

Food Taboos, Myths and Nutritional Knowledge Influencing Dietary Patterns of Pregnant Women in Selected Primary Health Centres in Ile-Ife.

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Abstract

Background: Adequate nutrition during pregnancy is essential for maternal and foetal wellbeing. Yet, in many African settings, unfounded beliefs about certain foods lead women to restrict nutrient-rich foods.

Objective: To identify food taboos, myths and nutritional knowledge and their influence on the dietary patterns of pregnant women attending selected primary health centres in Ile-Ife. **Methodology:** A hospital-based, mixed-method cross-sectional study was conducted, combining a semi-structured interviewer-administered questionnaire with a focus group discussion. 100 pregnant women attending antenatal care were purposively drawn from two health care centres through a two-stage sampling approach, while six respondents participated in the focus group discussion conducted in the Yoruba language. Quantitative data were analysed descriptively using SPSS version 21; recordings from qualitative data were transcribed, translated, and analysed thematically. **Results:** About 28% of respondents reported factoring restrictive beliefs into their food choices, most commonly avoiding snail, banana, okro, milk, bush meat, plantain, and Bournvita, giving reasons such as infant drooling, big babies, or prolonged labour. The focus group discussion session reinforced that avoidance was often driven by inherited beliefs and enforced by spouses or older relatives. **Conclusion/ Recommendations:** Snail and “esuru” emerged as the most prominent restricted foods among this population; they are avoided due to fear of complications during delivery. It is recommended that nutrition awareness in antenatal care services move beyond generic nutrition talks to confront specific, named misconceptions directly, and actively involve spouses and elder family members in counselling sessions.

Keywords: Antenatal, Misconception, Gestation, Cultural beliefs, Maternal health.

Introduction

Pregnancy is a nutritionally sensitive period characterised by substantial physiological adaptation and increased requirements for energy, protein and several micronutrients. These requirements support expansion of maternal tissues and blood volume, placental development, fetal growth and preparation for lactation. Nutritional needs vary according to pre-pregnancy nutritional status, body size, maternal age, stage of pregnancy, physical activity and the presence of illness or

multiple pregnancy; maternal nutrition should therefore be understood as a dynamic process rather than a fixed prescription (Brown et al., 2020). Maternal undernutrition remains a significant issue in low- and middle-income nations like Nigeria, where women and girls typically have unjust access to necessities like healthcare and education. There exists a misconception among pregnant women regarding certain foods, particularly those considered taboo. Consequently, some nutritious foods are

intentionally restricted. For instance, in African countries, food intake is often reduced in pregnancy under the assumption that this practice can decrease the size of the baby, potentially complicating the birth process (Maykondo et al., 2022). In Gambia, Nigeria, Gabon, the Democratic Republic of Congo, and Asia, pregnant women are usually forbidden from consuming the richest food sources of iron, carbohydrates, animal proteins, and micronutrients (Kebbe et al., 2021). A healthy maternal diet should provide adequate energy and protein together with sufficient vitamins and minerals from a range of food groups. The World Health Organization recommends a varied diet that includes vegetables, fruits, legumes, nuts, whole grains, pasteurised dairy products and animal-source foods, alongside appropriate micronutrient supplementation and nutrition counselling during antenatal care (World Health Organization, 2023). Supplementation is important but cannot fully compensate for a monotonous diet that is low in protein, essential fatty acids, fibre and multiple micronutrients.

Healthy diets established during pregnancy can last well beyond pregnancy and benefit health for life. A healthy maternal diet during pregnancy contains adequate energy, fats, proteins, vitamins and minerals, obtained from consuming a variety of food groups (Gebregziabher et al., 2023). However, in many societies, these foods are regarded as taboo for pregnant women; this limits the ability of pregnant women to achieve the recommended dietary intake and increases the risk of adverse health outcomes for both the mother and her newborn (Mohammed et al., 2019). Pregnancy may create a 'teachable moment' in which concern for the developing baby increases motivation to improve diet. However, pregnancy does not automatically produce healthier eating. Nausea, vomiting, food aversions, cravings, fatigue, cost, convenience and pre-existing habits can alter intake, while household food insecurity, cultural norms and family authority may restrict the ability to act on nutrition advice (Kebbe et al., 2021). Consequently, poor dietary patterns should not be interpreted solely as an individual failure of

knowledge or motivation. Dietary pattern is a useful framework for examining maternal nutrition because women consume combinations of foods rather than isolated nutrients. Patterns characterised by greater consumption of vegetables, fruits, whole grains, legumes, fish and other nutrient-dense foods are generally associated with more favourable maternal and birth outcomes than patterns dominated by refined grains, highly processed foods, added sugars and saturated fats, although associations vary across populations and study designs (Chia et al., 2019; Kebbe et al., 2021). Dietary diversity is also widely used as a practical proxy for micronutrient adequacy in low- and middle-income countries. A systematic review found that low maternal dietary diversity was commonly associated with an increased likelihood of low birth weight, while also noting methodological differences between studies (Kheirouri & Alizadeh, 2021).

Food taboo can be referred to as the avoidance or prohibition of certain foods due to cultural, social, or religious beliefs. A food taboo is a socially sanctioned rule discouraging or prohibiting a particular food, whereas a food myth is an unverified explanation about the effect of a food on the mother, fetus, labour or newborn. The concepts often overlap: a myth provides the explanation and the taboo produces the behaviour. One of the major problems mitigating against adequate nutrition among pregnant women in Africa and Sub-Saharan Africa in particular is the issue of food taboo and myths; this problem has a ripple effect on the mother and the developing baby during pregnancy, ranging from serious complications of pregnancy to low-birth weight or even death of the unborn child during the perinatal period. Poor maternal nutrition adversely affects pregnancy and birth outcomes. In many societies, there are dietary restrictions due to misconceptions or food taboos during pregnancy, which consequently results in the depletion of important nutrients. These cultural malpractices and beliefs can influence the dietary intake of pregnant women, subsequently affecting birth outcomes (Dereje et al., 2021). Across many sub-Saharan African settings, pregnancy-related

food restrictions are frequently motivated by concerns that particular foods may produce an excessively large fetus, cause obstructed or prolonged labour, or give the child undesirable physical or behavioural characteristics. Evidence from Ethiopia shows substantial variation between ethnic and regional groups, indicating that food taboos are widespread but not culturally uniform (Debela et al., 2023; Gebregziabher et al., 2023). A recent meta-analysis across sub-Saharan Africa similarly found that food-taboo practices remain common and are associated with factors such as maternal education, antenatal-care attendance and nutritional knowledge, although the considerable variation between studies limits broad generalisation (Belew et al., 2025).

Comparable restrictions have been reported in South Asian communities, but the cultural explanations often differ. Foods may be classified as 'hot' or 'cold' and avoided because they are believed to disturb bodily balance, increase the risk of miscarriage or complicate delivery. Qualitative research from Uttar Pradesh, India, further showed that maternal food choices were negotiated between pregnant women, husbands, older female relatives and health workers, while household finances and food availability determined whether recommended dietary advice could be followed (Jhaveri et al., 2023); this demonstrates that dietary behaviour is shaped by the interaction of cultural beliefs, family authority and socioeconomic circumstances rather than nutritional knowledge alone. Maternal dietary practices in Nigeria are shaped by food availability, household income, antenatal nutrition education, religion and inherited beliefs. Nigeria is ethnically diverse, and foods considered appropriate or harmful during pregnancy differ between regions and communities. Evidence from south-western Nigeria suggests that restrictions may persist despite reasonable nutrition knowledge. In Ile-Ife, Oluleke et al. (2016) found that many pregnant women had good dietary knowledge, yet cultural and religious beliefs remained important reasons for food restriction; snail and walnut were among foods commonly avoided for cultural reasons. In

Osogbo, Afolabi et al. (2024) identified beliefs that eating less food would facilitate delivery and that okra and snail were culturally prohibited.

Regional comparisons show both convergence and variation. In south-eastern Nigeria, Ekwochi et al. (2016) documented avoidance of foods such as snail and grass-cutter meat because they were believed to cause infant salivation, sluggishness or prolonged labour. In Kano, north-western Nigeria, Ugwa (2016) also reported pregnancy-related food restrictions. Concerns about fetal size, labour and infant characteristics recur across regions, but the foods and explanations differ according to local culture. Within Yoruba communities, dietary advice may come from older relatives, mothers-in-law, religious leaders, traditional care providers and health professionals. A woman may therefore receive biomedical advice during antenatal care while facing conflicting expectations at home. Family authority and respect for inherited knowledge can make restrictions difficult to challenge, even among educated women; this supports the need for culturally responsive counselling and context-specific research in Ile-Ife. Despite increasing awareness of the need for adequate nutrient intake during pregnancy, food taboos and myths still play significant roles in determining the dietary pattern of pregnant women. The literature therefore shows that maternal dietary behaviour results from the interaction of nutritional knowledge, food availability, socioeconomic conditions, family authority and culturally transmitted beliefs. Previous studies have often examined food taboos, nutritional knowledge or dietary practice separately, limiting understanding of how these factors interact. National or regional summaries may also conceal important local variation, and relatively few studies have combined quantitative assessment with qualitative exploration of the beliefs underlying dietary behaviour. Evidence specific to Yoruba communities in south-western Nigeria remains limited, despite reports that traditional beliefs continue to coexist with modern antenatal nutrition education. Accordingly, this study aimed to identify food taboos, myths and

nutritional knowledge and assess their influence on the dietary patterns of pregnant women attending selected primary health care centres in Ile-Ife, Osun State, Nigeria. The mixed-method approach was intended to provide quantitative evidence on knowledge and dietary practice alongside qualitative insight into the cultural meanings and social influences underpinning food choices.

Materials and Methods

Study area

The study was conducted in antenatal clinics of two primary health care centres in Ile-Ife, Nigeria. Ile-Ife is the headquarters of the ancient Ife Kingdom situated in the southwest of Nigeria, stretching over 200 km from the Niger River in the north to the borders of Benin in the west. It is believed to be the cradle of modern civilisation and has a special place in Yoruba culture. Major religions in Ile-Ife are Christianity, Islam, and Traditional African Religion (TAR). Ile-Ife is well-known for several TAR practices, doctrines, cultural beliefs, and festivals. Apart from Yoruba, the native language widely spoken in Ile-Ife, many residents, especially the literate population, communicate in English. Ile-Ife is made up of Ife Central LGA and Ife East LGA. Ile-Ife has government-owned and private educational institutions, including Obafemi Awolowo University and Oduduwa University. Ile-Ife has a teaching hospital named Obafemi Awolowo University Teaching Hospital Complex with an arm as a Comprehensive Health Centre at the Eleyele area of the town.

Study design

A hospital-based mixed-method cross-sectional study was conducted using questionnaires and a focus group discussion (FGD) guide to enhance and clarify quantitative results. The mixed-method approach was chosen to allow for in-depth probes due to sensitivity around the practices. Participants were selected from two randomly sampled primary health care centres: Urban Comprehensive Health Centre, Eleyele and Olomowewe Primary Health Centre, Enuwa.

Sample size determination/sampling technique

The Sample size was determined using the Cochran Formula (Cochran 1977) and the Finite Population correction (FPC). So, 314 was calculated but since the target population of pregnant women attending antenatal care at the two selected primary health care centers was relatively small (estimated at approximately 120 women across both facilities based on clinic attendance records), a Finite Population Correction (FPC) was applied to reduce the computed size and it summed up to 87, to account for non-response, incomplete questionnaires and potential attrition during data collection, a 10% non-response rate was factored in making it 97, which was eventually rounded up to 100. About five per cent of the total respondents were recruited for the qualitative aspect of the study; the focus group consisted of six pregnant women in Olomowewe Health Centre, Enuwa.

A two-stage sampling technique was used to select the pregnant women. In the first stage, two primary health care (PHC) facilities with the highest number of antenatal clinic attendees over the preceding 6-month period were purposively selected. In the second stage, all consenting pregnant women who attended the health centres within the study period were recruited for the study. Two research instruments consisting of a questionnaire and focus group discussion guide were used for this study.

Research Instrument

Data were collected using a semi-structured, interviewer-administered questionnaire. The questionnaire was divided into five parts; the first was used to obtain information on the respondents' socio-demographic and socio-economic characteristics, the second was used to obtain information on pregnancy history of the respondents, the third part was used to obtain information on dietary pattern of the pregnant women, the fourth part was used to obtain information on knowledge of Nutrition and the fifth part was used to obtain information on food taboos and myths.

A focus group discussion was held with six pregnant women in Olomowewe Health Centre, Enuwa. A purposive convenience sampling approach was used to recruit six pregnant women. The FGD was held on a day different from the day of administering questionnaires. The researchers enlightened the pregnant women on the purpose of the study and sought informed consent from pregnant women willing to participate in the FGD session. The FGD session was audio recorded, and a note taker was present. The FGD session incorporated issues such as general food taboos, food taboos peculiar to pregnant women, food taboos that align with pregnancy, compliance and adherence to food taboos. FGDs were conducted in the local Yoruba language and lasted for about 40 minutes. Each session began with a brief introduction and description of the study purpose. All participants were assured of confidentiality and were asked to respect each other's opinions. Participants were informed that there were no right or wrong answers.

Statistical Analysis

The completed questionnaires were checked daily for completeness and consistency and appropriate data cleaning was done. The data were entered into Microsoft Excel and exported into SPSS. Quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS) version 21. Descriptive statistics were used to get frequencies, percentages, mean, and standard

deviation presented in charts and tables. The qualitative data were obtained through recording using an audio tape; the qualitative data were transcribed verbatim in the Yoruba language and translated into English. The translated transcripts were cross-checked against the audio recordings for accuracy. The content of the transcripts was then analysed manually using thematic analysis to identify key themes from the discussion.

Results

Socio-demographic characteristics of the respondents

Table 1 shows the socio-demographic characteristics of the respondents. The majority of the respondents (53%) are between the ages of 26–35, while 10% are in the 36–45 age group. 40% are traders while 9.5% are civil servants. 66% are Christians and 34% are Muslims. 89% of the respondents are not salary earners. 54.3% have secondary education while 9.6% have primary education.

Food taboos and myths identified among respondents

Table 2 shows that 28.0% of the respondents consider food taboos and myths when selecting foods they consume during pregnancy; some of the reasons given for food taboos are drooling (5%), large babies (4%), and difficulty in labour (2%).

Table 1: Socio-Demographic Data of Respondents

	Frequency (N)	Percentage (%)
Age(Mean = 27.33 ± 5.34)		
16 – 25	37	37.0
26 – 35	53	53.0
36 – 45	10	10.0
Occupation		
Civil servant	9	9.5
Farming	-	-
Trading	38	40.0
Retiree	-	-
Others	48	50.1

Religion		
Christian	64	66.0
Muslim	33	34.0
Traditional	-	-
Other	-	-
Are you a Salary Earner?		
Yes	11	11.0
No	89	89.0
Apart from salary, do you have other sources?		
Yes	13	13.4
No	84	86.6
Level of income		
<N18,000	18	20.0
N20,000 - N40,000	35	38.0
N41,000 - N60,000	30	33.0
>N70,000	9	9.0
Educational Status		
Primary	9	9.6
Secondary	51	54.3
Polytechnic	22	23.4
University	11	11.7
non-formal	1	1.1

Table 2: Food Taboos and Myths among Respondents

	Frequency (N)	Per cent (%)
Do you consider any food taboos and myths when selecting foods that you consume during pregnancy?		
Yes	28	28.0
No	72	72.0
Food taboos mentioned		
No response	74	74.0
Banana	3	3.0
Snail	11	11.0
Bournvita	2	2.0
Milk	2	2.0
Okro	3	3.0
Bush meat	3	3.0
Plantain	2	2.0
Reasons given for food taboos.		
No response	82	82.0
Allergy	1	1.0
Because it is forbidden by the husband's family	3	3.0
Drooling	5	5.0
Dislike	2	2.0
Difficulty in labour	2	2.0

Causes excessively large babies	4	4.0
Disrupts bowel movement	1	1.0

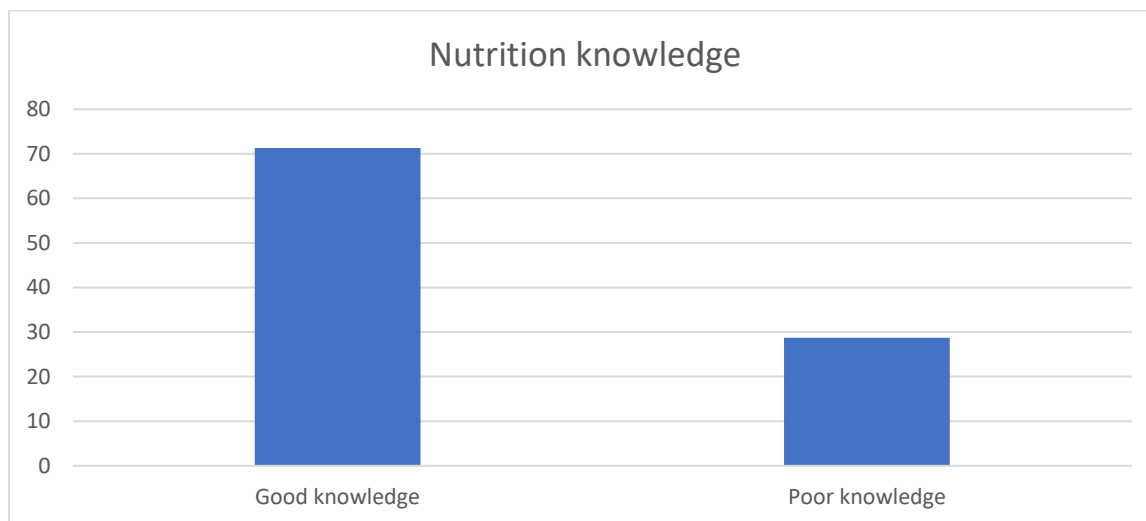


Fig. 1: The chart below shows the bar graph of the nutritional knowledge of the respondents.

Nutrition knowledge of the respondents

Figure 1 shows the nutrition knowledge of the respondents. Overall, 71.3% have good nutritional knowledge while 28.7% have poor nutritional knowledge.

Food habit and dietary pattern of the respondents

Table 3 shows that most respondents (64%) eat more than three times a day, and 2% eat once a day during pregnancy. The majority (84.7%) do not skip meals. Most respondents (71.4%) take in-between meals. A majority (76.3%) take bedtime snacks. Most respondents (72.4%) take drugs or iron supplements during pregnancy.

Consumption pattern of respondents

Table 4 presents the food consumption pattern of respondents across the days of the week. Cereals, meats, poultry and poultry products, fish and fish products, and fruits were consumed by the majority of respondents daily (7 days a week). Legumes were consumed most frequently 2 days per week, roots and tubers 2 days, and vegetables 3 days.

Focus group discussion: translation and interpretations

Focus group discussion (FGD) was conducted to determine food taboos common among pregnant women attending selected antenatal care in primary health care centres of Ile-Ife. The FGD probed information on: general food taboos common across various households; foods classified as taboos among pregnant women; and compliance to food taboos.

Food taboos peculiar to respondents

Focus group discussion findings revealed that most of the respondents do not comply with food taboos in their normal physiological state, except one respondent who stated:

'I don't have food taboos in person, but my mother's people do not eat ewedu so I don't take it likewise.' (R5)

Food taboos particular to pregnant women

Most of the respondents had various views on known taboos common with pregnant women. Their responses included:

'We don't have any food taboo.' (R1 & R2)

'It is said that pregnant women cannot consume esuru.' (R3)

'You know that some people eat eba and it affects their body, because it is contrary to their health... but for me as an individual, it does not affect me.' (R4)

Foods naturally avoided by respondents

All the respondents reported that they do not avoid any food except one respondent who stated:

'I don't consume noodles when pregnant; I don't even stay around where it is being prepared. It does not affect my health, but it nauseates me.' (R1)

Common food taboos known to pregnant women

Several known food taboos peculiar to pregnant women were described, along with the perceived reasons behind them:

'They usually say that if someone takes snail, the baby when delivered will be drooling saliva.' (R1)

'Some people said, if someone takes sugar cane, the mother will have hiccups during delivery and labour.' (R2)

'I have heard esuru is not good for pregnant women because it causes okaori.' (R4)

'It is not even good for a pregnant woman at all, because it is said that it delays the delivery of the baby. It makes the pregnant woman belch during delivery; I also don't eat it.' (R3)

'It's mainly from the Yoruba belief; my mother-in-law, who stays with me, does not allow me to eat it. Even if I eat it, it won't be in her presence because she says it is not good. I ate it in my first pregnancy, and it didn't give me any problem... So, I can say it is not really real that it affects pregnant women during delivery.' (R3)

Table 3: Food Habit and Dietary Pattern of the Respondents

	Frequency (N)	Per cent (%)
How many times do you eat in a day?		
Once	2	2.0
Twice	4	4.0
Thrice	30	30.0
More than thrice	64	64.0
Do you skip meals?		
Yes	15	15.3
No	83	84.7
If yes, reason		
Financial constraint	3	20.0
Household chores	1	6.6
It makes sleeping difficult	3	20.0
Loss of appetite	2	13.3
Not hungry	4	26.6
Not tolerable	1	6.6
Work commitment	1	6.6
Which of the meals do you skip?		
Breakfast	3	20.0
Lunch	8	53.3
Dinner	4	26.7
Is there any in-between meal?		
Yes	70	71.4

No	28	28.6
Is there any bedtime snacks?		
Yes	71	76.3
No	22	23.7
Do you take drugs or iron supplements during the period of pregnancy?		
Yes	71	72.4
No	27	27.6
Do you follow a diet regimen?		
Yes	12	12.3
No	85	87.6
If yes, what are they?		
Eat more fibre	5	41.7
Restrict salt	-	-
Restrict sugar	6	50.0
Restrict pepper	1	8.3

Table 4: Consumption Pattern of the Respondents

Days of the week								
	0	1	2	3	4	5	6	7
Food group	Freq (%)	Freq (%)	Freq (%)	Freq (%)	Freq (%)	Freq (%)	Freq (%)	Freq (%)
Legumes e.g. beans, soybean	7 (7.1)	21 (21.2)	28 (28.3)	26 (26.3)	6 (6.1)	3 (3.0)	3 (3.0)	5 (5.1)
Cereals e.g. rice, maize, pap etc.	-	5 (5.0)	6 (6.0)	18 (18.0)	19 (19.0)	12 (12)	6 (6.0)	34 (34.0)
Roots and Tubers e.g. Yam, Potato, garri, eba, semo, amala etc	1 (1.0)	13 (13.1)	20 (20.2)	18 (18.2)	17 (17.2)	9 (9.1)	9 (9.1)	12 (12.1)
Meats e.g. beef, pork, liver	2 (2.0)	12 (12.0)	10 (10.0)	15 (15.0)	10 (10.0)	4 (4.0)	7 (7.0)	40 (40.0)
Poultry and poultry products	14 (14.3)	13 (13.3)	13 (13.3)	16 (16.3)	8 (8.2)	7 (7.1)	5 (5.1)	22 (22.4)
Fish and fish products	5 (5.1)	9 (9.1)	8 (8.1)	7 (7.1)	11 (11.1)	8 (8.1)	7 (7.1)	44 (44.4)
Fruits e.g. orange, banana, mango	2 (2.0)	8 (8.2)	11 (11.2)	10 (10.2)	10 (10.2)	6 (6.1)	14 (14.3)	37 (37.8)
Vegetables e.g. carrots, green leafy vegetables	2 (2.0)	11 (11.2)	17 (17.3)	25 (25.5)	7 (7.1)	9 (9.2)	7 (7.1)	20 (20.4)
Fried foods e.g. fish, meats, eggs, plantain, pastries	11 (11.1)	22 (22.2)	17 (17.2)	16 (16.2)	11 (11.1)	6 (6.1)	4 (4.0)	12 (12.1)
Milk and milk products e.g. soy milk, yoghurt, milk	19 (19.0)	18 (18.0)	17 (17.0)	21 (21.0)	10 (10.0)	3 (3.0)	2 (2.0)	10 (10.0)

Baked foods e.g. cake, meat pie	26 (27.7)	21 (22.3)	22 (23.4)	12 (12.8)	6 (6.4)	2 (2.1)	2 (2.1)	3 (3.2)
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Other taboos aligning with pregnancy aside from food

Respondents also described non-food taboos during pregnancy:

'It is not good for a pregnant woman to stand by the main entrance of the door; it causes aches during labour.' (R1, R2, R6 & R3)

'A pregnant woman should not eat from a pot because the baby's buttocks will be black.' (R4 & R6)

'A pregnant woman should not sit on the mortar.' (R3)

'A pregnant woman should not walk around 1 pm in the sun or in the hot afternoon because an evil spirit walks around.' (R3 & R5)

Compliance and adherence to food taboos

Respondents had varying opinions on compliance with food taboos. Selected responses include:

'It is good for someone to comply, but there are some things like snail consumption which I know has some things good for the pregnant women which is a taboo to be consumed. I know it's a taboo, but I am against it.' (R1)

'They should not eat it, since they know it is a taboo.' (R2)

'Pregnant women should be away from the food taboos once it is a known taboo for her. The likes of banana, I consume and it has no effect on my children, but it's only the esuru I don't eat.' (R4)

'There are food taboos that are known by some churches like Celestial, but it is not targeted at pregnant women alone. These restrictions are for snails and any food that draws in the likes of okro and ewedu.' (R1)

'Muslims do not eat dogs and pigs.' (R4)

Discussion

This study provides an integrated evaluation of food taboos and myths, nutritional knowledge, and dietary and consumption patterns among pregnant women, highlighting how these interrelated factors shape maternal nutrition. Our findings indicated that the prevalence of culturally defined food taboos was relatively low. However, a considerable proportion of respondents still adhered to food-related beliefs, including following specific dietary codes and considering taboos in food choices; this suggests that beyond cultural norms, individual perceptions and social influences, family pressures significantly shape dietary behaviours during pregnancy, consistent with previous studies (Peter et al., 2023; Shahrin et al., 2024). Compared to reports from Abia State, Nigeria, where higher adherence was observed (Ada et al., 2024), the lower prevalence in this study may reflect differences in exposure to nutrition education, urban residence, or antenatal care coverage in Ile-Ife relative to more rural comparison settings. Notably, an earlier facility-based study conducted within the same city found that more than a third of pregnant women restricted specific foods for cultural reasons, with protein- and vitamin-rich items such as snail and walnut most frequently avoided, and that this avoidance was more pronounced among women with lower education and income (Oluleke et al., 2016). Viewed alongside that earlier local evidence, the present findings suggest a gradual decline in taboo adherence in Ile-Ife over the past decade, plausibly reflecting expanded antenatal education and rising educational attainment among women accessing these primary health centers; this contrast itself is informative: it suggests that taboo adherence is not a fixed cultural trait but one that is modifiable through education and healthcare contact, which has direct programmatic implications for antenatal counselling in this population.

A broader regional comparison reinforces this picture. A recent systematic review and meta-analysis pooling data across Sub-Saharan Africa estimated that roughly two in five pregnant women practice some form of food taboo, with somewhat lower rates among urban residents than rural ones (Belew et al., 2025), a pattern consistent with the comparatively low prevalence found in this urban, health-facility-based sample. At the same time, single-site studies elsewhere on the continent report considerably higher figures, for instance more than half of pregnant women in one Eastern Ethiopian town (Tofik et al., 2025), underscoring how strongly taboo prevalence depends on local context, literacy, and antenatal care access rather than any uniform "African" pattern.

Despite the relatively low overall prevalence, the persistence of taboos remains nutritionally and clinically relevant. Foods such as banana, snail, milk, okro, bush meat, plantain, and Bournvita were avoided, albeit in small proportions. These findings differ from other Nigerian studies where restrictions on foods like snail and okro were more widespread (Adegboyega et al., 2024), but align with reports from Ethiopia and Uganda (Dereje et al., 2021; Peter et al., 2023), suggesting that the specific foods targeted by taboos, and their severity, vary considerably even within similar sociocultural contexts across sub-Saharan Africa. Notably, the majority of the respondents could not justify these restrictions, indicating that such practices are largely sustained by unverified beliefs rather than reasoned dietary judgment. Reported reasons include fears of difficult labour, fetal abnormalities, allergies, and gastrointestinal disturbances, echoing earlier findings (Maduforo, 2016; Marwa et al., 2024). Family influence, particularly from spouses and elders, further reinforces adherence to these beliefs, underscoring that dietary decision-making in pregnancy in this setting is rarely an individual choice but a negotiated one shaped by household hierarchy.

The maternal and child health implications of this pattern deserve explicit attention. Several of the avoided foods, snail, milk, and Bournvita among them, are relatively accessible, protein-, calcium-,

and micronutrient-dense options in the local food environment. Their avoidance, even at low prevalence, removes an accessible route to meeting the elevated protein, calcium, and iron demands of pregnancy, and may compound the risk of anemia, poor gestational weight gain, and impaired fetal growth in an already micronutrient-vulnerable population (NPC & ICF, 2019); this link is not merely theoretical: a continent-wide systematic review and meta-analysis found that pregnant women with inadequate dietary diversity had roughly double the odds of both maternal anemia and low birth weight compared with those consuming a more varied diet (Seid et al., 2023), giving quantitative weight to the concern that even modest, taboo-driven restriction of nutrient-dense foods can translate into measurable adverse outcomes at the population level. A recent qualitative study in Ethiopia similarly concluded that pregnant women's diets were shaped more by inherited cultural taboos and family pressure than by actual nutritional need, with husbands and elders reinforcing restrictions that health workers considered nutritionally harmful (Kumsa et al., 2026), a dynamic that closely mirrors the spousal- and elder-driven adherence reported by our own respondents. Where taboo-driven avoidance coincides with low dietary diversity more broadly, as our consumption pattern data suggest, the cumulative effect on birth outcomes such as low birth weight, preterm birth, and maternal anemia is plausible and consistent with the broader literature linking restrictive pregnancy diets to adverse perinatal outcomes (Dereje et al., 2021; Marwa et al., 2024); this reinforces that food taboos should not be dismissed as a marginal cultural curiosity but treated as a measurable, modifiable risk factor for maternal and child health in antenatal care.

We also found that the majority of the respondents demonstrated good nutritional knowledge, with high awareness of increased nutritional requirements during pregnancy. Most respondents recognised that pregnant women have different nutritional needs, and substantial proportions identified key nutrients such as iron and folic acid. Awareness of the consequences of poor nutrition

was also high, with the majority acknowledging risks such as low birth weight and adverse maternal outcomes. These findings align with existing literature suggesting improved awareness among antenatal attendees (Kebbe et al., 2021; Okeke & Chiejina, 2024), and likely reflect the reach of antenatal health education in this urban, health-facility-based sample.

However, gaps were observed in translating knowledge into practice, particularly regarding identification of nutrient-rich food sources; this knowledge–practice disconnect is critical in contexts with high prevalence of micronutrient deficiencies (NPC & ICF, 2019). The coexistence of good knowledge with persistent specific taboos underscores that sociocultural belief systems can override abstract nutritional knowledge at the point of an actual food choice, particularly when that choice is made under family or spousal supervision; this has a direct implication for intervention design: nutrition education must move beyond simply increasing knowledge and instead directly confront and dispel the specific, named beliefs driving avoidance, ideally involving spouses and elder family members who exert influence over the pregnant woman's choices.

Dietary pattern assessment revealed that most respondents consumed three or more meals daily, consistent with recommendations and findings from similar Nigerian studies (Adebisi et al., 2019; Olatona et al., 2017). Nevertheless, some reported skipping meals, commonly lunch, due to nausea, poor appetite, workload, or cultural beliefs. Snacking was common and may support energy intake, although avoidance of late-night eating due to cultural beliefs may limit total caloric intake (Ekwochi et al., 2016). Meal skipping in pregnancy, even when partially compensated by snacking, carries implications for gestational weight gain trajectories and glycemic stability, both of which affect fetal growth.

Food consumption patterns showed frequent intake of staples and animal source foods, supporting energy and protein needs. However, intake of vegetables, legumes, and dairy products was inconsistent, suggesting potential micronutrient

inadequacies, particularly for calcium, iron, folate, and vitamin A. Similar patterns have been reported in Nigeria and Ghana (Appiah & Adomako-Boateng, 2018; Saaka & Galaa, 2016), suggesting a shared regional challenge in achieving dietary diversity during pregnancy that goes beyond taboos alone and reflects broader food access and affordability constraints. Importantly, several foods avoided due to taboos are nutrient-dense and contribute essential nutrients such as calcium, iron, and potassium. Their restriction, even when not widespread, may therefore compound an already inconsistent intake of key micronutrients rather than simply representing an isolated cultural preference.

Although many respondents reported using supplements including iron, supplementation alone cannot substitute for a diverse and balanced diet (NPC & ICF, 2019), particularly for nutrients not routinely supplemented in standard antenatal protocols, such as dietary calcium, zinc, and a broader range of micronutrients obtained from whole foods. Overall, while meal frequency and general nutrition awareness appear adequate in this population, dietary diversity and quality remain suboptimal due to the combined effects of taboos, misconceptions, and social influences, a combination that plausibly contributes to the persistently high burden of maternal anemia, low birth weight, and other adverse pregnancy outcomes documented nationally (NPC & ICF, 2019).

Taken together, these findings suggest that improving maternal and child health outcomes in this setting requires interventions that operate simultaneously at three levels: correcting specific, named misconceptions about individual foods; engaging the family members, especially spouses and elders, who reinforce taboo adherence; and translating existing nutritional knowledge into concrete, locally relevant food choices.

Antenatal programmes should incorporate strategies that go beyond generic health talks to actively dispel myths, engage family decision makers, and promote practical, acceptable dietary alternatives to the nutrient-dense foods currently

being avoided. Also, antenatal nutrition programmes should acknowledge the cultural differences identified and engage family members and community leaders in culturally sensitive nutrition education rather than relying solely on information directed at pregnant women. Addressing both the knowledge gaps and the sociocultural determinants of food choice identified is essential for improving maternal nutrition status and ultimately pregnancy and birth outcomes in this population.

Conclusion

Snail was the major food taboo identified as common among the pregnant women, with the belief that it causes drooling in babies born to mothers who consumed it. Esuru was also identified as a taboo during the focus group discussions, with most respondents explaining the difficulty it poses during delivery. The study revealed that the women have good nutritional knowledge but poor dietary practice, highlighting the need for targeted interventions.

Professional implications of the study

The findings underscore the critical role of nutrition professionals in antenatal care. Dietitians and nutritionists should be integrated into primary health care teams to deliver targeted nutrition education that addresses specific food taboos and myths prevalent in the community. Culturally sensitive communication strategies, involving not just pregnant women but also their family members and community leaders, are essential to closing the gap between knowledge and practice.

Limitations of the study

The study was conducted among 100 pregnant women attending only two primary health care centres in Ile-Ife, which may limit the generalization of the findings to pregnant women in other parts of Osun State or Nigeria with different socio-cultural and demographic characteristics. Additionally, the cross-sectional design provides an insight of participants' dietary practices and cultural beliefs at a point in time but

does not provide inferences regarding the relationship between food taboos, nutritional knowledge, and dietary patterns. Furthermore, the qualitative data involved a relatively small number of participants and may not have captured the full diversity of cultural beliefs and practices within the wider population.

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Ethical approval

Ethical approval was obtained from the Osun State Ministry of Health with reference number OSHREC/PRS/2026/842/01/205.

Informed consent

Verbal informed consent was obtained from all participants prior to their inclusion in the study. Participation was voluntary, and participants were informed of their right to withdraw at any time.

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