

ATTITUDE OF RURAL HOUSEHOLDS TOWARDS FOOD SAFETY PRACTICES IN IBARAPA NORTH LOCAL GOVERNMENT AREA OF OYO STATE

Alabi, A. F., Ajuwon, I. O., and Abdulazeez, B.

Department of Agricultural Technology,
Oyo State College of Agriculture and Technology, Igbo Ora, Oyo State, Nigeria
Correspondence: aajeronke2009@gmail.com +234 8055788336

Abstract

Food safety practices concerns are escalating worldwide, and the lack of adequate knowledge and a negative attitude among households or food handlers can lead to foodborne diseases. A favorable attitude toward food safety practices can result in the adoption of proper food safety practices. Therefore, this study investigated the attitudes of rural households toward food safety practices in the Ibarapa North Local Government Area of Oyo State. A multi-stage sampling procedure was employed to select 125 food handlers in the Ibarapa North Local Government Area. Structured questionnaires and interview schedules were used to gather information on respondents' socioeconomic characteristics, challenges to food safety practices, and attitude toward food safety practices. Data were analyzed using descriptive statistics and inferential statistics (Pearson Product Moment Correlation) at $p = 0.05$. Respondents exhibited a favorable attitude toward food safety practices (62.4%). However, respondents faced several constraints, including poor access to clean water ($\bar{x}=2.00$), perishability of some food items ($\bar{x}=1.96$), inadequate knowledge of food safety standards, and high food prices ($\bar{x}=1.95$, respectively). No significant relationship was found between respondents' attitudes and the challenges they encountered in food safety practices ($r = 0.06$, $P < 0.05$). To enhance food safety practices in rural areas, there is a need to provide essential infrastructure such as portable water. This infrastructure can help address the problem of poor access to clean water and promote food safety practices in rural communities.

Keywords: Attitude; Rural household; Food safety, Portable water.

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Introduction

Rural Nigerian homes may be vulnerable to foodborne illnesses. The environment plays a crucial role in the transmission of infections, often resulting from poor personal or environmental hygiene, unsafe drinking water, inadequate waste management, poor food handling, and ineffective management of pests and disease-carrying vectors (Fasoro et al.,

2016). The continuous intake of contaminated food contributes significantly to societal health challenges, leading to both chronic and non-chronic illnesses, particularly in rural communities (FAO, 2014). Consequently, food safety practices have become a major global concern in mitigating the severe effects of foodborne diseases. Evidence from existing literature highlights that adherence to food

safety practices is vital for enhancing overall health and wellbeing (WHO, 2016).

Recognizing the vital role of food safety in achieving improved health outcomes for Nigerians, the Federal Government, in 2000, established the National Policy on Food Hygiene and Safety as a component of the National Health Policy. The policy's overarching objective was to ensure proper safe and hygienic food handling that would enhance public health, prevent foodborne diseases, and reduce, eventually eliminate the risks linked to substandard food handling and sanitation (Fatiregun, Oyebade, and Oladokun, 2010). Despite these efforts and other related regulations, foodborne illnesses continue to exist, particularly in rural areas of the country (FAO, 2012). Empirical evidence shows that foodborne diseases remain widespread in rural households of Southwestern Nigeria due to poor food safety practices (Sofela et al., 2014; Oladoyinbo and Awosika, 2015; Fasoro et al., 2016). Fatemeh et al. (2017) further noted that households often fail to meet appropriate food preparation standards, largely because of limited knowledge and attitudes that influence their food safety behaviors. It is believed that people's attitudes toward a particular situation will determine the outcome. A favorable attitude toward food safety practices may translate into correct food safety behavior. Therefore, this study aims to ascertain the attitude of rural households toward food safety practices in Ibarapa North Local Government Area of Oyo State. The main aim of the study was to analyze the attitude of rural households toward food safety practices in Ibarapa North Local Government Area of Oyo State. The study specifically described the socioeconomic characteristics of rural households, determined the attitude of rural households toward food safety practices, and examined the challenges in relation to food safety practices encountered by rural households in the study area. The hypothesis tested was to establish a significant relationship between the challenges faced by

rural households and their attitude toward food safety practices in the study area.

Methodology

The study was carried out in Ibarapa North Local Government Area of Oyo State, located in the southwestern geopolitical zone of Nigeria. The target population for this study comprised rural households, with a specific focus on food handlers (both women and men). A multi-stage sampling procedure was employed to select respondents for this study. Ibarapa North Local Government Area of Oyo State consists of 10 wards. In the first stage, 50% of the wards in the LGA were randomly selected, resulting in five chosen wards: Ayete Ward 1, Ofiki Ward 1, Tapa Ward 1, Igangan Ward 4, and Igangan Ward 5. The second stage involved purposively selecting one community from each ward, resulting in a total of five communities: Asawo (Ayete Ward 1), Alaagba (Ofiki Ward 1), Bale Ikogba (Tapa Ward 1), Isale Akao (Igangan Ward 4), and Okeola (Igangan Ward 5). In the third stage, 0.8 % of the households (food handlers, both men and women) in each community were randomly sampled resulting in 125 respondents. Information from the respondents was gathered using a carefully designed interview schedule and questionnaire. Challenges were outlined and presented to the respondents, and they indicated how these challenges hindered them from adhering to food safety practices by choosing from options such as "not a challenges," "mild challenges," and "severe challenges." Weighted means were calculated to rank the challenges based on their intensity. To evaluate respondents' attitudes toward food safety practices, a set of attitudinal statements was provided, and they were asked to respond on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." The mean scores derived from their responses were used to classify them as having either favorable or unfavorable attitudes toward food safety practices. Data analysis involved descriptive statistics, including

percentages, mean scores, standard deviation, and frequency counts, as well as inferential statistics such as the Pearson Product Moment Correlation (PPMC).

Results and discussion

Socioeconomic characteristics of respondents

The result in Table 1 indicates that 32.80% of respondents were within the age bracket of 30–39 years, with an average age of 40.55 years and a standard deviation of 18.30. This suggests most respondents were mature food handlers in the study area. The results further reveal 72.80% of the respondents were female and 27.20% male, implying that women were predominantly responsible for food preparation. This aligns with Akabanda, Hlortsi, and Owusu-Kwarteng (2017), who reported that 76.6% of food handlers in their study were women. Regarding marital status, 29.60% were single, 58.40% married, 8.0% widowed, and 4.0% divorced. This

corroborates Losasso, Cibin, Cappa, and Ricci (2015), who observed that most rural food handlers were married. In terms of education, 80.00% of respondents had some level of formal education (from primary to tertiary), while 20.00% had none. This distribution suggests that most were literate and, therefore, more likely to understand and adopt food safety practices due to their educational background. Household size averaged four members, consistent with Olajide (2013), who reported household sizes of 2 to 4 persons in the area. The major occupations among respondents were trading (28.8%), farming (27.2%), and fashion designing (12.0%). However, Laxmi (2016) noted that occupation does not necessarily influence the level of knowledge regarding food safety practices. Majority (66.4%) of the respondents earned less than N20,000 monthly, while 8.0% earned above N60,000 monthly. This implies that most of the respondents were living below the poverty line of 2.15 dollar a day.

Table 1: Socioeconomic characteristics of respondents

Variable	Frequency	Percentages	Mean	S.D
Age				
19-29	34	27.20		
30-39	41	32.80	40.55	18.30
40-49	16	12.80		
50-59	4	3.30		
60 and Above	30	24.00		
Sex				
Male	34	27.20		
Female	91	72.80		
Marital Status				
Single	37	29.60		
Married	73	54.80		
Divorced	5	4.0		
Widowed	10	8.0		
Educational Status				
No Formal Education	25	20.00		
Primary	25	20.00		
Secondary	31	24.80		
Tertiary	44	35.20		
Household Size				
1-5	100	80.00	4.02	2.40

6-10	23	18.4		
11-15	2	1.60		
Main Occupation				
Unemployed	4	3.20		
Barbing	4	3.20		
Catering	4	3.20		
Clergy	2	1.60		
Drumming	2	1.60		
Farming	34	27.2		
Fashion Designing	15	12.00		
Hair dressing	6	4.80		
Nursing	2	1.60		
Pharmacy	4	3.20		
POS	2	1.60		
Teaching	10	8.00		
Trading	36	28.8		
Monthly Income				
Below 20,000	83	66.4	22,368	10,998
20001-40,000	16	12.8		
40,001-60,000	16	12.8		
Above 60,000	10	8.0		
Total	125	100		

Source: Field survey, 2023

Respondents' attitudes toward food safety practices

Table 2 shows that most of the respondents agreed with the following statements: buying fresh food is very important ($\bar{x}=24.1$), fruits and vegetables should be stored in a cool environment ($\bar{x}=22.7$), cleaning used cooking utensils is important ($\bar{x}=22.5$), consuming spoiled or damaged food items can increase the risk of foodborne illnesses ($\bar{x}=21.8$), thorough washing of fruits and vegetables should be done with clean water ($\bar{x}=21.7$), preparing food in a hygienic place is important ($\bar{x}=21.4$), serving food while it is hot is safer as it helps prevent contamination ($\bar{x}=21.4$), hand washing before handling food is a good practice ($\bar{x}=21.1$), using separate knives for raw and cooked foods helps prevent foodborne illnesses ($\bar{x}=20.4$), foodborne illness can be prevented by cooking meat thoroughly

($\bar{x}=19.4$), proper storage of raw food items away from rodents or pests cannot reduce food contamination ($\bar{x}=17.4$), touching raw food and then cooked food can cause contamination of food ($\bar{x}=17.3$), and a dustbin should be kept inside the kitchen ($\bar{x}=17.1$). The reason for this could be that respondents have been observing certain food safety practices, and this may have contributed to shaping their attitudes toward food safety practices. However, respondents were least favorably disposed to inspecting food items before purchase at the market ($\bar{x}=11.3$), cleaning used cooking utensils ($\bar{x}=10.6$), cross ventilation of the cooking area to avoid sweat coming in contact with the food ($\bar{x}=10.5$), and inspecting stored ingredients for expiration ($\bar{x}=9.4$). This implies that the respondents do not know the implications of not observing these food safety practices on their health.

Table 2: Attitudes of respondents toward food safety practices

Attitudes to food safety practices	WMS	Rank
Buying of fresh food is very important	24.1	1 st
Fruits and vegetables should be stored in a cool environment.	22.7	2 nd
Cleaning used cooking utensils is important	22.5	3 rd
Consuming spoiled or damaged food items can increase the risk of foodborne illnesses	21.8	4 th
Thorough washing of fruits and vegetables should be done with clean water	21.7	5 th
Preparing food in an hygienic place is important	21.4	6 th
Serving food while it is hot is safer as it helps prevent contamination	21.4	6 th
Hand washing before handling food is a good practice	21.1	8 th
Using separate knives for raw and cooked foods helps prevent foodborne illnesses.	20.4	9 th
Food borne illness can be prevented by cooking meat thoroughly	19.4	10 th
Proper storage of raw food items away from rodents or pests cannot reduce of food contamination	17.4	11 th
Touching raw food and then cooked food can cause contamination of food	17.3	12 th
Dustbin should be kept inside the kitchen	17.1	13 th
Drinking water from stream and well cannot predispose someone to food bore illness	16.0	14 th
Unwrapped cooked food should be handled with bare hands	14.3	15 th
Handling food with open cut or wound cannot encourage microbial activities in the food	13.8	16 th
Good processing hygiene promotes food borne illnesses	13.8	17 th
Coughing and sneezing when cooking cannot contaminate food	13.3	18 th
Contamination of food cannot happen when you are sick so it is safe to cook food	13.1	19 th
Covering of food properly before storing is not necessary	12.9	20 th
Thorough re-heating is not necessary before eating left overs	12.0	21 th
Food items should not be inspected before purchase at the market	11.3	22 th
Cleaning used cooking utensils is not important	10.6	23 rd
Cross ventilation of the cooking area to avoid sweat coming in contact with the food is not necessary	10.5	24 th
Stored ingredients should not be inspected for expiration	9.4	25 th

Source: Field survey, 2023 WMS- Weighted mean score

Categorization of respondents' attitudes toward food safety practices

Table 3 indicates that 62.4% of the respondents showed a favorable attitude towards food safety practices, while 37.6% demonstrated an unfavorable attitude. These findings suggest that respondents generally hold favorable attitudes regarding food safety practices. There is a widely held expectation

that people's attitudes toward a specific situation can influence the outcome. Given the favorable attitude observed among the respondents, there is optimism that their positive stance on food safety practices will lead to appropriate food safety behaviors, ultimately reducing the risk of foodborne illnesses.

Table 3: Categorization of respondents' attitudes toward food safety practices

Level of attitude	Frequency	Percentage	Minimum score	Maximum score	Mean	Standard deviation
Unfavourable attitude	47	37.6				
Favourable attitude	78	62.4				
Total	125	100	1.16	3.28	2.669	0.387

Source: Field survey, 2023

Challenges to food safety practices

The rural households' challenges related to food safety practices were explored, and the results in Table 4 illustrate these challenges, ranked by their severity as perceived by the respondents. The most frequently encountered challenges by the respondents included poor access to clean water ($\bar{x}=2.00$). Other significant challenges were the perishability of some food items ($\bar{x}=1.96$), inadequate knowledge of food safety standards, and the

high cost of food items ($\bar{x}=1.95$), cultural values ($\bar{x}=1.94$), insufficient financial resources to purchase necessary equipment for food preparation and storage ($\bar{x}=1.93$), and the inconvenient nature of food safety practices ($\bar{x}=1.92$). These findings support the conclusions drawn by Awoyemi, Ajiboye, Adesiji, and Kayode (2019), which also identified a lack of public education as a constraint that hinders farmers' understanding of safe food handling in the study area.

Table 4: Challenges to food safety practices

Challenges	Weighted mean score	Rank
Poor access to clean water	2.00	1 st
Perishability of some food items	1.96	2 nd
Inadequate knowledge on food safety standards	1.95	3 rd
High price of food items	1.95	3 rd
Cultural values	1.94	5 th
Inadequate finance to purchase necessary equipment's for food preparation and storage	1.93	6 th
Inconvenient nature of food safety practices	1.92	7 th

Source: Field survey, 2023

Correlation analysis between respondents' attitude and challenges towards food safety practices

The PPMC results in Table 5 revealed no significant association between the attitudes of rural households ($r = 0.060$, $P < 0.05$) and the challenges encountered in food safety practices. This suggests that the attitudes of rural households toward food safety practices are not determined by the challenges they experience.

Table 5: Correlation between respondents' attitude and challenges towards food safety practices

Variable	r-value	p-value	Remark
Attitude/Challenges	0.060	0.504	Not significant

Source: Data analysis, 2023

Conclusions and recommendations

The research findings indicated that the rural households held a favorable attitude toward food safety practices within the study area. However, the challenges they encountered concerning food safety practices primarily revolved around poor access to clean water, the perishability of specific food items, inadequate awareness of food safety standards, high food prices, adherence to cultural values, insufficient financial resources for acquiring essential food preparation and storage equipment, and the inconveniences associated with practicing food safety. It is noteworthy that presence of these challenges did not significantly influence the respondents' attitudes toward food safety practices. To address these issues effectively, there is a pressing need to improve the provision of essential amenities in rural communities, such as access to safe water and adequate sanitation facilities, reliable electricity, and efficient waste disposal systems. Such improvements would not only alleviate the challenges related to clean water but also facilitate the practice of food safety in the study area. Additionally, periodic sensitization and training programs for rural household food handlers are essential to instill and maintain a consistently positive attitude toward food safety practices. These educational initiatives can be strategically delivered through religious organizations, as many respondents indicated their affiliation with such groups. By leveraging these existing community structures, awareness and adherence to food safety practices can be effectively promoted among rural households.

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