

DIETARY KNOWLEDGE, PRACTICES AND NUTRITIONAL STATUS OF PREGNANT WOMEN IN URBAN AND RURAL AREAS OF NSUKKA LOCAL GOVERNMENT, AREA, ENUGU STATE, NIGERIA

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ABSTRACT

Knowledge gaps can directly influence poor dietary choices, which in turn affect maternal and fetal health outcomes. This study compared dietary knowledge, practices, and nutritional status of pregnant women in urban and rural areas of Nsukka Local Government Area, Enugu State, Nigeria. Specifically, it examined their socioeconomic status, level of dietary knowledge, dietary practices, fruit and vegetable consumption patterns, anthropometric indices (height, weight, body mass index), and the relationship between socioeconomic status and anthropometric indices. A total of 400 pregnant mothers aged 25–40 years were selected using stratified random sampling. Data were collected through structured questionnaires on dietary knowledge, practices, anthropometric status, and food consumption patterns. Descriptive statistics such as bar charts were used to summary data, while Pearson's product moment correlation established relationships between anthropometric status and socioeconomic factors, with significance set at $p \leq 0.05$. Results revealed that a majority (67.0%) of urban respondents had tertiary education compared to only 20.5% in rural areas. Most urban respondents (92.5%) demonstrated high dietary knowledge, while only 9.5% of rural respondents did. Dietary practices also differed: 75% of urban respondents often consumed balanced diets compared to 12% in rural areas, and 76.5% of urban respondents ate a variety of foods often compared to 23% in rural areas. Half (50%) of urban respondents consumed green vegetables weekly, while only 24% did so in rural areas. Similarly, 40% of urban respondents consumed fruits regularly compared to 15.5% in rural areas. Anthropometric findings showed that 49.5% of rural respondents were overweight compared to 40% in urban areas. A significant relationship was observed between highest educational qualification and BMI among both urban and rural respondents. The study concludes that pregnant mothers in urban areas had better dietary knowledge, practices, and nutritional status than their rural counterparts. It recommends urgent nutrition education interventions, particularly in rural communities, through strategies such as community-based workshops and nutrition programs to improve dietary practices and maternal health outcomes.

KEYWORDS: Pregnant women, Dietary knowledge, Practice, Rural, Urban, Nutritional status

INTRODUCTION

Pregnancy is the period during which a fetus develops inside a woman's womb or uterus, and it represents one of the most critical stages in a woman's life cycle (Ademuyiwa & Sanni, 2013). This period is often accompanied by nutritionally linked problems, with symptoms that may be unpleasant and difficult to tolerate (Ademuyiwa & Sanni, 2013). Pregnant women are particularly at elevated risk of malnutrition due to increased nutrient demands required to support fetal growth. Women of reproductive age who are food insecure have been found to be at risk of anemia (FAO, 2018). Proper nutrition during pregnancy is essential, as it ensures adequate fetal growth and keeps the expectant mother healthy. Nutrition is a fundamental pillar of human life, health, and development throughout the lifespan. Diet must therefore be planned to meet the growth requirements and nutrient demands of pregnant women. Adequate nutritional knowledge has been identified as one of the most powerful tools for improving nutrition and health outcomes (Spronk et al., 2014).

The burden of malnutrition, particularly undernutrition among women of reproductive age, remains a global public health concern, this is directly linked to poor pregnancy outcomes and intergenerational malnutrition (UNICEF/WHO/World Bank, 2023). Maternal undernutrition is especially prevalent in developing countries such as Nigeria with anaemia and micronutrient deficiencies contributing to poor pregnancy outcomes and child stunting (Federal Ministry of Health & National Population Commission, 2025). Nigeria ranks among the countries with the

highest number of chronically undernourished pregnant women, with malnutrition widespread in rural areas (Nnukwe, 2018). Undernourished women are at increased risk of delivering low birth weight infants, which negatively affects the child's physical and mental development (Mariyam & Dibaba, 2018). Pregnancy also depletes maternal iron stores and other nutrients (Ebele et al., 2021). Inadequate maternal nutrition can result in poor pregnancy outcomes such as fetal growth restriction, low birth weight, anemia, preterm birth, and increased prenatal and infant morbidity and mortality. Deficiencies in key macronutrients and micronutrients can therefore substantially impact pregnancy outcomes and neonatal health (Yaya et al., 2018).

The nutritional status of the mother directly influences fetal growth and development. Malnutrition may result from undernutrition or overnutrition (Dhaar & Robbani, 2008). Undernutrition often arises from inadequate access to high-quality food (Rajkumar et al., 2012), while overnutrition results from excessive food intake over time, often linked to poor dietary choices or ignorance (World Health Organization, WHO, 2021).

Several factors contribute to maternal malnutrition. Okafor (2010) identified poor food consumption patterns, limited food availability, parity, ignorance, socioeconomic conditions, illiteracy, and religion as key determinants. Ignorance plays a particularly critical role, as many mothers lack knowledge of appropriate foods to ensure adequate nutrition during pregnancy, exposing them to environmental, social, physical, and emotional risks (Nnukwe, 2018). Endalifer et al. (2019) further highlighted inadequate food intake, low educational status, occupation, and income as associated factors. Cultural practices, including food taboos and restrictions during pregnancy, also compromise maternal nutrition (Esienumoh et al., 2016).

Assessment of maternal nutritional status is essential for identifying nutrient adequacy. Methods include anthropometry, biochemical assessment, clinical evaluation, and dietary assessment. Anthropometric measurements such as weight, height, waist circumference, hip circumference, and body fat are widely used to evaluate nutritional status. Indices such as body mass index (BMI), mid-upper arm circumference (MUAC), and maternal height serve as frontline indicators of maternal nutritional well-being and predict pregnancy outcomes including low birth weight, preterm delivery, and maternal complications.

Healthy food consumption patterns, combined with adequate maternal body composition, metabolism, and placental nutrient supply, reduce risks to maternal, fetal, and long-term offspring health (Cetin & Laoreti, 2015). Food consumption patterns refer to the types, quantities, and combinations of foods regularly consumed. Adequate food intake in terms of both quantity and quality is a key determinant of nutritional status. Poor consumption patterns are associated with adverse outcomes such as low birth weight, malnutrition, disability, poor quality of life, and mortality. Optimal maternal nutrition, including sufficient intake of essential vitamins and minerals, is vital for fetal development and long-term child health (Tuncalp et al., 2020). However, there is limited data on maternal nutrition in Nsukka's rural and urban areas. This study therefore assessed the dietary knowledge, practices, and food consumption patterns of pregnant women in rural and urban communities of Nsukka Local Government Area, Enugu State, Nigeria.

Objective of the study

The study assessed the dietary knowledge, practice and food consumption pattern of pregnant women in rural and urban of Nsukka local government area, Enugu State, Nigeria. The specific objectives of the study were to:

1. ascertain the socioeconomic status of pregnant women in rural and urban of Nsukka local government area, Enugu State;
2. determine the level of dietary knowledge of pregnant women in rural and urban areas;
3. assess the dietary practices of pregnant women in rural and urban areas;
4. determine the fruits and vegetable consumption pattern of the respondents using food frequency questionnaire;
5. assess the anthropometric indices (height, weight, body mass index) of the respondents and
6. determine the relationship between socio-economic status and anthropometric indices of pregnant women in rural and urban areas of Nsukka, Enugu State, Nigeria

METHODOLOGY

Study Design The study adopted a cross-sectional descriptive research design. Cross-sectional studies are observational in nature and analyze data from a population at a single point in time.

Study population: The study population comprised of 4004 pregnant mothers registered and attending ante-natal clinic in Nsukka (Office of the monitoring and evaluation unit, Health department Nsukka L.G.A).

Sample Size and Sampling Technique: A total of 400 pregnant women participated in the study. The sample comprised 200 urban pregnant women residing in Nsukka urban communities (Orba, Amukwa, Nkpunano, and Edem) and 200 rural pregnant women residing in Nru, Opi, Obukpa, and Ede-Oballa communities. The study employed a stratified random sampling technique to ensure that both urban and rural settings were proportionally and fairly represented.

Inclusion and exclusion criteria: The inclusion criteria included pregnant women within the age range 25-40 years and the ones below or above the age range were excluded.

Instrument/Method of data collection

Questionnaire: Data were collected using a structured questionnaire divided into three sections. Section A obtained socio-economic information, Section B assessed dietary knowledge, and Section C focused on dietary practices.

Dietary Knowledge Scoring The dietary knowledge of the pregnant women was categorized into three levels. Scores ranging from 0–8 were classified as poor knowledge, scores of 9–12 as average knowledge, and scores of 13–17 as high knowledge.

Anthropometric Assessment: Anthropometric measurements of weight, height, and body mass index (BMI) were obtained from the pregnant women. Physical dimensions were measured using standard procedures.

Height Measurement The respondents' height was measured with a height meter (microtomes) calibrated in centimeters. Participants stood barefoot on a horizontal platform, with arms relaxed at the sides in a natural position. Measurements were recorded to the nearest 0.1 cm.

Weight Measurement The respondents' weight was measured using a Salter scale. Participants stood erect without shoes and in minimal clothing. Measurements were recorded to the nearest 0.1 kg.

Body Mass Index (BMI) BMI was calculated as weight in kilograms divided by height in meters squared (kg/m²). The following cut-off points were applied according to CDC (2022) reference standards:

$$\text{BMI} = \frac{\text{Weight}}{\text{Height}^2} = \frac{\text{Kg}}{\text{M}^2}$$

Fruit and vegetable consumption pattern

The food frequency questionnaire was used to collect information of the respondent's dietary consumption pattern of fruits and vegetables. Participants were required to select how often each food item was consumed (e.g. never, twice a month, once a week, once a day).

Validation of Questionnaire: The questionnaire was validated by three lecturers who are expert from the Department of Home Science and Management, University of Nigeria, Nsukka.

Reliability of the instrument: The data collected from the respondents were subjected to Cronbach's Alpha reliability test and the coefficient value obtained was 0.81 which fell within the acceptable reliability range.

Ethical Approval and Informed consent : Ethical approval for the study was obtained from the Health Research and Ethics Committee on research projects, University of Nigeria Teaching Hospital (UNTH) Ituku-Ozalla, Enugu State with reference number UNTH/HREC/2023/05/573. The study commenced as soon as the ethical clearance was granted. An informed consent form was given to the pregnant women to get their consent to participate in the study. This form stated the purpose of the research, the procedure, the voluntary nature of participation and assurance of confidentiality of the information.

Letter of identification: A letter of identification was collected from the Head of Department of Home Science and management, University of Nigeria, Nsukka to introduce the researcher to the head of the ante-natal clinics and the pregnant women to solicit their co-operation.

Preliminary visit: A letter of introduction was collected from the Head of the Department of Home Science and Management for preliminary visit to the ante-natal clinic to introduce the research and to obtain permission letter for the research to be carried out among the pregnant women.

Recruitment of research assistants: Three research assistant was recruited and trained by the researcher on how to administer questionnaires. They comprised undergraduates of Home science and management, University of Nigeria, Nsukka.. They were indigenes of Nsukka LGA who speak their dialect fluently.

Data and Statistical analysis

Data collected were analyzed using the Statistical product for service solution (SPSS), version 22.0. Descriptive statistics such as bar charts were used to display frequencies and percentages of categories. Data on anthropometry were transformed to obtain the frequency and percentage scores which aided the categorization of the variables. Pearson's product moment correlation was used to establish the relationship among anthropometric status and socioeconomic status of pregnant women. A $P \leq 0.05$ was used as level of significance.

RESULTS/FINDINGS

Socio-economic characteristics of the respondents.

Figure 1 shows the socio-economic characteristics of the respondents. Majority (67.0%) of the respondents had tertiary education in the urban while few (20.5%) had it in the rural area. None had formal education in both rural and urban area. A greater percentage (89.5%) of the respondents were self-employed in the rural area while greater than half (53.5%) were from urban area. Higher percentage (19.0%) of the respondents were civil servant in the urban while very few (7.0%) were in the rural area. Majority (84.5%) of the respondents in the rural area earned less than ₦20,000 while few (18.0%) from the urban area. A higher percentage (60.0%) of the respondents in the urban earned ₦30,000-₦50,000 while few (13.0%) from the rural area.

Figure 1: Socio-economic characteristics of the respondents.

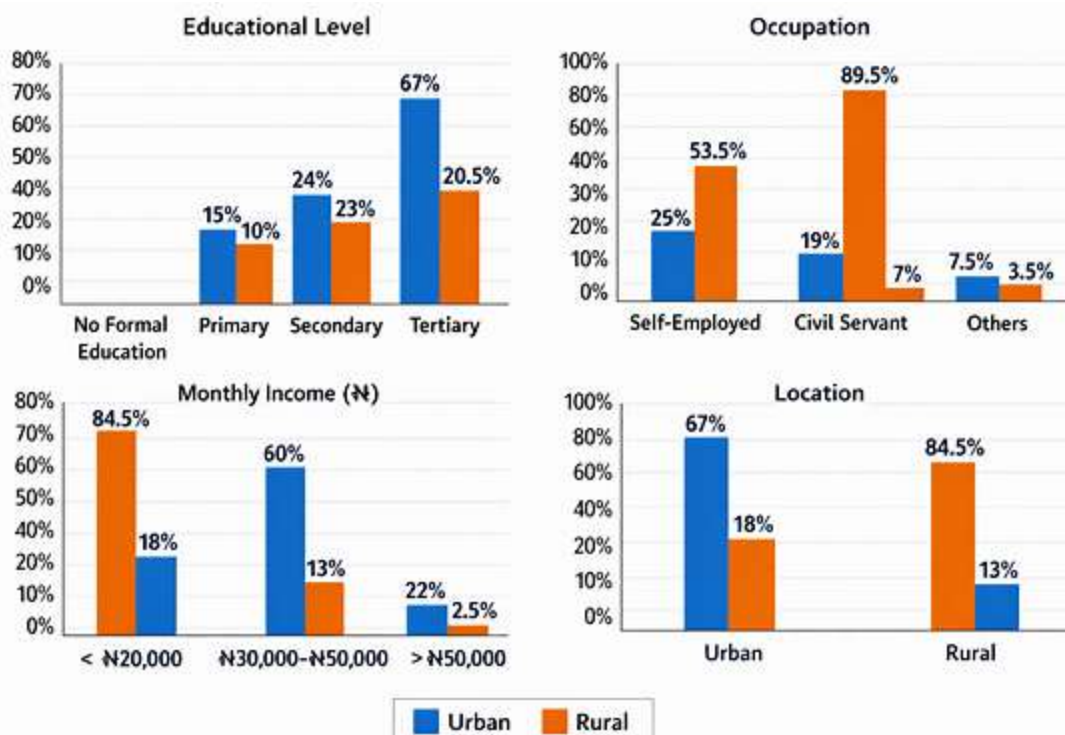
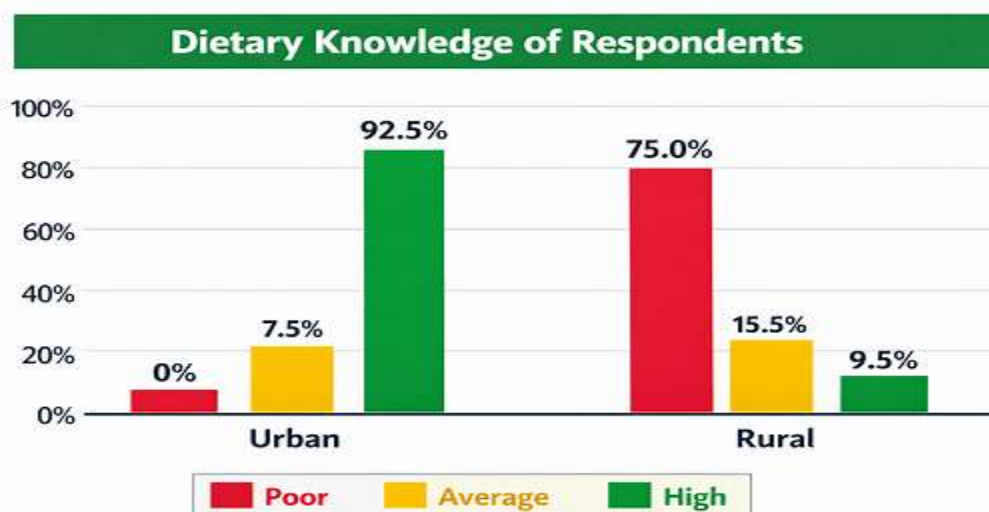


Figure 2 present the percentage distribution of the dietary knowledge of the respondents. Majority (75.0%) of the respondents in the rural area had poor dietary knowledge while none was found in the urban area. A total (15.5%) of the respondents in rural area had average dietary knowledge lower percentage (7.5%) was found in the urban area. Moreso, majority (92.5%) of the respondents in the urban area had higher dietary knowledge while few (9.5%) were found in the rural area.

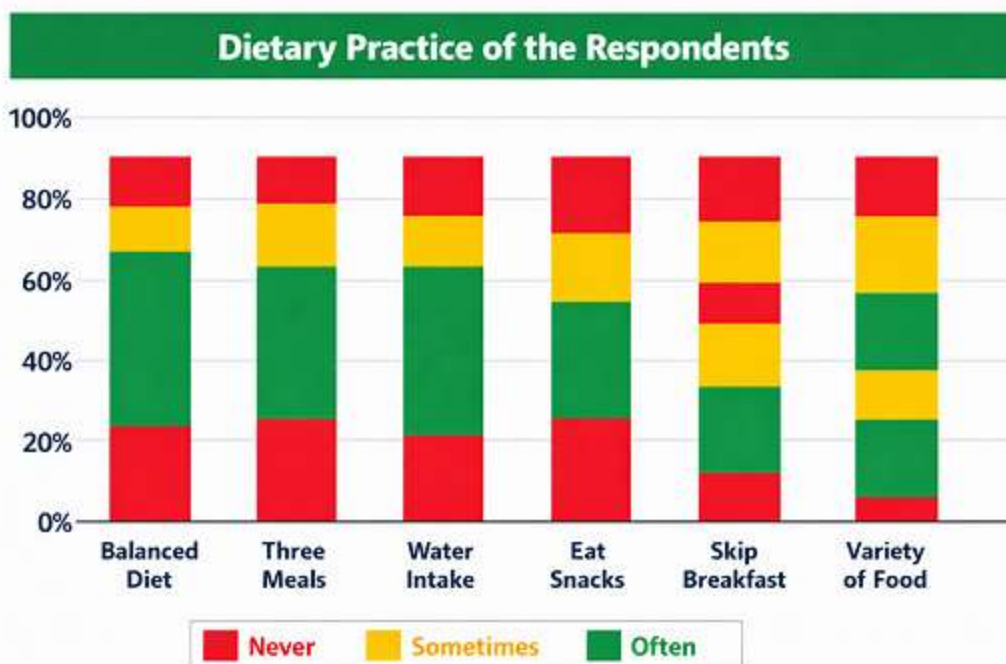
Figure 2: Percentage distribution of the dietary knowledge of the respondents.



Dietary practice of the respondents

Figure 3 shows the percentage distribution of the dietary practice of the respondents using stacked bar chart. Higher respondents (75%), in the urban often eat balanced diets while rural respondents mostly sometimes do (65.5%). Skipping breakfast is far more common in rural areas (49%) than urban (20.5%). Urban respondents show stronger consistency (76.5%) in eating variety of food compared to rural (23%).

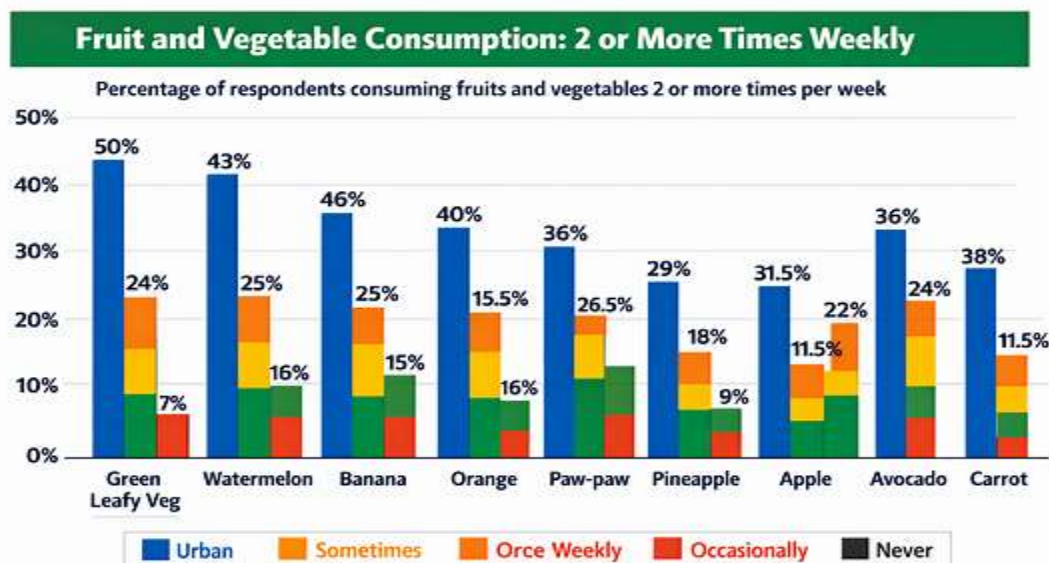
Percentage distribution of the dietary practice of the respondents using stacked bar chart.



Fruit and vegetables consumption pattern of the respondents

Figure 4 shows the percentage distribution of how often respondents consumed fruit and vegetables using bar chart. The figure compares urban and rural respondents across nine food sources, showing the percentage who consumes each fruit or vegetable at least twice weekly. The chart showed that green leafy vegetables are consumed more often in urban areas (50%) than rural (24%). It shows the urban-rural gaps in fruit consumption such as banana (46% versus. 15%), Orange (40% versus. 15.5%), and Carrot (36% versus. 11.5%) in urban and rural respectively. Fruits such as apple (31.5% versus. 11.5%) and avocado (33.5% vs. 22%) are also much more common in urban diets.

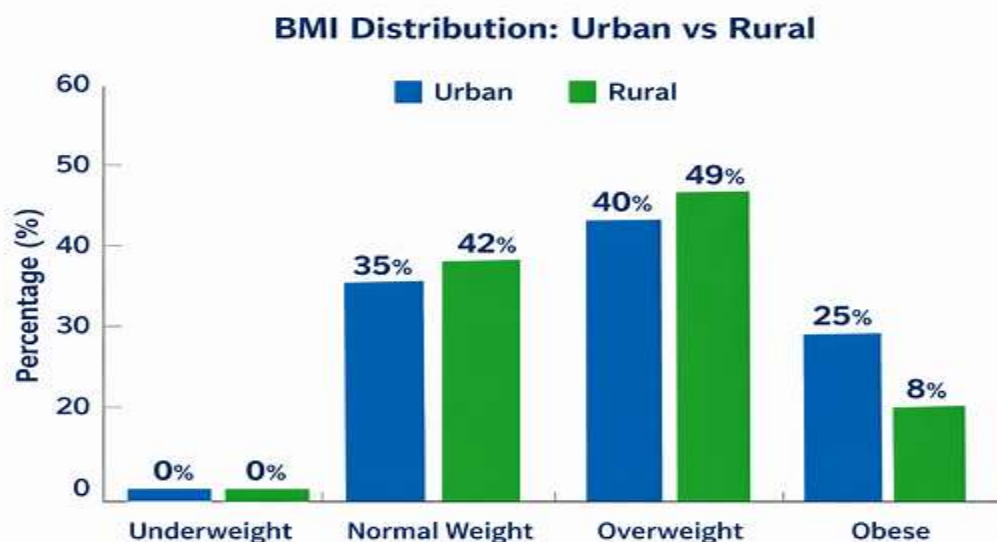
Figure 4: Distribution of Fruit and vegetables consumption pattern of the respondents



Anthropometric Status of respondents (body mass index of respondents, BMI).

Figure 5 presents the percentage distribution of the body mass index of respondents (BMI). Both urban and rural respondents had 0% underweight. Rural respondents (42%) had a higher proportion of normal weight compared to urban respondents (35%). Overweight prevalence was higher in rural areas (49.5%) than urban areas (40%).

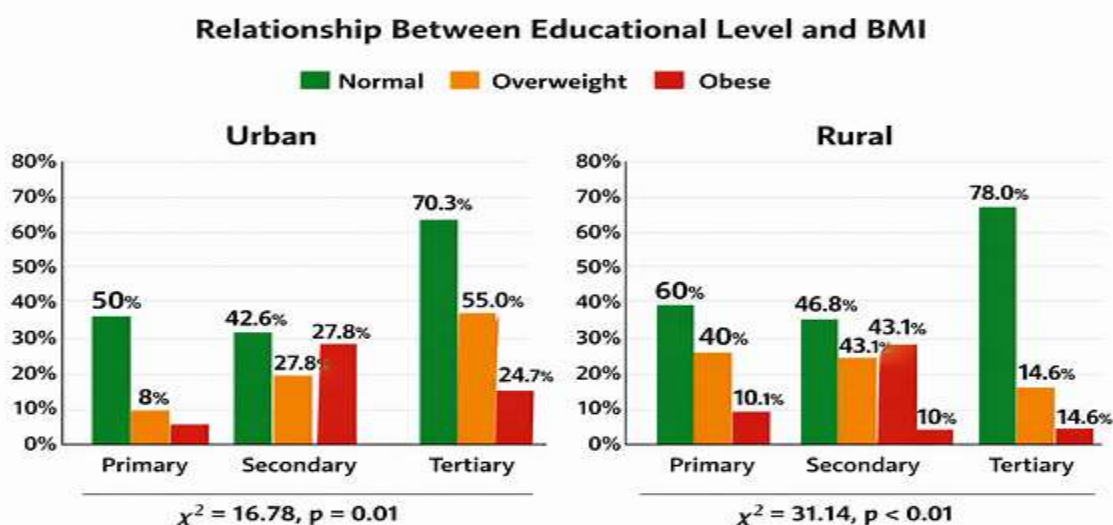
Figure 5: Percentage distribution of the Anthropometric Status (body mass index of respondents. BMI).



Relationship between Educational level and Body mass index

Figure 6.1 shows the relationship between Educational level and body mass index. In urban areas, women with tertiary education show a dual trend: the majority (70.3%) have normal BMI, yet a substantial proportion (55%) are obese, reflecting both healthier weight maintenance and rising obesity risks. Among those with lower education, half (50%) were normal but 41.7% obese, while another group had 60% normal and 40% overweight with no obesity in rural areas, the pattern is strikingly different. Very few tertiary-educated women are normal (7.3%), while the majority (78%) are overweight and 14.6% obese. This contrasts sharply with urban tertiary respondents, who lean toward normal BMI despite obesity concerns

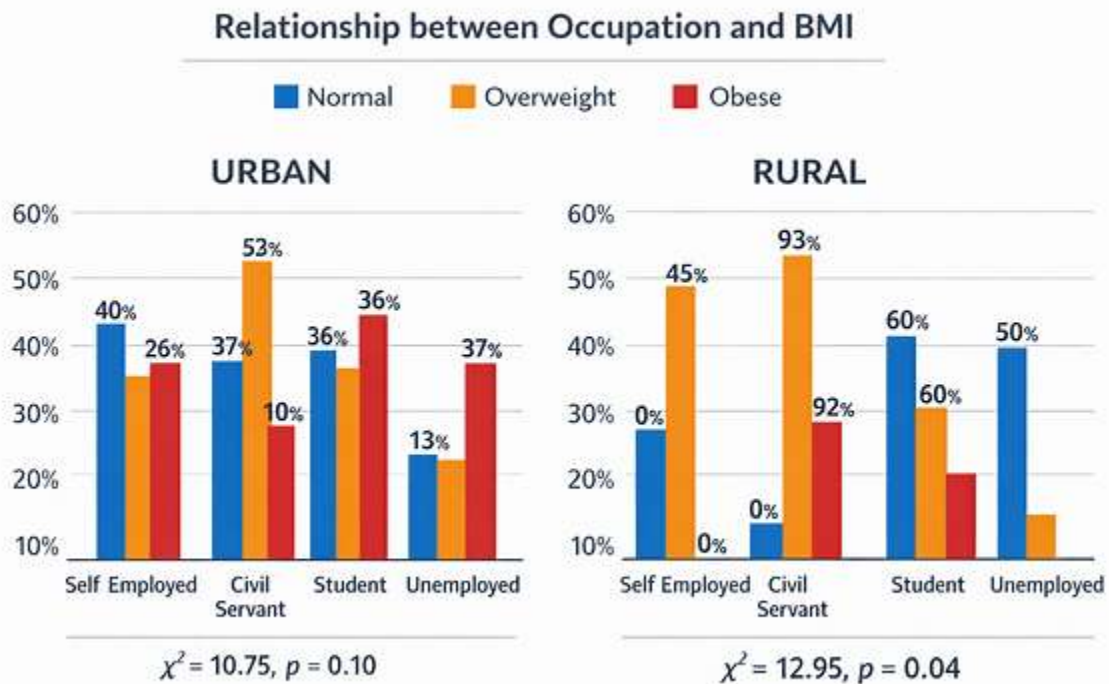
Figure 6.1: Relationship between Educational level and Body mass index



Relationship between Occupation and Body mass index

Figure 6.2 shows the relationship between occupation and BMI of the respondents. In urban areas, self-employed individuals show a balanced distribution with 39.3% normal, 36.4% overweight, and 24.3% obese, while civil servants are mostly overweight (52.6%) but still have 36.8% normal BMI. Students in urban settings have high obesity (36.2%) alongside 36.2% overweight, and the unemployed show the lowest normal BMI (12.5%) with high obesity (37.5%). In rural areas, self-employed individuals are healthier overall, with 45.3% normal and only 8.9% obese, while civil servants are overwhelmingly overweight (92.9%) and none are normal. Rural students are mostly overweight (60%) but not obese, and unemployed individuals split evenly between normal (50%) and overweight (50%), with no obesity recorded.

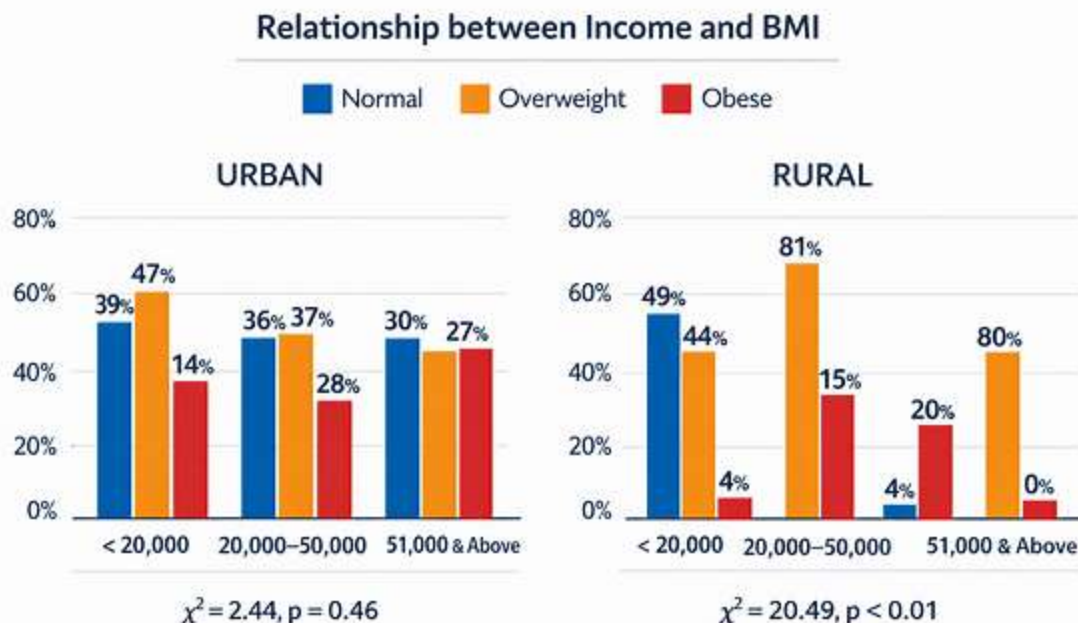
Figure 6.2: Relationship between Occupation and Body mass index



Relationship between Income and BMI

Figure 6.3 shows the relationship between income and BMI of the respondents. In **urban areas**, individuals earning less than ₦20,000 show 38.9% normal BMI, 47.2% overweight, and 13.9% obese, indicating that overweight is most common among low-income earners. Those earning ₦20,000–₦50,000 have 35.8% normal, 36.7% overweight, and 27.5% obese, while the highest income group (₦51,000 and above) records 29.5% normal, 43.2% overweight, and 27.3% obese. This pattern shows that as income increases, obesity tends to rise slightly, but overweight remains dominant across all income levels. The chi-square test ($\chi^2 = 2.44, p = 0.46$) reveals **no** significant relationship between income and BMI in urban areas. In rural areas, the trend differs sharply. Those earning less than ₦20,000 have 48.5% normal BMI, 43.8% overweight, and 7.7% obese, showing a healthier balance. However, among those earning ₦20,000–₦50,000, only 3.8% are normal, while 80.8% are overweight and 15.4% obese. The highest income group (₦51,000 and above) shows 20% normal and 80% overweight, with no obesity recorded. This indicates that higher income in rural areas is strongly associated with being overweight. The chi-square test ($\chi^2 = 20.49, p < 0.01$) confirms a significant relationship between income and BMI in rural areas.

Figure 6.3: Relationship between income and Body mass index



DISCUSSION OF THE FINDINGS

Socio- economic characteristics of the respondents

The findings on socioeconomic status revealed that urban respondents were far more likely to have tertiary education, while rural respondents leaned heavily toward secondary education. Urban areas showed a concentration of tertiary-educated individuals (67%), reflecting better access to higher education. Urban respondents also tended to have higher education and income, whereas rural respondents were predominantly self-employed with lower earnings. This pattern suggests a strong link between educational attainment and income level, as well as the influence of location on occupational opportunities.

These findings are consistent with Christiane et al. (2020), who reported that the majority (66.9%) of rural respondents had completed secondary education, while only a minority (25.9%) had attained tertiary education. The present study also showed that most rural respondents were self-employed, while more than half of urban respondents were likewise self-employed. Rural respondents relied heavily on self-employment (89.5%), reflecting limited availability of formal jobs. This aligns with Eze (2012), who reported that 88.0% of urban respondents and 57.0% of rural respondents were self-employed. While rural respondents were overwhelmingly self-employed, urban respondents demonstrated greater occupational diversity, including students and civil servants.

Income disparities were also evident. Rural respondents were concentrated in the low-income bracket, while urban respondents dominated the average- and high-income categories. This finding is similar to Eze (2012), who reported that a higher percentage of urban respondents (89.5%) earned average income, whereas only a small proportion (22%) of rural respondents earned low income.

Dietary knowledge of the respondents

The study revealed that the majority (92.5%) of urban respondents had high dietary knowledge, whereas only a small proportion (9.5%) of rural respondents demonstrated similar knowledge. In contrast, most rural respondents (75.0%) exhibited poor dietary knowledge. This finding is consistent with Tamiru et al. (2022), who reported that 88% of rural respondents had poor dietary knowledge, likely reflecting differences in socioeconomic status. The poor dietary knowledge observed among pregnant women in rural areas also aligns with the findings of Maykondo et al. (2022), who reported that 78% of rural respondents had limited dietary knowledge. Adequate knowledge and understanding of nutritional intake and dietary recommendations are essential for achieving healthy weight gain during pregnancy (Wyness, 2014). Madiforo (2010) further emphasized that lack of nutrition knowledge among pregnant women, and the inability to apply such knowledge in daily life, poses a serious threat to adequate nutrition.

Dietary Practice of the respondents

The findings showed that majority (75.7%) of the urban respondents ate three meals per day while few (18.5%) did in the rural area. This finding is in agreement with the report by Wordu and Akusu, (2020) who reported that majority (78.5.0%) of the urban respondents ate three meals per day. Poor nutrition knowledge could lead to poor dietary practices among pregnant women (Abubaker, 2015). This finding also showed that more than half (54.0%) of the respondents in urban area never skipped breakfast unlike in the rural area which recorded only few (14.5%). This finding is in agreement with Tariku et al. (2019) that reported that many (61.7%) of the rural respondents skipped their usual meal and the most commonly skipped meal was breakfast. This study also showed that majority (76.5%) of the urban respondents ate variety of food while few (23.0%) did in the rural area. This finding is similar with the report by Ademuyiwa et al. (2013) who reported that only one fourth (25.0%) of the rural respondents ate variety of food. According to Lutter (2000), dietary practices among pregnant mothers were influenced by maternal knowledge. Adequate nutrition knowledge characterized by good nutrition practices during pregnancy is important for the pregnancy performance.

Anthropometric Status of Respondents (Body Mass Index)

This finding showed that half (50%) percent of the rural respondents were overweight while less than half of the urban respondents were overweight. This finding is contrary to the report by Adikari et al. (2016) who reported that less than one third (30.5%) of the rural respondent were found to be overweight. It also showed that one fourth of the urban respondent and few of the rural respondents were obese. This findings is similar with the report by Sohana et al. (2018) who reported that majority (78%) of the pregnant women in the urban were obese than the rural area (22%) this could be as a result of their sedentary lifestyle. Obesity is one of the biggest factors associated with abnormal reproductive outcomes. According to Kandala & Stranges (2014) the commonness of overweight and obesity was most elevated in the urban range. Poliana and Beatriz (2018) highlighted that nutritional status has repercussions on gestational and perinatal outcomes, hence the importance of maintaining adequate BMI during the pregnancy period and maintaining weight gain from the onset of pregnancy.

Fruit and vegetable Consumption pattern of respondents

The findings of the study revealed that the majority of respondents in urban areas consumed more fruits and vegetables compared to their rural counterparts. This result aligns with the study by Eze et al. (2025), which reported that urban pregnant women consumed more fruits and vegetables than rural women. A plausible explanation is that urban women have better access to diverse foods, including fruits, due to proximity to markets and higher income levels. This disparity may be attributed to the higher socioeconomic status of respondents living in urban areas compared to those in rural settings. A similar study conducted in Varanasi, India, by Singh and Deodiya (2023) compared dietary habits across rural and urban populations and different socio-economic groups, highlighting significant disparities in fruit and vegetable intake. They reported that half (50.4%) of urban women consumed fruits weekly, while only a small proportion (2.9%) of rural women consumed fruits daily. Regarding green leafy vegetables, the majority (70.9%) of urban women and more than half (57.1%) of rural women consumed them weekly. These differences were largely attributed to socioeconomic disparities. Previous studies have consistently shown that women from higher socioeconomic backgrounds had significantly better fruit and vegetable intake than those from lower socioeconomic groups, particularly in rural areas, where consumption was more occasional (Ball et al., 2006; Singh & Deodiya, 2023).

Similarly, the present study found that urban respondents consumed more fruits than their rural counterparts. This finding is consistent with Eze (2012), who reported that fruits were consumed more frequently by urban respondents (71.6%) compared to rural respondents (29.5%). This difference may be explained by the higher income levels of urban dwellers, which enable them to afford fruits more regularly.

Relationship between Anthropometric status and socioeconomic status

The findings of the study showed that educational level is strongly associated with BMI, though the patterns differ between urban and rural populations. Urban respondents with tertiary education tended toward normal BMI, with notable cases of obesity, whereas rural tertiary respondents were predominantly overweight, with minimal representation in the normal BMI category. Overall, urban populations face higher rates of obesity, particularly among students and the unemployed, while rural populations are more often overweight but less obese.

Occupation was also related to BMI among rural respondents. Samnang et al. (2022) reported that women with professional jobs and those from wealthier households had higher rates of overweight and obesity compared to women in manual occupations and poorer households. Occupations involving physical activity, such as farming, manual labor, or hawking, may contribute to lower BMI due to increased energy expenditure (Chigbu & Aja, 2011). Conversely, sedentary occupations combined with poor dietary habits may lead to higher BMI (Chigbu & Aja, 2011). In urban settings, overweight and obesity were consistently observed across income levels, while in rural areas, higher income was clearly linked to overweight, with lower-income groups maintaining healthier BMI profiles.

Income also influenced BMI among rural respondents. Lower income levels may limit access to nutritious foods and healthcare, thereby affecting maternal health and BMI. Educational level was similarly connected to BMI in both rural and urban populations. Samnang et al. (2022) found that women with no education (78%) had higher rates of overweight/obesity compared to those with higher education (22%). Educated women are less likely to develop overweight and obesity due to greater awareness of nutrition and health. Studies in Nigeria have similarly reported that educated women had a lower risk of overweight and obesity, likely linked to education's influence on healthy behaviors (Balarajan & Villamor, 2009).

Evidence from developed societies also suggests an inverse relationship between educational level and BMI, particularly among pregnant women (Ball & Crawford, 2005). Women with higher education levels generally have better access to information on nutrition and healthy lifestyles, which promotes healthier eating habits and increased physical activity, resulting in healthier BMI profiles. Conversely, lower levels of education are associated with limited access to health and nutrition information, leading to less informed dietary choices and negative impacts on BMI.

CONCLUSION

This study assessed the dietary knowledge, practices, and food consumption patterns of pregnant women in urban and rural areas of Nsukka Local Government Area, Enugu State, Nigeria. The findings revealed significant disparities between rural and urban respondents in education, occupation, and income. Urban respondents demonstrated higher dietary knowledge and better dietary practices compared to their rural counterparts. Furthermore, urban women consumed more fruits and vegetables than those in rural areas, highlighting clear nutritional differences. These disparities underscore the urgent need for targeted rural development policies, particularly in nutrition education, to bridge the gap between urban and rural populations. The study recommends the implementation of appropriate nutrition intervention programs for pregnant women, especially in rural communities, to improve dietary practices and promote maternal and fetal health outcomes.

Based on this findings, the following recommendations were made.

- 1 This study recommends that nutrition education programs should be initiated to educate pregnant women on dietary knowledge and good dietary practices. These Nutrition programs should emphasize on portion control, balanced diets, and culturally appropriate nutrition education
- 2 Intervention strategies should be done in the rural areas in the form of food provisions, food fortification and diet diversification. This could help improve the dietary habits and nutritional status of the pregnant women.
- 3 Consumption of fruits, vegetables, and whole grains should be encouraged while reducing processed and high-fat foods, especially among urban dwellers to prevent obesity.

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Competing Interests

The authors declare that they have no competing financial or non-financial interests regarding the publication of this manuscript.

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