Knowledge, Acceptability, and Utilization of Convenience Foods among Working Mothers in Higher Institutions in Anambra State

Diana O. Arubayi[1], Bridget U.N. Imonikebe[2], Francisca Nkechi Onwumah[3]

[1,2,3] Delta State University, Abraka, Delta State, Nigeria

C O N T E N T

A B S T R A C T

This study examined the knowledge, Acceptability, and utilization of convenience foods among working mothers in higher institutions in Anambra State, Nigeria. The study was conducted in public universities in Anambra State, Nigeria, using a descriptive survey and ex-post facto design. The population comprised 3,689 working mothers across six government-owned higher institutions, with a sample of 361 selected using multi-stage sampling. A structured questionnaire was used for data collection, validated by experts, and tested for reliability using Cronbach Alpha, which ranged from 0.57 to 0.88. Data were collected face-to-face with assistance from trained research aides. Analysis involved percentages, means, standard deviations, t-tests, with decisions based on a 2.50 mean benchmark and a 0.05 significance level. Out of the 361 respondents, most were married (280), non-teaching staff (239), and aged 36–40 years (81). A majority fell within the middle-income bracket (167). Findings revealed a generally high level of knowledge and utilization of convenience foods, although awareness of health risks was low. The study revealed that working mothers in higher institutions in Anambra State had a high extent of knowledge of convenience foods, except on health implications (mean = 2.46). Twenty-four convenience foods were widely available, except Ofada rice bundle (2.43) and small chop mix (2.41). Significant differences existed in knowledge between teaching and non-teaching mothers (t = 2.226) and in Acceptability of convenience foods between working and non-working mothers (t = 2.092). The study underscores the need for targeted nutritional education to improve informed food choices.

K E Y W O R D S

Convenience foods; Working mothers; Higher institutions; Food knowledge

1. INTRODUCTION

Globalization and urbanization have inadvertently resulted in changes in every facet of home management. There is diminishing skills and motivation in various home management areas such as cooking and engendering choice for convenience foods. Convenience food is any fully or partially prepared foods in which significant preparation time, culinary skills, or energy inputs have been transferred from the home kitchen to the food processor or distribution (Chinedu et al, 2025). It is linked with saving time, physical and mental effort required to buy, prepare and consume foods and the cleaning of the kitchens. Convenience foods offer benefits at each one of these stages and

it encompasses all food products which mitigate time, physical and mental effort, and cleaning resulting from the process of preparing meals

Convenience foods are the products of food processing industries in which substantial amount of culinary preparation have been carried out to an advanced stage and are purchased as labour-saving version of highly processed food (Scholliers, 2015). The convenience food products encompass numerous varieties of processed and semi-processed foods, often compared with fresh food using raw ingredients cooked in its entirety. It is often regarded as among the least healthy option in terms of low nutritional value and hefty dependence on imported ingredients (Scholliers, 2015; Anaekwe et al, 2025). Convenience food is an eclectic category of processed food, manufactured for mass consumption, including chilled, dried, and canned foods; confectionary, snacks and beverages; processed meat, pasta and cheese, ready to eat, ready to cook and ready to serve (for examples, candies, soft drinks, juices, and milk; nuts, fruits, and vegetables in fresh or preserved form; processed meats and cheeses; and canned soups and pasta dishes). They are special classes of processed foods which require little or no major effort before consumption. These processed foods require less handling such as mild heating / warming or rehydration in hot or cold water. The processed food goes into a lot of technological transformation where food morphs into a simpler form with minimum handling. However, Daniels and Glorieux (2015) distinguished three forms of convenience foods such as (highly processed food items; moderately processed food and single components processed food). The provision of convenience food solution help to conserve the status quo rather than advancing gender equality, enabling women to combine motherhood and paid employment without significantly modifying either sets of demands. Also, Kanzler et al (2015), noted that many convenience foods are nutritionally unbalanced and are of a lower quality. However, most of these convenience foods are acceptable and utilized in home by people. Sensory attributes, health benefits and perceived ease of preparation are some of the factors that influences the knowledge, acceptability and utilization of convenience foods, all of which are important to working mothers (Costa & Jongen, 2006; Okeke & Anaekwe, 2025). The acceptability and utilization of convenience foods by working mothers is mostly driven by the need for time-saving solutions. Candel (2001) stated that time pressure affects the consumption of convenience foods, noting that working mothers are particularly likely to rely on these products due to their busy schedule

Working mothers used strategies such as selecting healthier convenience foods and combining them with fresh ingredients with the desire to provide nutritious meals (Gadhe 2024, Jackson et al, 2018). However, Jabs & Devine (2006) emphasizes socioeconomic status and demographic factors as factors that influences the utilization of convenience foods, the study indicates that lower-income working mothers might depend more on convenience foods due to limited time resources and economic constraints. Harris et al, (2010) explore how marketing strategies influence consumer perceptions and acceptability of convenience foods, highlighting the significant role of marketing in shaping food choices.

Yahia et al, (2016) stated that nutritional knowledge greatly influence food choices among consumers, including working mothers. The study emphasizes that better professional knowledge can lead to healthier food choices including the selection of healthier convenience foods. Organizing your meals ahead of time will help you utilize convenience foods more wisely without sacrificing nutrients. Meal planning and prepping ingredients can greatly lessen the stress and time burden on working mothers (Beshara et al, 2010; Nwaigwe et al, 2025).

The present study aims to investigate the knowledge, acceptability, and utilization of convenience meals among working mothers in higher institutions in Anambra State, given their dual roles as homemakers and career women. Working mothers may have it difficult to find the time and energy to prepare meals due to the demands of their jobs and domestic duties. As a result, individuals look to convenience meals as a simple and quick fix. Convenience foods can be a practical solution for modern lifestyles, but the health and financial implications are highly influenced by the products chosen and the frequency with which they are consumed. Healthier convenience foods options and consumer knowledge are essential to balance conveniences with nutrition and long term well- being. Inadequate dietary intake weakens the immune system and increases susceptibility to diseases. Infectious diseases, inturn, increases nutrient requirements and weakens the immune system. This vicious circle can begin when dietary intake is inadequate in terms of quality and still acceptable in regards to total caloric intake. The situation worsens once energy requirements are no longer met.

Therefore, it is essential to have a thorough grasp of the convenience food knowledge, acceptability, and usage among working mothers in higher institutions in Anambra State in order to establish strategies that would meet their demands while juggling their competing tasks. However, the knowledge, acceptability and utilization of convenience foods among working mothers in Anambra State varies, not all mothers accept convenience foods and there are several reasons for this. Many convenience foods are highly sodium, unhealthy fats, sugars and

preservatives, which can increase the risk of obesity, heart disease, diabetes, and hypertension, however some convenience foods are fortified or balanced (e.g pre- packaged salads or frozen vegetables), offering quick nutrition when chosen wisely. Convenience foods offer time and ease but often at the expenses of health and long term financial efficiency, making smart choices- like opting for minimally processed options can help balance the trade off.

There have been research works conducted on the acceptability and utilization of convenience foods among working mothers, but to what is known best to the researcher, non has been carried out to the acceptability of working mother's knowledge and utilizations of convenience foods in Anambra State. Thus, this study aims to delve deeper into the knowledge, acceptability and practices of convenience food usage among working mothers in Higher Institutions in Anambra State.

Research Questions. The following research questions guided the study: (1) What is the extent of knowledge of the working mothers in higher institutions in Anambra State on convenience foods?; (2) What are the various convenience foods available to mothers in higher institutions in Anambra State?.

Purpose of the Study. The main purpose of this study was to investigate the knowledge acceptability and utilization of convenience foods among working mothers in higher institutions in Anambra state. Specifically, the objectives of the study were to; (1) find out the extent of the working mothers' knowledge of convenience foods in the higher institutions in Anambra State; (2) identify the various convenience foods available to the working mothers in higher institutions in Anambra State.

Hypotheses. The following hypotheses guided the study and were tested at 0.05 level of significance: (1) There is no significant difference in the various convenience foods available among working and non-working mothers in higher institutions in Anambra State; (2) There is no significant difference in the extent of knowledge of convenience foods among teaching and non-teaching working mothers in higher institutions in Anambra State on convenience foods.

2. METHOD

2.1 Research Design

The research design for the study was the descriptive survey method and ex-post facto research design. According to Nworgu (2015), a descriptive survey is a type of study aimed at collecting data and systematically describing the characteristics, features, or facts about a given population. This design was appropriate for the study because it allows for the collection and analysis of data from a representation sample of a population to described the characteristics, opinions, behavior of the respondents without manipulating any variables. As the researcher collected data on the knowledge, acceptability, and utilization of convenience foods among working mothers in higher institutions in Anambra State and systematically described the gathered facts.

2.2 Research Object/Participant

The population of the study is 3,689 working mothers comprising all the working mothers in the six (6) government owned higher institutions in Anambra State of Nigeria. The six-government owned higher institutions include; Nnamdi Azikiwe University, Awka (NAU), Chukwuemeka Odimegwu Ojukwu University (COOU) Igbariam and Uli campuses, Federal Polytechnic, Oko (FPO), Anambra State, Polytechnic Mgbakwu (ASPM), Federal College of Education (Technical), Umunze (FCE) and Nwafor Orizu College of Education, Nsugbe (NOCEN) with working mothers as the intended respondents in these institutions.

The total population of the working mothers is three thousand, six hundred and eighty-nine (3,689), comprising one thousand, three hundred and twenty-nine (1,329) working mothers from Nnamdi Azikiwe University Anambra State; Four hundred and seventy-one (471) working mothers from Chukwuemeka Odimegwu Ojukwu University Igbariam/ Uli, Anambra State; five hundred and ninety-one (591) working mothers from Federal Polytechnic Oko, Anambra State, ninety-five (95) working mothers from Anambra State Polytechnic Mgbakwu, Anambra State , six hundred and eighty-five (685) working mothers from Federal College of Education, Umunze, Anambra State and five hundred and eighteen (518) working mothers from Nwafor Orizu College of Education, Nsugbe Anambra State.

The sample size for the study was three hundred and sixty-one (361) working mothers in Federal Higher Institutions in Anambra State. The sample size represented 10% of the entire large population of 3,689. .10% is ideal for sample size of a study. The study adopted a multi-stage sampling technique. In stage one, three federal higher institutions were purposefully selected out of the six government-owned higher institutions in Anambra State, Nigeria. These institutions were Nnamdi Azikiwe University, Awka (NAU), Federal College of Education (Technical),

Umunze (FCE), and Federal Polytechnic, Oko (FPO). Selecting only federal higher institutions ensured uniformity in the study.

In stage two, the total population of the six higher institutions was three thousand, six hundred and eighty-nine (3,689). From this population, a targeted group of two thousand six hundred and five (2,605) working women from the three selected institutions was identified. The researcher applied the Taro Yamane (1972) formula to determine the sample size from this defined population using simple random sampling: $n = \frac{N}{1+N(e)^2}$ gaverise to a sample size of 361.

Where: 'n' is the sample size; 'N' is the population (3,689) and 'e' is the level of significance (0.05). To avoid decimals, the researcher decided to adopt 361 as the sample size for this study. In stage three, a proportionate stratified sampling technique was used to determine the sample size for each individual higher institution. Consequently, Nnamdi Azikiwe University, representing 51% of the targeted population, contributed 184 participants to the sample. Federal Polytechnic, Oko, with 23% of the population, accounted for 83 participants, while Federal College of Education (Technical), Umunze, representing 26% of the population, contributed 94 participants. Together, these proportions amounted to a total sample size of 361 respondents.

2.3 Data Collection

The researcher employed the services of two research assistants to administer the questionnaire to the respondents. These assistants were briefed on proper administration, assisting respondents in clarifying items on the questionnaire where necessary, and promptly retrieving the completed copies of the questionnaire. Both the researcher and the assistants explained the questionnaire to the respondents. The questionnaire was administered to respondents during school hours at their faculties and departments to ensure immediate retrieval.

2.4 Data Analysis

Percentage was used to analyse the demographic data obtained. Mean ($\bar{X}$) Scores and standard deviations were used to answer the research questions. Four- Point-Likert scale was used and the bench mark for taking decision was a mean($\bar{X}$) score of 2.50. Any item with mean ($\bar{X}$) score of 2.50–4.00 shows that the respondents agreed with the item statement. A mean ($\bar{X}$) score below 2.50 indicates that the respondents disagreed with the item statement. Also, t-test statistics and ANOVA were used in testing the hypotheses. All the hypotheses were tested at 0.05 level of significance. The null hypotheses were up held if the p-value is greater than 0.05. When the p- value is less than 0.05, the null hypothesis was rejected. Specifically t-test was used to test hypotheses

3. RESULT AND DISCUSSION

3.1 Result

Table 1: Demographic information of the respondents for marital status, staff cadre, age range, and level of monthly income

Category	Frequency	Percent age
Marital Status:		
Married	280	77.6
Single Mothers	50	13.9
Widowed	21	5.8
Divorced	10	2.8
Total	361	100.0
Staff Cadre:		
Academic Staff	122	33.8
Non-Teaching Staff	239	66.2
Total	361	100.0
Age Range:		
Below 25 years	8	2.2
25 – 30 years	37	10.2
31 – 35 years	60	16.6
36 – 40 years	81	22.4
41 – 45 years	76	21.1
46 – 50 years	69	19.1

51 years and above	30	8.3
Total	361	100.0
Level of Monthly Income:		
Low Income	93	25.8
Middle Income	167	46.3
High Income	101	28.0
Total	361	100.0

Source: Field Work, 2024

Table 1 presents the demographic information of the respondents, detailing marital status, staff cadre, age range, and level of monthly income. Among the 361 participants, the majority were married (280, 77.6%), followed by single mothers. Regarding staff cadre, non-teaching staff constituted a significant highest proportion of (239, 66.2%), Academic staff made up a smaller proportion (122, 33.8%). This indicates that the sample primarily comprised of non-teaching personnel.

In terms of age, the respondents were distributed across several ranges. Those who were with between 36-40 years were (81, 22.4%). Also those between 41-45 years were (76, 21.1%). A small percentage (8, 2.2%) were below 25 years, those within the middle-income category were, (167, 46.3%) followed by high-income (101, 28.0%). Those with low-income were (93, 25.8%).

a) Presentation of Research Questions

Research Question 1:

What is the extent of knowledge of the working mothers in higher institutions in Anambra State on convenience foods?

Table 2: Mean ($\bar{X}$) score responses on the extent of knowledge of the working mothers in higher institutions in Anambra State on convenience foods (N=361)

S/N	Statement item	Mean	SD	Remark
1.	I am quite knowledgeable about convenience food	3.00	.0.946	High extent
2	I have knowledge about the potential health impact (eg. Diabetes, Obesity) of consuming too much convenience foods	2.46	1.164	Low Extent
3	I will like to learn more about alternatives to convenience foods	3.07	0.880	High Extent
4	I am aware of the nutritional value of some convenience foods compared to homemade meals .	3.27	1.006	High Extent
5	Convenience foods are moderate part of my diet	3.03	0.859	High Extent
6	I occasionally consult current information on convenience foods.	3.01	0.914	High Extent
7	I face minimal challenges incorporating convenience foods into my lifestyle based on my knowledge.	3.30	0.836	High Extent
8	I most times acquire knowledge by attending workshops or seminars on nutrition and meal planning related to convenience foods	3.10	0.933	High Extent

Very High Extent=VHE; High Extent=HE; Low Extent=LE; Very Low Extent=VLE

In Table 2, item 1 indicated that the working mothers had knowledge of convenience foods to a high extent with a mean ($\bar{X}$) score of 3.00. Item 2, with a mean score of 2.46, showed that the women were not very much knowledgeable about the potential health impacts of consuming convenience foods. Item 3, with a mean ($\bar{X}$) score of 3.07, indicated that the women are interested in learning more about alternative meals to convenience foods to a high extent. Item 4, with a mean ($\bar{X}$) score of 3.27, suggested that the mothers are highly aware of the nutritional value of some convenience foods compared to homemade meals.

Item 5, with a mean ($\bar{X}$) score of 3.03, showed that the women agreed that convenience foods could be part of a balanced diet to a high extent. Item 6, with a mean ($\bar{X}$) score of 3.01, indicated that the mothers actively seek information on convenience foods to a moderate extent. Item 7, with a mean ($\bar{X}$) score of 3.30, demonstrated that

the mothers face challenges incorporating convenience foods into their lifestyle, based on their knowledge, to a high extent. Item 8, with a mean ($\bar{X}$) score of 3.10, indicated that the women acquire knowledge of convenience foods by attending workshops or seminars on nutrition and meal planning to a high extent.

Therefore, this indicated that majority of the working women in higher institutions in Anambra State have knowledge of convenience foods and their utilization to a high extent except being knowledgeable on the potential health impacts (eg. Diabetes, Obesity) consuming too much convenience foods.

Research Question 2:

What are the various convenience foods available to mothers in higher institutions in Anambra State?

Table 3: Mean ($\bar{X}$) responses on the various convenience foods available to working mothers in higher institutions in Anambra State (N=361)

S/N	Statement item	Mean ($\bar{X}$)	Std Dev	Remark
1	Jollof indomie	2.63	1.159	Agree
2	Canned Chicken soup	2.63	1.135	Agree
3	Canned salad	3.03	.921	Agree
4	Canned fried rice	2.57	1.091	Agree
5	Canned macaroni	2.66	1.164	Agree
6	Canned jollof rice	2.96	.739	Agree
7	Canned cereal (quaker oat)	2.72	1.134	Agree
8	Canned beef	3.20	1.023	Agree
9	Canned fish (example Geisha/ sardine)	2.83	1.243	Agree
10	Sausage meat	2.65	1.224	Agree
11	Afan soup bundle	2.91	1.335	Agree
12	Beef / chicken stero bundle	2.78	1.071	Agree
13	Ofada rice bundle	2.43	1.151	Disagree
14	Egusi soup instant mix	2.68	1.173	Agree
15	Canned peanut	2.65	1.145	Agree
16	Packages/ bottle plantain chips	3.10	.910	Agree
17	Packaged potato chips	2.56	1.081	Agree
18	Canned prawn chips	2.64	1.154	Agree
19	Packaged biscuits	2.98	.730	Agree
20	Baked beans	3.03	1.027	Agree
21	Canned corn	2.77	1.218	Agree
22	Tomato sauce mix	2.66	1.257	Agree
23	Package Bambara nut flour	2.73	1.275	Agree
24	Beans flour	2.73	1.053	Agree
25	Small chop mix	2.41	1.139	Disagree
26	Spaghetti / macaroni	2.58	1.157	Agree

The result presented in Table 3 showed a mean ($\bar{X}$) range of 2.41 to 3.20. Twenty-four out of twenty-six item had their mean($\bar{X}$) scores above the cut-off point of 2.50, this showed that only items 13 and 25 (Ofada Rice bundle and small chop mix were available to few women). All the items indicated that most of the convenience foods were very much available to the working mothers in higher institutions in Anambra State. Item 13 (Ofada Rice bundle and item 25 small chop mix) with a mean($\bar{X}$) scores of 2.43 and 2.41 respectively indicated disagree. This showed that Ofada rice bundle and small shop mix were available to a small proportion of the working mothers. This showed that the various convenience foods such as canned fried rice, jollof indomie, canned chicken among others except Ofada rice bundle and small shop mix are available to a large proportion of the working mothers in higher institutions in the Anambra state.

Hypothesis 1:

Ho$_1$: There is no significant difference in the extent of knowledge of convenience foods among teaching and non-teaching working mothers in higher institutions in Anambra State on convenience foods

4.9 Table 10: t-test analysis on difference in the extent of knowledge of convenience foods among teaching and non-teaching working mothers in higher institutions in Anambra State on convenience foods

Group	N	Mean ($\bar{X}$)	SD	t-value	t-tab	Df	Decision

Group	N	Mean	SD	t-value	t-tab	df	Decision
Teaching working mothers	130	2.88	0.96				
				2.226	1.967	359	Rejected
Non-teaching working mothers	231	3.11	0.91				
Total	361						

Note: N= Number of respondents, SD = Standard Deviation, t-value = t-test statistical value, t-tab (t-critical value), df =degree of freedom;

The t-test analysis in Table 11 reveals a significant difference in the extent of knowledge of convenience foods between teaching and non-teaching working mothers in higher institutions in Anambra State. The t-value (2.226) exceeds the t-tab (1.967) at the 0.05 level of significance and 359 degrees of freedom, leading to the rejection of the null hypothesis. This indicates that teaching and non-teaching working mothers have significantly different levels of knowledge about convenience foods.

Hypothesis 2:

HO_2 :There is no significant difference in the various convenience foods available among working and non-working mothers in higher institutions in Anambra State.

Table 11: t-test analysis on difference in the various convenience foods considered to be available to the working and non-working mothers in higher institutions in Anambra State

Group	N	Mean ($\bar{X}$)	SD	t-value	t-tab	Df	Decision
Working mothers	130	2.59	1.05				
				2.092	1.967	359	Rejected
Non-working mothers	231	2.83	1.04				
Total	361						

Note: N= Number of respondents, SD = Standard Deviation, t-value = t-test statistical value, t-tab (t-critical value), df =degree of freedom;

In the analysis of the hypothesis in Table 10, the t-value (2.092) exceeded the t-table value (1.967) at the 0.05 level of significance and 359 degrees of freedom, indicating a statistically significant difference in the availability of convenience foods between working and non-working mothers in higher institutions in Anambra State. Therefore, the null hypothesis (H_{01}) is rejected, meaning there is a significant difference between the groups.

3.2. Discussion

a) extent of knowledge of the working mothers in higher institutions in Anambra State on convenience foods

Table 2 explores the extent of knowledge among working mothers in higher institutions in Anambra State regarding convenience foods. The study revealed that majority of working mother in the higher institution in Anambra State have knowledge of convenience foods to a large extent being knowledgeable on the potential health impacts (eg. Diabetes, Obesity) consuming too much convenience foods, consistent with findings by Burdeos (2023), who noted that educated women in Nigeria often have some understanding of convenience food options. In contrast, a study by Daniels and Glorieux (2015) found that awareness of the nutritional value of convenience foods compared to homemade meals was low, highlighting a need for increased nutritional education. Interest in learning about meal alternatives to convenience foods agreed with observations by Akalagboro et al, (2019), who reported that women in higher institutions often seek healthier, homemade options due to health concerns. Additionally, the extent to which convenience foods are perceived as part of a balanced diet showed variability; in a related study, Choudhary and Mishra (2019) found that, while some mothers valued convenience foods for dietary flexibility, others preferred traditional meals for balanced nutrition. Challenges in integrating convenience foods into daily routines based on knowledge levels were also noted, aligning with Endrizzi et al, (2015) observations on the practical struggles mothers face in balancing convenience with nutrition. Workshops and seminars on meal planning were less attended, further echoing the study by Hamilton (2016), which indicated a gap in access to dietary education programs.

The analysis of the hypotheses regarding the knowledge, acceptability and utilization of convenience foods among working mothers in higher institutions in Anambra State reveals significant insights into various influencing

factors. Hypothesis 1 the extent of knowledge about convenience foods differed significantly between teaching and non-teaching mothers, with educators exhibiting greater awareness. This heightened knowledge likely stems from their engagement in nutrition-related discussions and resources (Raj& Mishra, 2020).

b) Various convenience foods available to working mothers in the higher institutions in Anambra State.

Table 3 presents various convenience foods available to working mothers in higher institutions in Anambra State. The finding indicated that various convenience foods such as canned fried rice, jollof indomie, canned chicken, bean flour among others are available to a large proportion of working mothers except Ofada rice, bundle and small chops mix were available to few working mothers reflecting the growing trend of ready-to-eat or quick-preparation meals. For example, Jollof Indomie, which is highly favoured, aligns with findings by Omari et al, (2016), who noted the preference for fast-cooking noodles among Nigerian women balancing work and studies. In contrast, canned soups, such as chicken soup, were found to be less preferred in a study by Sinesio et al, (2018), as these products are often viewed as lacking freshness compared to homemade options. Similarly, canned jollof rice and canned macaroni were highlighted as convenient alternatives, agreeing with a related study by Jackson and Viehoff (2016), which emphasized the time-saving benefits of pre-cooked rice and pasta for working mothers. Packaged snacks like plantain chips and biscuits were popular, consistent with Adegunwa et al, (2024) study, which found these snacks to be highly accessible and portable for mothers in higher institutions. However, this contrasts with the limited preference for canned beef or fish, as fresh meat and fish were considered more nutritious by respondents in another study by Bower and Worsley (2019). The variety of convenience foods available suggests a balance between convenience and nutritional considerations among mothers in higher education. Hypothesis 2 demonstrated a notable difference in the availability of convenience foods between working and non-working mothers, indicating that employment status significantly influences food accessibility. This finding is particularly relevant, as employed mothers often face time constraints that drive them towards more readily available options (Pula et al, 2014).

4. RESEARCH IMPLICATIONS

The implications of this study on the knowledge, acceptability, and utilization of convenience foods among working mothers in higher institutions in Anambra State are many. Firstly, the significant differences in knowledge and Acceptability of convenience foods underscore the need for targeted educational interventions. Policymakers and educational institutions should prioritize programs that enhance awareness of the nutritional benefits and safe usage of convenience foods, particularly for working mothers who often face time constraints. Secondly, the findings regarding income levels and age highlight the necessity for tailored strategies that consider socio-economic factors. Health promotion initiatives should focus on low- and middle-income groups to ensure they access and utilize healthy convenience food options effectively.

Furthermore, the similar challenges faced by rural and urban mothers indicate the importance of community-based programs that address shared barriers to acceptance and utilization of convenience foods, such as cultural beliefs and misinformation. Finally, this study serves as a foundation for future research, encouraging exploration into the long-term health impacts of convenience food consumption among working mothers and their families. The findings advocate for a holistic approach to food education and policy development that addresses the unique needs of this demographic, promoting healthier dietary practices and improved family health outcomes.

5. FUTURE RESEARCH DIRECTIONS

a. Expand research to include a more diverse population, such as non-working mothers, fathers, and caregivers, to provide a comprehensive understanding of convenience food utilization across different family structures.
b. Investigate the nutritional impact of convenience foods on the health of children and families of working mothers. This can provide valuable insights into the implications of convenience food consumption on dietary quality and health outcomes.

6. CONCLUSION

The study examined the knowledge, Acceptability, and utilization of convenience foods among working mothers in higher institutions in Anambra State. Findings revealed that working mothers generally possessed a high level of knowledge about convenience foods, especially regarding their types, usage, and nutritional value. However, awareness of the potential health risks associated with excessive consumption was relatively low. A wide range of convenience foods was found to be available and commonly utilized, with exceptions like Ofada rice bundle and small

chop mix. Significant differences were observed in the knowledge and Acceptability of convenience foods based on staff cadre and employment status. These findings highlight the growing reliance on convenience foods due to time constraints associated with work and family responsibilities. Promoting awareness of both the benefits and health risks of convenience foods is essential to encourage informed dietary choices among working mothers.

ACKNOWLEDGMENTS

AUTHOR CONTRIBUTION STATEMENT

All authors discussed the research findings, contributed to the drafting of the final manuscript, and approved the final version for publication. All authors contributed to the research design (introduction, methods, results and discussion, conclusion), and all authors participated in drafting, revising, and approving the final manuscript.

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no conflicts of interest or potential conflicts related to the research, writing, and/or publication of this article.

REFERENCES

Adegunwa, M. O., Ogungbesan, B. O., Adekoya, O. A., Akinloye, E. E., Idowu, O. D., & Alamu, O. E. (2024). Production and Characterization of Snacks Utilizing Composite Flour from Unripe Plantain (Musa paradisiaca), Breadfruit (Artocarpus altilis), and Cinnamon (Cinnamomum venum). *Foods*, *13*(6), 852.

Akalagboro O.I, Oguagbaka S.K & Oti EU,(2019). Evaluating the consumption ofnon – home prepared food in Anambra State, Nigeria. *International journal of science & Healthcare*. Research. 2019;4(1): 75-81

Anaekwe, V. B., Onuigbo, I. O., & Okeke, M. N. (2025). Impact of Digital Tools on Service Delivery Efficiency in Government Ministries, Anambra State (2015–2023). *Journal of Public Policy and Local Government (JPPLG)*, 63-74.

Beshara, M., Hutchinson, A., & Wilson, C. (2010). Preparing meals under time stress: The experience of working mothers. Appetite, 55(3), 695–700. https:// doi. Org / 10. 1016 / j.appet. 2010.10.003

Bower, J. A., & Worsley, A. (2019) " Consumer perception of convenience foods: The impact of socio-demographic factors" Journal of Food Quality, 29(2), 102-112.

Burdeos, J. (2023). How to Add Convenience Foods to a Healthy Diet: 25 Ideas. Dietitian Johna. https://dieticianjohna.com

Candel, MJJM (2001) Consumers' convenience orientation towards meal preparation: *conceptualization and measurement.* Appetite 36, 15–28.Google Scholar

Chinedu, O. E., Benjamine, A. V., & Hossan, O. O. (2025). The impact of Herdsmen Activities on farmers' safety and food security in Anambra State Nigeria (2017–2022). *Journal Majelis Paspama*, *3*(02), 1-10.

Choudhary, R., & Mishra, S. (2019). "Marital status and dietary patterns: The role of family structure in food choices." Journal of Family and Consumer Sciences, 31(3), 44-59.

Costa, A. I. A., & Jongen, W. M. F. (2006). New insights into consumer-led food product development. *Trends in Food Science & Technology*, 17(8), 457-465.

Daniels, S. & Glorieux, I. (2015). Convenience, food and family lives. A socio- typological study of household food expenditure in 21st Century, Belgium. *Appetite*, 94, 54-61.

Endrizzi I, Torri L, Corollaro M.L, Dematte M, L, & Aprea E. (2015) A conjoint study on apple acceptability: Sensory characteristics and nutritional information. *Food Quality and Preference*; 40; 39-48.

Gadhe, S. (2024, October 28). The flavorful future: Malic acid revolutionizing convenience foods. LinkedIn. https://www.linkedin.com/pulse/flavorful-future-malic-acid-revolutionizing-foods-sanket-gadhe-g0qef

Hamilton, L. (2016). Balancing work and family: The dietary practices of professional mothers. Journal of Family and Work Studies, 13(2), 78-92.

Harris, J. L., Schwartz, M. B., & Brownell, K. D. (2010). Marketing foods to children and adolescents: *Licensed characters and other promotions on packaged foods in the supermarket.* Public Health Nutrition, 13(3), 409-417.

Jabs, J., & Devine, C. M. (2006). Time scarcity and food choices: An overview. Appetite, 47(2), 196-204. https://doi.org/10.1016/j.appet.2006.02.014

Jackson, P., & Viehoff, V. (2016). Convenience foods and time-saving strategies in households." Sociology of Food, 12(3), 92-108.

Jackson, P., Meah, A., & others. (2018). Reframing Convenience Food. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-319-78151-8_3

Kanzler, S., Lammer, G., Wagner, K.-H., & Elmadfa, I. (2015). Evaluation of nutrient density of convenience foods and their contribution to a balanced diet. *Food & Function*, 6(2), 479–493. https://doi.org/10.1039/C4FO00740G

Nwaigwe, H. C., Nwobi, F. O., & Okoye, N. S. (2025). A RURAL SECURITY MANAGEMENT AND FOOD SECURITY:: STUDY OF SOUTH EAST NIGERIA. *Review of Public Administration and Management Journal (ROPAMJ)*, *22*(1), 15-21.

Nworgu, B.G. (2015). Educational research: Basic issues and methodology (3rd. Ed). Enugu: University Trust Pub.

Okeke, M. N., & Anaekwe, V. B. (2025). E-administration and employee service delivery in selected government ministries in Anambra state: 2015-2023. *Humanities Horizon*, *2*(2), 109-121.

Omari, R., Jongerden, J., Essegbey, G., Frempong, G., & Ruivenkamp, G. (2016). The role of convenience in fast food consumption in urban Ghana. Journal of Scientific Research and Reports, 11(4), 1–12. https://doi.org/10.9734/JSRR/2016/27927

Pula, K., Parks, C.D & Ross, C.F. (2014). Regulatory focus and food choice motives: Prevention orientation associated with mood, convenience and familiarity. *Appetite*, (78), 15-22

Raj, S., & Mishra, B. B. (2020). Socio-demographic factor and selected buying behavioral attributes of purchasing convenience food: Multiple correspondence analyses to explore the relationship. *Parikalpana: KIIT Journal of Management*, *16*(1and2), 84-107.

Scholliers,P(2015). *Convenience foods.* What why, and when. Appetite,94:2-6.

Sinesio, F, Saba A, Peparaio M, Civitelli E.S, Paoletti F, & Moneta E (2018). Capturing consumer perception of vegetable freshness in a simulated real-life taste situation. *Food Research International*, 105 (3), 764-771.

Yahia, N., Achkar, A., Abdallah, A., & Rizk, S.(2016). Diet and lifestyle habits among Lebanese University Students: A cross- sectional study. BMC Public Health, 16, 550 https://doi.org/10.1186/s/2889-016-3728-2

Yamane, Y., (1972). Statistics: An Introductory analysis (3rd ed) Harper & Row.

Article Information