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Impacts of Petroleum Subsidy Removal on Dietary Choices and Nutritional Status of Students of Federal Polytechnic Ede

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Abstract

This study investigates the ramifications of removing petroleum subsidies on students' dietary behaviors and nutritional well-being. School of Applied Sciences Department of Federal Polytechnic Ede, Osun State. Its objectives encompass assessing the impact of subsidy elimination on transportation costs, scrutinizing shifts in food consumption patterns in response to increases in price fluctuations, evaluating students' nutritional status pre- and post-subsidy removal, and identifying factors influencing dietary choices and food security within this context. Data from 200 respondents were collected through meticulously crafted self-administered questionnaires. The analysis involved descriptive statistics and chi-square analysis. The findings divulge significant insights. Notably, a considerable portion of respondents (33.7%) fell within the 21-26 age bracket, with a majority (73.2%) residing off-campus. A substantial segment (33.2%) spent less than ₦500 daily on food. Over half of the respondents (50.7%) were malnourished, as evidenced by a BMI below 18. However, a sizable proportion (34.6%) maintained a normal BMI (18-24.5), while smaller percentages were categorized as overnourished (7.3%) or obese (4.9%). Therefore, this study provides compelling evidence of the profound effects of petroleum subsidy removal on students' food habits and nutritional status. It emphasizes the imperative of proactive measures, such as nutritional education programs, to address the challenges and promote dietary health and well-being in educational settings.

Keywords: Subsidy, Food choice, Transportation cost, Nutritional well-being

1.0 Introduction

A petroleum or fuel subsidy is a government policy providing financial assistance or support to reduce the cost of petroleum-based products such as gasoline, diesel fuel, and sometimes liquefied petroleum gas (LPG) for consumers (Igwe, 2024). These subsidies are typically aimed at shielding consumers from the full impact of global market fluctuations in oil prices, ensuring that energy remains affordable and accessible to the population (Davis, 2016). Subsidy removal refers to the deliberate and often government-led action

of discontinuing or reducing financial incentives or support previously provided to specific sectors or products, such as petroleum, agriculture, or education (Trencher *et al.,* 2023). This policy decision eliminates or reduces subsidies, which can lead to higher prices for the affected goods or services, impacting consumers and industries (Clements & Gupta, 2016).

Food habits are the routine choices and practices individuals and groups employ regarding food and beverages (Kucharczuk *et al.,* 2022). These choices encompass a range of actions, including what foods are consumed, how they are prepared when consumed, and even the social and cultural context in which meals are shared. The term "food habits" also extends to dietary preferences, restrictions, and rituals that individuals and communities follow. It also involves consistent patterns of food consumption, including the types of foods consumed, the frequency of meals, portion sizes, meal timing, and food preparation methods (Popkin, 2017). Food habits are shaped by cultural, social, economic, environmental, and personal factors and play a crucial role in determining an individual's overall dietary intake and nutritional status (Chen & Antonelli, 2020). Food habits and nutritional status are intrinsically linked to human health and well-being. A person's nutritional status reflects the balance between the nutrients they consume and the nutrients their body requires for optimal functioning. This balance is influenced by various factors, including dietary choices and patterns, cultural practices, socioeconomic conditions, and access to nutritious foods (Drewnowsk & Almiron-Roig, 2010).

Nutritional status is a fundamental concept in nutrition and public health (Richardson & Lovegrove, 2021). It is a crucial indicator of an individual's or a population's overall well-being, health, and dietary adequacy. Nutritional status can be defined as the current state or condition of an individual's or a population's health concerning their nutrient intake and utilisation, as well as any nutritional deficiencies or excesses. (Dwyer & Bailey, 2019; Ogundele *et al.,* 2023). It reflects the balance between the intake of essential nutrients (such as macronutrients, vitamins, and minerals) and the body's physiological needs for growth, maintenance, and overall health. According to the World Health Organization (WHO), nutritional status is "an individual's health in terms of the presence or absence of the nutrients required for the maintenance of optimal health, normal growth, development, work productivity, and well-being. Nutritional status refers to an individual's overall health and well-being as influenced by dietary intake, nutrient absorption, and utilisation. It reflects the balance between the nutrients a person consumes through their diet and their body's requirements for growth, maintenance, and optimal functioning. Nutritional status is typically assessed by considering various indicators such as body weight, height, body mass index (BMI), biochemical markers, and clinical signs and symptoms of malnutrition (Budzyński & Szukay, 2022).

2.0 Methodology

2.1 Research Design

This study employed a quantitative survey approach. This design is chosen to capture a comprehensive understanding of the impact of petroleum subsidy removal on the removal of food habits and nutritional status of applied science students at Federal Polytechnic Ede, Osun State.

2.1.1 Sampling Strategy

This study employed a stratified cluster to achieve a representative sample for this study. Sampling strategy. The stratification was based on the five departments that form the School of Applied Sciences: Nutrition and Dietetics, Computer Science, Statistics, Geology, and Hospitality Management department. Each department represented different tribes and students from all over Nigeria. Each department has an average of 250 students, and 40 students were randomly selected from each department.

2.2 Population of Study

200 respondents were selected from the School of Applied Science population, with a total of 650

students' figure, out of which the sample size was determined. The School of Applied Sciences was chosen because of its proximity to the researcher.

2.3 Research Instrument and Instrumentation

Data for this study were collected from primary and secondary sources. The primary source of data collected was a structured questionnaire designed to elicit information on the effect of Petroleum Subsidy Removal on Food Habits and Nutritional Status of Students in Applied Sciences of Federal Polytechnic Ede, Osun State. The secondary sources of data collection were textbooks, journals and scholarly materials.

2.4 Method of Data Collection

This study was based on two possible data sources: primary and secondary sources. The primary data for this study consists of raw data generated from responses to questionnaires and interviews by the respondents. Well-structured and pre-tested interviewer-administered questionnaires were used to access information on respondents' dietary choices, daily feeding allowance, and eating habits. The secondary data includes information obtained through literature review: journals, monographs, textbooks, and other periodicals (Adewumi & Ogundele, 2024).

2.5 Method of Data Analysis

Data collected were analyzed using a frequency table, percentage, and mean score analysis, while the nonparametric statistical test (Chi-square) was used to test the formulated hypothesis using SPSS (version 26.0).

4.0 Result and Discussion

Information on socio-demographic characteristics in Table 4.1 above shows that 92 (44.9%) of the respondents were within the age range of 15-20 years, while only 69 (33.7%) were 21-26 years, and the remaining 19.0% were 27 years, and above. The subject was made up of 75 (37.5%) male and 125 (62.5%) female.

Table 4.1 Social Demographic Characteristics of Respondent

Variable	Frequency	Percentage (%)
Age		
15 – 20 years	92	44.9
21-26 years	69	33.7
27- above	39	19.0
Gender		
Male	75	36.6
Female	125	61.0
Total	200	100

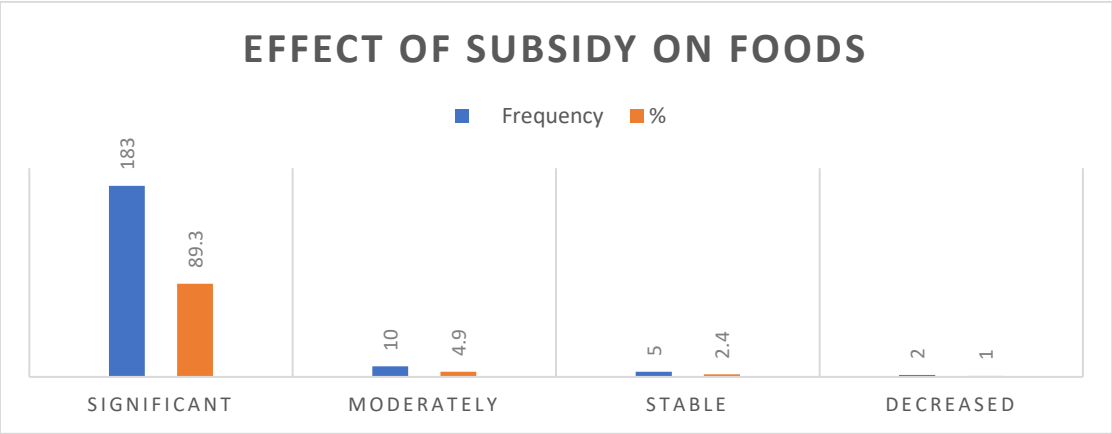

Figure 4.1: Effect of Subsidy Removal

Table 4.2 Effect of Subsidy Removal on Transportation and Nutrition

Daily transportation amount		
100-150	141	68.8
150-200	54	26.3
200-250	5	2.4
Total	200	100
How accessible are nutritious foods to you?		
Harder	161	78.5
Easy access	39	19.0
Total	200	100

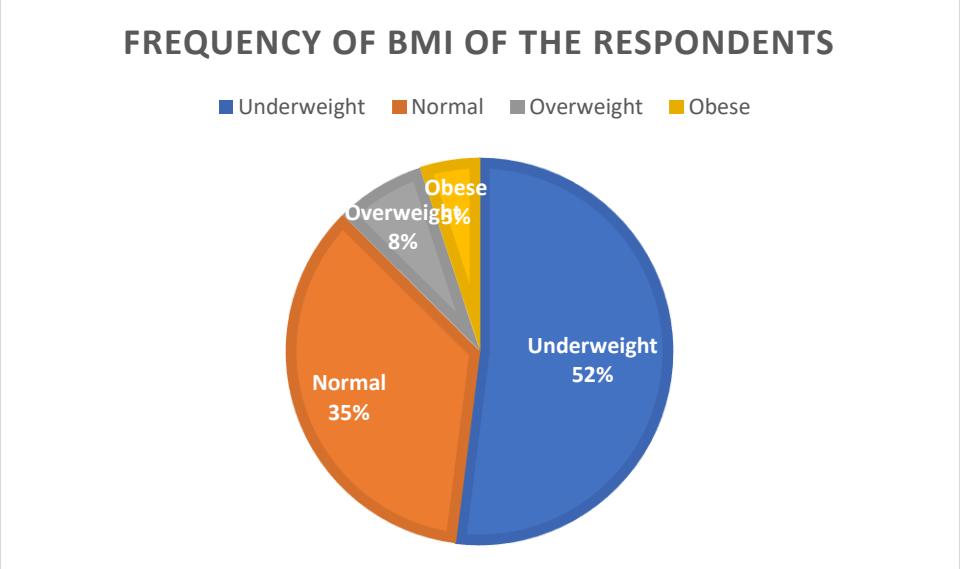

Figure 4.2: Nutritional Status

Table 4.3 Food Habit

Food Habit Variable	Frequency	Percentage (%)
Any change in vitamin and mineral intake		
Fewer Vitamin	110	53.7
Still the same	70	34.1
Taking steps	09	4.4
Not sure	11	5.4
Total	200	100
Frequency of eating at a restaurant?		
Less frequent	101	49.3
The same	80	39.0
More frequent	10	4.9
Not sure	09	4.4
Total	200	100
Any effect on a variety of foods		
Less diverse range	135	65.9
Still diverse	60	29.3
Not sure	05	2.4
Total	200	100

The effect of subsidy removal (Fig. 4.1) on the respondents shows that 183 students (89.3%) were significantly affected by food procurement, 4.9% were moderately affected, 2.4% were stable even with the subsidy removal and the remaining 1% decreased. Table 4.2 shows that a significant number of respondents (89.3%) felt the adverse effects of fuel subsidy removal on foods. The table also shows that 78.5% of respondents have difficulty accessing nutritious food because of subsidies. It also shows that 12.2%, 66.3%, and 19.5% of respondents heard information about subsidies and health, to which they responded yes, no and not sure, respectively. The above table (4.3) shows that 53.7% of the respondents consume fewer vitamins and minerals since the subsidy was removed. It also shows that 71.7% and 25.9% of respondents were aware of the impact on nutrient intake, and they responded yes and not sure, respectively. Figure 4.2 above shows that 50.7% of respondents were underweight, while only 4.9% were obese. The information on the effects of fuel subsidy removal this result is in tandem with Suke, 2020 (Table 4.2), which revealed that 183 respondents, comprising 89.3% of the sample, considered the effect of subsidy removal negative and significant. While a small proportion of respondents, 10 individuals, accounted for 4.9% of the respondents, perceived the impact as moderate. Furthermore, 5 respondents, making up 2.4%, believed the impact was relatively stable. This result is similar to the results of Suke, 2020. In contrast, a tiny proportion, only 2 respondents or 1.0%, reported that the impact of fuel subsidies and food prices had decreased. 141 individuals, representing 68.8% of the sample, reported spending between 100 and 150 currency units on daily transportation. Furthermore, 54 respondents, accounting for 26.3%, reported daily expenses

falling in the 150 to 200 currency units. In contrast, fewer respondents, specifically 5 individuals or 2.4%, reported daily transportation expenses between 200 and 250 units of currency. 161 individuals, comprising 78.5% of the sample, found it harder to access nutritious foods.

Findings on vitamin and mineral consumption among respondents show that 53.7% of the subjects experience a decrease in their intake of vitamins and minerals. This result is in line with Mohsen *et al.* (2021). Since the petrol subsidy was removed, this may result from the high cost of commodities like fruits and vegetables in the market. 70 individuals, accounting for 34.1%, believed their vitamin and mineral intake had remained the same, as indicated by the response. 9 individuals, or 4.4%, reported addressing changes in their vitamin and mineral intake, indicating proactive measures. According to this study (Figure 4.2), 50.7% of the subjects were under-nourished, indicating a BMI below 18. A substantial number of respondents, 34.6%, were classified as having a normal BMI 18 - 24.9. A smaller but notable proportion of respondents, 15 individuals or 7.3%, were categorised as overweight (BMI 25 – 30), while only 4.9% were classified as obese, indicating a BMI in the obese range. This result is similar to what (Clements & Gutpa, 2019) reported in his study, where he affirms that prices affect the affordability of foods, which may lead to under-nutrition.

4.0 Conclusion

The removal of petroleum subsidies has profoundly impacted students' dietary choices and nutritional status at Federal Polytechnic Ede. With the increase in fuel prices, students face heightened transportation and food costs, significantly reducing their purchasing power. As a result, many students struggle to afford a diverse range of nutritious foods, compromising their food security and overall nutritional status. The inability to access a variety of foods has led to poor dietary habits, with students often resorting to cheaper, less nutritious options. This shift affects their immediate health and could have long-term implications on their academic performance and well-being. Therefore, removing subsidies has created a challenging environment for students, exacerbating food insecurity and negatively impacting their nutritional choices and health outcomes.

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