



Original Research Report

Cost-Effective Meal Planning Strategies for Maintaining Nutritional Quality in Financial Hardship among Families in Plateau State, Nigeria

Nanbam Ignatius Istifanus^{1*}

¹Department of Home Economics and Hospitality Management, University of Nigeria, Nsukka 410001, Enugu State, Nigeria

***Correspondence:** Nanbam Ignatius Istifanus, Department of Home Economics and Hospitality Management, University of Nigeria, Nsukka 410001, Enugu State, Nigeria (Email: nanbizil8617@gmail.com)

Abstract: This study addresses the issue of maintaining nutritional quality amidst financial hardship faced by families in Plateau State, Nigeria. Surveys research designed was used for the study. The study covers 3 local government areas in Plateau State, ensuring diverse representation. The sample size of 400 families residing in Plateau State was used. Questionnaire was used to collect data for the study which capture the demographic information, dietary habits, household budget allocation for food, and perceptions of nutritional value. Mean and standard deviation was used to present result for the findings. The findings of the study revealed that that there should be cost-effective meal planning strategies in promoting healthy eating habits. Also, socioeconomic factors impact cost-effective meal planning in promoting healthy eating habits. Based on the findings, stakeholders, policymakers, and community organizations should implement interventions that support cost-effective meal planning, enhance nutritional literacy, and alleviate financial burdens on families in Plateau State. This study may empower families to make informed dietary choices and achieve better health outcomes despite economic constraints.

Keywords: Families, Financial Hardship, Meal Planning, Nutritional Quality

Introduction

Nutritional quality is based to a large extent on the amount of nutrients found in food through effective meal planning. The term "nutritional quality" describes how well a diet provides necessary nutrients while limiting the consumption of harmful substances like salt, saturated fats, and added sugars (Cena & Calder, 2020; Liu, Steele, Li, Karageorgou, Micha, Monteiro, & Mozaffarian, 2022). Thus, nutritional quality may be defined as a meal or diet's total healthfulness or nutritional value measured by how well it provides necessary nutrients, promotes health, and lowers the risk of chronic illnesses. Marty, de Lauzon-Guillain, Labesse, and Nicklaus (2021) investigated the relationship between shifts in the reasons for food choices and variations in nutritional quality during the lockdown. According to their findings, the nutritional quality of the food was poorer during the lockdown than it was before, and there was a substantial shift in the reasons people chose what they ate, with weight management being linked to higher nutritional quality. Additionally, food insecurity and the incidence of undernutrition are among the problem faced in Nigeria due to high cost of living (Fadare et al., 2019). Sustaining dietary quality is beneficial for general health and wellbeing, especially when finances are tight.

A household is said to be in financial hardship if they are having trouble paying their bills and may find it difficult to buy food and other essentials (Friedline, Chen, & Morrow, 2021). This is because a family's capacity to maintain a healthy diet may be impacted by economic downturns, job loss, natural catastrophes, medical costs, debt, and unforeseen expenses (Bowen, Elliott, & Hardison-Moody, 2022). Accordingly, incapacity to pay for or meet up with daily living expenses with his or her spouse, family needs and any dependents to survive is defined as financial hardship. Any claim of continuous financial strain during the previous 12 months, regardless of whether it was distressing or described as somewhat, very, or extremely difficult "to meet monthly payments or bills," might be classified as financial hardship.

Making meal plans is also known as meal planning (D'Ambrosio, 2023). It is true that "we eat with our eyes" and that a well-planned meal is always visually pleasing (Whitney et al, 2019). The process of organizing meals in advance utilizing one's tastes, timetable, available foods, seasonal produce, and on-sale goods is known as meal planning. This entails creating strategies that are nutrient-sound. Another stage in meal planning is choosing the meals you will eat within a specific time range. One example would be to plan your meals for the next week, including breakfast, lunch, and dinner. Therefore, meal planning is a great way to save money, time, and preserve your health by taking control of your weekly food plan. According to research by Leung et al. (2019), those who planned their meals are more likely to eat a wider range of nutrient-dense foods than people who do. Caspi et al. (2019) demonstrated that low-income households that implemented meal planning strategies were better able to stretch their food budgets while maintaining adequate nutrition. Hence, meal planning can positively influence dietary quality and health outcomes.

There hasn't been much discussion on meal planning in scientific literatures up until this point. Eating at when due can help diet health of human thus there is need to focus on nutrition and establish some of the strategies in order to set ourselves up for success. Meal planning increases the likelihood

of eating a healthy diet to saves money, improves nutrition, lowers stress, and may even meet nutritional needs. According to Monsivais et al. (2017). Meal planning and budgeting are practical ways to save costs on food without sacrificing nutritional quality. Families may extend their food budget by prioritizing nutrient-rich items and reducing waste via meticulous meal planning. Hence, families need to think ahead, check stock, create meal ideas and be able to write it down, shop and preserve the gotten stocks. Meal planning that is both economical and nutrient-dense requires thoughtfully choosing recipes and ingredients (Van Dooren, 2018). It is not too expensive and but yields good effects. Meal planning techniques save families money, it's important to take into account how they may affect the quality of the food. Research has indicated that, regardless of price, meals cooked at home are typically healthier than those eaten at fast-food or restaurant chains.

Families may stay within budgetary constraints and maintain a high standard of nutrition by giving priority to whole, nutrient-dense meals and reducing the use of processed components. Meal planning that is economical is a sensible strategy for preserving nutritional quality when things go tight financially. Families may stretch their food budget while making sure their nutritional needs are fulfilled by creating meal planning, shopping in bulk, and adding seasonal vegetables into their diet. Even in hard economic circumstances, it's essential to give nutrient-dense meals first priority and stay away from highly processed choices in order to support general health and well-being. The significance of income and food costs in influencing dietary choices, especially for low-income groups, was highlighted by Darmon and Drewnowski (2015). Also, Loopstra et al. (2016) indicated that individuals experiencing food insecurity were more likely to rely on cheaper, energy-dense foods with lower nutritional value, underscoring the need for targeted interventions to address socioeconomic disparities in diet quality. By adopting cost-effective meal planning strategies, families can stretch their food budget further without sacrificing nutrition.

1.1. Problem of the study

With the economic situation of the country, Plateau State faces various economic and social issues, including poverty and food insecurity. Also, In the face of these, maintaining adequate nutritional intake becomes a challenge for many families. Families often struggle to access nutritious foods due to financial constraints, leading to malnutrition and related health problems. The problem of cost-effective meal planning strategies directly correlates with the field of public health, nutrition, and socio-economic development. In Plateau State, as in many regions worldwide, there is a pressing need to find sustainable solutions to ensure that families, particularly those facing financial difficulties, can afford and access nutritious meals. This issue aligns with the Sustainable Development Goals (SDGs), particularly Goal 2 (Zero Hunger) and Goal 3 (Good Health and Well-being), which emphasize the importance of food security and nutrition for overall well-being. To address this, researchers and policymakers need to explore and implement effective strategies that enable families to plan and prepare nutritious meals within their limited financial means. Hence, this study aims to determine the cost-effective meal planning strategies for maintaining nutritional quality in the face of financial hardship among families in Plateau State.

1.2. Purpose of the Study

The general purpose of this study was to determine cost-effective meal planning strategies for maintaining nutritional quality in financial hardship among families in Plateau State. Specifically, the study sought to;

- (a) determine cost-effective meal planning strategies in maintaining nutritional quality in financial hardship among families in Plateau State and
- (b) identify socioeconomic factors impacting cost-effective meal planning in maintaining nutritional quality in financial hardship among families in Plateau State.

1.3. Research Questions

The following research questions guided the study:

- (a) What are the cost-effective meal planning strategies in maintaining nutritional quality in financial hardship among families in Plateau State?
- (b) What are the socioeconomic factors impacting cost-effective meal planning in maintaining nutritional quality in financial hardship among families in Plateau State?

2. Methods and Materials

2.1 Design for the Study

The study adopted descriptive survey research design. Rouse (2017) described descriptive survey research as the collection of data obtained by asking individuals questions either in person, on paper, by phone or online. Rouse added that conducting surveys is one form of primary research, which is the gathering of first-hand data from its source and the information collected may also be accessed subsequently by other parties in secondary research.

2.1.1 Ethics Statement

An ethical approval was obtained from the Research Ethics Committee of the Department of Home Economics and Hospitality Management, University of Nigeria, Nsukka. Written consent was obtained from the respondents.

2.2. Area of the Study

The study was carried out in Plateau State which is made up of 17 Local Government Areas. Plateau State is located in the central region of Nigeria and is known for its diverse culture, beautiful landscapes, and rich history. It is often referred to as the "Home of Peace and Tourism" due to its tranquil environment and numerous tourist attractions. The state was chosen because it is located at the middle belt of Nigeria and is being affected with securities challenges.

2.3. Population and Sample

The population for the study was made up of all both youth and parents in the area of the study. The estimated number was 3,206,531 (Source: National Population Commission of Nigeria & National Bureau of Statistics). 400 youths and parents were sampled from the population using Taro Yamane formula. Simple random sampling technique was used to select one local governments each from the three senatorial districts in the 17 Local Government Area of the state. Convenience sampling techniques was used to select respondent for the study.

2.4. Instrument for Data Collection

A structured questionnaire was used to collect data. It was developed based on the research questions and literature reviewed for the study. The questionnaire was broadly categorized into one part to obtain information on cost-effective meal planning strategies for maintaining nutritional quality in financial hardship among families. Five-point responses scale of: strongly agreed (SA) 5 points, agree (A) 4 points, Undecided (U) 3 points, Disagree (D) 2 points and Strongly Disagreed (SD) 1 point. The instrument for data collection was subjected to face validation by three Experts, in the Department of Home Economics and hospitality Management Education, Faculty of Vocational and technical education, University of Nigeria, Nsukka. The copies of the questionnaire were given to the experts to read through and point out ambiguous and hanging items or statement and check the items in the questionnaire one by one to make sure the entire questionnaire items could answer the research questions raised. The observations and corrections made by the experts were used to improve the quality of the questionnaire for data collection for the study. The internal consistency of the questionnaire items was determined by using Cronbach alpha reliability method. The copies of the questionnaire were given to parents in Benue state which was outside the study area. The data collected through the questionnaire was analysed using Cronbach alpha reliability method and 0.82 reliability coefficient value was obtained.

2.5. Method of Data Collection

Four hundred copies of the questionnaire were administered to the respondents by hand and on point collection was made with the help of three research assistants. The collected copies of the questionnaire were arranged and the responses were coded for data analysis

2.6. Method of Data Analysis

Mean and Standard Deviation were used to analyze the data collected through the use of the questionnaire. A cut-off point of 3.50 on 5-point rating scale was used for decision. This implies that any item with a Mean value of 3.50 or above was agreed upon by the respondents while any item with a Mean value below 3.50 was regarded as disagreed upon by the respondents.

3. Results and Discussion

3.1. Research Question 1: What are the cost-effective meal planning strategies in promoting healthy eating habits?

Table 1: Cost-Effective Meal Planning Strategies in Maintaining Nutritional Hardship among Families in Plateau State

	Cost-Effective Meal Planning Strategies	Mean	SD	Decision
1	More in control of my finances when I engage in cost-effective meal planning	3.74	0.84	Agreed
2	Meal planning helps save money on groceries.	3.61	0.22	Agreed
3	Utilizing seasonal and local produce in meal planning contributes to cost-effectiveness	3.53	0.74	Agreed

4	Cost-effectiveness helps me in good diet quality	3.67	1.29	Agreed
5	Planning meal help to improve my dietary quality	3.66	0.18	Agreed
6	Planning meal prevent to wastage	1.68	1.16	Disagree
7	Budgeting, helps in meal planning when shopping	3.82	1.22	Agreed
8	Meal planning can safe excess spending in the family	2.56	0.86	Disagree
9	Meal planning strategies helps to improve physiological stress	2.41	0.97	Disagree
10	Preparing meals in bulk (e.g., batch cooking) is an effective cost-saving strategy	2.59	0.26	Disagree

Key: SD = Standard Deviation

Table 1 shows findings on cost-effective meal planning strategies in promoting healthy eating habits. The Table reveals that 10 items had a mean score ranging from 1.68 to 3.82. However item 1-5 and 7 agreed that there should be cost-effective meal planning strategies in promoting healthy eating habits with the mean rating from ($\bar{X} = 3.53, SD = .74$) - ($\bar{X} = 3.82, SD = 1.22$) while item 6, 8-10 disagreed with the mean rating of ($\bar{X} = 1.68, SD = 1.16$) - ($\bar{X} = 2.59, SD = .26$). Hence, majority of the items were agreed upon by the respondents as cost-effective meal planning strategies in promoting healthy eating habits.

3.2. Research Question 2: What are the socioeconomic factors impacting cost-effective meal planning in promoting healthy eating habits?

Table 2: Socioeconomic Factors Impacting Cost-Effective Meal Planning among families in Plateau State

	Socioeconomic Factors Impacting Cost-Effective Meal Planning	Mean	SD	Decision
1	Income level influences one's ability to plan cost-effective meals	3.78	0.99	Agreed
2	Access to affordable food options promotes cost-effective meal planning	3.60	0.48	Agreed
3	Educational level affect one's ability to plan meals economically	3.82	1.25	Agreed
4	Household size impacts the feasibility of cost-effective meal planning	3.51	0.42	Agreed
5	Geographic location affects the cost-effectiveness in meal planning	2.20	0.68	Disagreed
6	Access to kitchen facilities influence the ability to plan meals economically	2.55	1.01	Disagreed
7	Cultural dietary preferences impact the cost-effectiveness of meal planning	2.91	0.62	Disagreed
8	Knowledge about nutrition affect cost-effectiveness in	3.74	0.99	Agreed

meal planning				
9	Time availability influences the feasibility of planning cost-effective meals	3.46	0.72	Disagreed
10	Personal motivation impact the ability to plan meals economically	3.72	0.98	Agreed

Key: SD = Standard Deviation

Table 2 shows socioeconomic factors impacting cost-effective meal planning in promoting healthy eating habits. The Table reveals that 10 items had a mean score ranging from 2.20 to 2.91. However item 1-4, 8 and 10 agreed that socioeconomic factors impact cost-effective meal planning in promoting healthy eating habits with the mean rating from ($\bar{X} = 3.51, SD = .42$) - ($\bar{X} = 3.82, SD = 1.25$) while item 5-7 and 9 disagreed with the mean rating of ($\bar{X} = 2.20, SD = .86$) - ($\bar{X} = 2.91, SD = .62$). Hence, majority of the items were agreed upon by the respondents as socioeconomic factors impact cost-effective meal planning in promoting healthy eating habits.

The study revealed that families control their finances when they engage in cost-effective meal planning. The study also revealed that meal planning helps to save money on groceries, improves dietary quality. Utilizing seasonal and local produce in meal planning contributes to cost-effectiveness. This is in line with Monsivais et al. (2017) whose study revealed that meal planning and budgeting are practical ways to save costs on food without sacrificing nutritional quality. Also, Leung et al. (2019) noted that those who planned their meals were more likely to eat a wider range of nutrient-dense foods than people who didn't. Caspi et al. (2019) demonstrated that low-income households that implemented meal planning strategies were better able to stretch their food budgets while maintaining adequate nutrition. Results of the present study also showed that meal planning helps save money on groceries, cost-effectiveness helps them in good diet quality, planning meal help to improve my dietary quality, and planning meal prevents to wastage. This finding is in consonance with Caspi et al. (2019) who demonstrated that low-income households that implemented meal planning strategies were better able to stretch their food budgets while maintaining adequate nutrition. The study further revealed that family's income level influences one's ability to plan cost-effective meals and access to affordable food options for cost-effective meal planning also geographic location affects the cost-effectiveness of meal planning. This finding is in line with Darmon and Drewnowski (2015) who noted the significance of income and food costs in influencing dietary choices, especially for low-income groups. Also, Loopstra et al. (2016) indicated that individuals experiencing food insecurity were more likely to rely on cheaper, energy-dense foods with lower nutritional value, underscoring the need for targeted interventions to address socioeconomic disparities in diet quality. Monsivais et al. (2017) also pointed out that meal planning and budgeting are practical ways to save costs on food without sacrificing nutritional quality. More so, households employ various coping mechanisms and adaptive strategies to stretch limited resources while prioritizing nutritional needs. The study identified key factors and strategies for influencing meal planning decisions, such as income level, food prices, cultural preferences, and

nutritional knowledge.

4. Conclusion

This research underscores the importance of tailored meal planning strategies in mitigating the adverse effects of financial hardship on nutritional well-being. Implementing evidence-based interventions and fostering collaborative efforts with stakeholders will empower families to make informed dietary choices and achieve better health outcomes despite economic constraints. Cost-effective meal planning strategies is important in maintaining nutritional quality in the face of financial hardship among families. Therefore, the follow recommendations and are made for the study: Stakeholders, policymakers, and community organizations should implement interventions that will support cost-effective meal planning enhance nutritional literacy, and alleviate financial burdens on families in Plateau State. Community-based initiatives should offer workshops and resources to empower families with meal planning skills tailored to their financial realities. Individuals can benefit from adopting strategies such as meal prepping, budgeting, and smart shopping to maximize nutritional value within limited budgets.

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None

Conflict of Interest

There is no conflict of interest to declare.

Author Contributions

The author was responsible for the study's conceptualization, methodology, writing, data gathering, analysis, and revision.

Data Availability Statement

The datasets used in this investigation are accessible upon request. Further questions should be directed to the author.

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