = 0.123

In Table 6, the overall P-value = 0.123. Therefore, the null hypothesis that states that nutritional knowledge of pregnant women does not significantly influence their nutritional practices is accepted.

## DISCUSSIONS OF FINDINGS

### Objective 1: To determine the nutritional knowledge of pregnant women attending antenatal clinic in health facilities in Nnewi-South LGA, Anambra State.

The result on the nutritional knowledge of pregnant women shows that a greater percentage (92.3%) of the respondents in this study had a good level of knowledge on nutrition among the pregnant women while a less percentage of (1.4%) had a poor level of knowledge on nutrition among pregnant women (Table 2). This finding might be as a result of nutrition education by the midwives in the antenatal clinic. These findings were in line with the findings of Shegaw et al. (2022) in their study on maternal nutritional knowledge, practice and their associated factors during pregnancy in Addis sub city health centers, Addis Ababa, Ethiopia where they observed that pregnant women had good nutritional knowledge and good nutritional practice. The study is in line with the study conducted by Nana and Zerma (2018) on dietary practices and associated factors among pregnant women in Northwestern Ethiopia,



who concluded that women exposed to nutrition information were more likely to have good dietary practices than women not exposed to nutrition information. The study also conforms to the findings by Tsegaye et al. (2020) who noted that mothers who had good nutrition knowledge were more likely to consume a diversified diet compared to those that have poor or no nutrition knowledge.

### **Objective 2: To determine sources of nutritional knowledge among pregnant women attending antenatal clinics in health facilities in Nnewi-South LGA**

Findings from the study showed that the majority of the respondents (95.2%) and (94.2%) got information about food from ANC classes and midwives respectively while a lesser percentage got their knowledge about food from other sources (Table 3). In the researchers' opinion, ANC is an important avenue for educating mothers about adequate nutrition in pregnancy. It shows the need for more effort by midwives and other healthcare providers to educate mothers during ANC and the importance of nutrition education during ANC. This result is in line with the study conducted by Katenga-Kaunda et al. (2021) on enhancing nutrition knowledge and dietary diversity among rural pregnant women in Malawi. Katen-Kamudoni et al. (2021) emphasized the importance of augmenting nutrition education offered at ANC with supplementary and community-based nutrition interventions and therefore suggested that efforts should be made to strengthen the education component of ANC services as these are decentralized and locally accessible in most low- and middle-income countries. This may therefore contribute to higher nutrition literacy regarding healthy diet during pregnancy. Similarly, a research conducted by Gebremichael et al. (2022) concluded that antenatal care visits are significantly associated with optimal nutrition and healthy practice, and that pregnant women who received health and nutrition information were more likely to practice optimal nutrition than the ones that did not receive.

### **Hypothesis 1: Myths and taboos of nutrition in pregnancy do not significantly influence the nutritional practices of pregnant women attending ANC in health facilities in Nnewi-South LGA.**

The overall P-value was  $P = 0.12$  which was not significant. This result could imply that women still avoid certain foods that are important for a healthy pregnancy and might be as a result of some traditions and cultural beliefs existing among the respondents which forced the pregnant women to abstain from certain food during pregnancy. Arzoaquoi et al. (2015) observed that food taboos and traditional beliefs among pregnant women exist in Upper Manyakrobo, and that pregnant women are forbidden from eating snails, rats, snakes, hot foods and animal lungs.

### **Hypothesis 2: Level of education of pregnant women attending antenatal clinics in Nnewi-South health facilities does not significantly influence their nutritional practices.**

The result shows that women's educational level significantly influences their nutritional practices (Table 5). The possible reason could be that those women who attended tertiary and secondary education have been taught about nutrition and its importance in health; they therefore ignore the false folktales and myths concerning nutrition in pregnancy. Losanko et al. (2020) were of the same view in their study which showed that the educational status of pregnant women was a significant factor with dietary practice; literate mothers have better dietary practice than the illiterate ones. The study is in line with the findings of Gebremichael



et al. (2022) who noted that husband education is significantly associated with optimal nutrition and healthy practice; as husband education improved, the nutrition and health practices of pregnant women increased. Conversely, the findings differ from those of Ugwa (2016) who found out that educational status has no association with nutritional practices of pregnant women. The disparity might be due to individual differences. Ramulondi, de Wet, and Ntuli (2021) in a study conducted on traditional food taboos and practices during pregnancy among Zulu women in northern KwaZulu-Natal, postpartum recovery, and infant care noticed that differences on food taboos and practices between participants who received formal education and those who did not receive it were insignificant. The study by Tsegaye et al. (2020) on dietary practices and nutritional status of pregnant women in rural communities revealed that the prevalence of under-nutrition and poor dietary practice was high which were significantly associated with level of education.

### **Hypothesis 3: Nutritional knowledge of pregnant women in Nnewi-South LGA does not significantly influence their nutritional practices.**

The result shows that there was no significant association between the nutritional knowledge of pregnant women and their nutritional practices. The finding is in contrast with the study conducted by Losanko et al. (2020) which showed that pregnant women's dietary knowledge had a positive association with the nutritional practice of mothers. The findings also contradict those of Diddani (2019) which deduced that there is a positive association between poorly perceived severity to malnutrition, poorly perceived benefits and poor self-efficacy with the poor dietary practice, and that poor dietary diversity, poor nutritional knowledge, poor perceived self-efficacy, history of illness and not attending antenatal care (ANC) were positively associated with under-nutrition. This might be due to different demographic data of the respondents and the understanding level of the respondents about nutrition in pregnancy.

## **CONCLUSION**

The findings from the study revealed that pregnant women despite their good knowledge of nutrition in pregnancy still have myths and taboos and cultural beliefs that hinder them from eating certain foods, which in turn influence their nutritional practices. Moreover, the level of education of the pregnant women had a significant association with their nutritional practices.

## **RECOMMENDATIONS**

Based on the findings of the study, the following recommendations were made:

1. Nurses should intensify health education on nutrition in pregnancy during antenatal clinics.
2. Health education in antenatal clinics should be centered more on nutrition in pregnancy and emphasis should be made on the importance of adequate nutrition in pregnancy.

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