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Consumer Attitudes Towards Organic Supplement Intake and Its Role in Sustainability: A Case Study of Staff of FCAI, Ebonyi State

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ABSTRACT

This study examined consumer attitudes toward organic supplement intake and its role in sustainability among staff of the Federal College of Agriculture, Ishiagu (FCAI), Ebonyi State, Nigeria. A simple random sampling technique was used to select 120 respondents from 12 departments. Data were analyzed using descriptive statistics, Likert scale analysis, and probit regression. The results showed that the mean age of respondents was 45.17 years, with 68.3% male and 73.3% married. Although 100% of respondents were aware of organic supplements, only 63.3% have taken them in the past, and just 26.7% continue usage. The Likert analysis revealed positive attitudes toward organic supplements (grand mean = 3.42), with respondents agreeing that organic supplements are worth the cost (mean = 3.87) and preferable to conventional ones (mean = 3.77). Regarding perceived health benefits, respondents strongly agreed that organic supplements boost immunity (mean = 4.15, SD = 0.47) and improve overall health (mean = 4.08, SD = 0.56), with a grand mean of 3.94. The probit regression estimated positive predictors of organic supplement intake as; age (coefficient = 0.2621, $p < 0.10$), years of working experience (coefficient = 0.4333, $p < 0.05$), income (coefficient = 1.2750, $p < 0.10$), having a health issue (coefficient = 3.8572, $p < 0.05$), perceived health benefit (coefficient = 5.293, $p < 0.05$), availability (coefficient = 1.9218, $p < 0.10$), and trust (coefficient = 2.7456, $p < 0.05$). Conversely, cost of supplements (coefficient = -1.1086, $p < 0.10$) was a significant barrier. The study concludes that while awareness and positive attitudes exist, cost and limited availability hinder sustained consumption. Recommendations include subsidizing organic supplements, improving availability through certified vendors, and organizing health awareness seminars targeting younger staff.

Keywords: *Organic supplements, consumer attitudes, perceived health benefits, and sustainability*

INTRODUCTION

In recent years, there has been a growing global shift toward healthier lifestyles and environmentally responsible consumption patterns. This shift has significantly increased interest in organic products, particularly organic supplements, as consumers become more conscious of the relationship between diet, health, and sustainability. Organic products are generally defined as those produced without the use of synthetic chemicals, pesticides, genetically modified organisms (GMOs), or artificial additives, thereby promoting ecological balance and biodiversity (IFOAM, 2014). Within this context, organic supplements such as vitamins, minerals, and herbal products derived from organically grown sources have emerged as an important component of preventive healthcare and wellness strategies.

The consumption of organic supplements is often associated with perceived health benefits, including improved immunity, reduced exposure to harmful chemicals, and enhanced overall well-being. Studies suggest that consumers who prefer organic products tend to associate them with higher nutritional value and safety compared to conventional alternatives (Smith and and Whelan, 2019). Furthermore, organic supplements are believed to support long-term health outcomes by minimizing toxic intake and promoting natural body functions (Williams, 2018). Although scientific evidence on the

superiority of organic supplements over conventional ones remains mixed, consumer perception continues to play a crucial role in shaping purchasing decisions and consumption patterns.

Beyond individual health benefits, the consumption of organic supplements is closely linked to sustainability. Organic production systems emphasize environmentally friendly practices such as soil conservation, reduced pollution, and biodiversity preservation (FAO, 2020). As a result, consumers who choose organic supplements may also be motivated by environmental concerns and ethical considerations, including the desire to support sustainable agriculture and reduce their ecological footprint. This dual motivation health and environmental consciousness has contributed to the increasing demand for organic products globally.

Consumer attitudes toward organic supplement intake are influenced by several factors, including awareness, education, income level, cultural beliefs, and accessibility. Research indicates that positive attitudes toward organic products are often driven by perceived quality, trust in labelling, and health consciousness, while barriers such as high cost, limited availability, and skepticism about authenticity can hinder adoption (Yadav and Pathak, 2016). In developing regions, including Nigeria, these factors are further shaped by socio-economic conditions and varying levels of awareness about organic products.

Understanding consumer attitudes is therefore essential for promoting sustainable consumption patterns and improving public health outcomes. This study focuses on the staff of Federal Collage of Agriculture, Ishiagu, FCAI, Ebonyi State, as a case study to examine how perceptions of organic supplement intake influence behaviour and sustainability awareness within a defined population. By exploring these dynamics, the study aims to contribute to the growing body of knowledge on organic consumption and provide insights that can inform policy, education, and market strategies for organic products. The study examined consumers' attitudes toward the intake of organic supplements, the perceived health benefits associated with organic supplement consumption, determined the factors influencing consumers' decisions to use or not use organic supplements and evaluated the relationship between organic supplement intake and sustainability practices.

Materials and Methods

The study was conducted among staff of FCAI in Ebonyi State, Nigeria. The Federal College of Agriculture, Ishiagu is a Federal Government–owned tertiary institution located in Ishiagu, Ivo Local Government Area of Ebonyi State, Nigeria. It was originally established in 1955 at Umudike as a School of Agriculture and later relocated to its present site in 1995. The college is accredited by the National Board for Technical Education (NBTE) and offers both National Diploma (ND) and Higher National Diploma (HND) programmes in various agricultural and related disciplines. They have over 1000 staff strength (both academic and non-academic) and 10,000 student population. It has about 12 departments (Agricultural Technology, Agricultural Bio-Environmental Engineering Technology, Animal Health and Production Technology, Agricultural Extension and Management, Computer Science Technology, Crop Production Technology, Fisheries Technology, Home and Rural Economics, Horticulture and Landscaping Technology, Pest Management Technology, Science Laboratory Technology, Cooperative Economics and Management) and closely related programme units across ND/HND levels.

A simple random sampling technique was used to select 10 staff from each of the 12 departments with the use of online data kit (ODK) giving a total of 120 respondents for the study. The study employed descriptive and inferential statistics to analyse its data. Consumers' attitudes toward organic supplement intake and perceived health benefits of organic supplements will be analysed using mean score from Likert scale (Strongly agree → Strongly disagree). The factors influencing consumers' decisions will be estimated using logit regression analysis.

The Logit regression analysis, $Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10}X_{10} + b_{11}X_{11...}X_n + ei$ -----(1)

Y= willingness to consume organic supplements (1= Yes, 0=No), X_1= age (years), X_2 = Sex (Male =1, Female =0), X_3 = academic qualification (Prof= 6, PhD= 5, Msc = 4, Bsc = 3, Secondary = 2, Primary =1), X_4 =marital status (married=1, single=0), X_5 =household size (number), X_6 =

working experience (years), X_{10} = any health challenge (yes =1, no =0), X_{11}= Estimate d Monthly income (Naira), ei = error term.

Results and Discussion

Average Characteristics of the Staff

The results in Table 1 shows the socio-economic and demographic factors of the staff. The average age (45.17 years) and substantial working experience (13.77 years) suggest a mature and knowledgeable population, which is often associated with higher health awareness and preventive health behavior. The relatively high mean income (₦196,666.67) implies strong purchasing power, making it easier for respondents to afford organic supplements, which are typically more expensive than conventional alternatives. Education also plays a crucial role, as a large proportion (43.3%) possess PhDs, which likely contributes to the universal awareness (100%) of organic supplements observed in the sample. Despite this high awareness, only 63.3% currently take supplements and just 26.7% continue usage, indicating that awareness alone does not guarantee sustained consumption. Marital status (73.3% married) and moderate household size (mean = 4.45) may further influence health-related decisions due to family responsibilities. Additionally, while only 18.3% reported health challenges, the relatively high uptake suggests that consumption is driven more by preventive motives than by illness.

Attitudes of Staff Toward Organic Supplement Intake

The results in Table 2 reveal notable shifts in the types of organic supplements consumed by staff over time, highlighting key behavioral determinants of intake. Initially, vitamins and minerals had the highest uptake (43.3%), but their current use has declined to 28.3%, suggesting a reduced reliance on conventional supplementation. In contrast, herbal/botanical supplements and traditional remedies show increased or sustained relevance, with traditional remedies rising significantly to 40.0%, indicating a growing preference for culturally familiar and locally accessible options. This shift may reflect trust in natural products and indigenous knowledge systems, which often influence health choices, particularly in developing contexts. Similarly, greens and superfoods increased from 20.0% to 29.2%, suggesting rising awareness of plant-based nutrition and preventive health practices. On the other hand, protein/fitness and gut health supplements show a decline, possibly due to cost, limited awareness, or perceived relevance to specific health needs. These patterns suggest that affordability, cultural acceptance, and perceived health benefits are major determinants of supplement choice. The findings align with the health behavior framework of Ajzen (1991), which emphasizes attitudes and beliefs in shaping behavior, and also support Iloh (2017), who argued that individuals invest in health based on perceived benefits and available resources.

Perception of Staff Toward Organic Supplement Intake

The Likert analysis in Table 3 shows that staff generally have a positive perception toward organic supplement intake, as indicated by the grand mean of 3.42 (Agree). Most respondents agreed that they prefer organic supplements to conventional ones (mean = 3.77) and perceive them as safer for consumption (mean = 3.60), suggesting that perceived safety and quality are strong determinants of their attitudes. In addition, respondents agreed that organic supplements are worth the cost (mean = 3.87) and expressed willingness to pay more (mean = 3.25), highlighting the influence of perceived value and health benefits on purchasing decisions. However, despite these favorable perceptions, respondents were undecided about regular consumption (mean = 2.63), indicating a gap between attitude and actual behavior. This inconsistency suggests that factors such as cost constraints, accessibility, or habitual practices may limit consistent usage. These findings support the behavioral assumptions of Ajzen (1991), which posits that positive attitudes do not always translate into action without enabling conditions, and align with Grossman (1972), who emphasized that health-related decisions depend on both perceived benefits and available resources.

Perceived Health Benefits

The analysis of perceived benefits of organic supplement intake, as presented in Table 4, indicates generally positive perceptions among respondents. The highest mean scores were recorded for "Boost immunity" (mean = 4.15, SD = 0.47) and "Organic supplements improve overall health" (mean = 4.08, SD = 0.56), both with a remark of "SA" (Strongly Agree). These findings align with Crinnion (2010), who noted

that organic plant-based supplements often contain higher levels of bioactive compounds such as polyphenols, which may support immune function. Similarly, a study by Hurt et al. (2018) found that consumers strongly associate organic supplements with general health enhancement, though clinical evidence remains mixed. In contrast, items such as "More nutritious than conventional supplements" (mean = 3.71, SD = 0.48) and "Reduce the risk of diseases" (mean = 3.83, SD = 0.69) received relatively lower agreement, both rated as "A" (Agree). This suggests a slightly more cautious perception regarding nutritional superiority and disease prevention, possibly due to inconclusive scientific backing (Smith and Whelan, 2019). The grand mean of 3.94 reflects an overall positive inclination toward organic supplement benefits, though variability in standard deviations points to moderate consensus, especially for disease risk reduction (SD = 0.69). In brief, while respondents strongly endorse immunity and general health benefits, they show slightly tempered agreement on nutritional superiority and disease prevention, consistent with existing literature that calls for more rigorous comparative studies (Brantsæter *et al.,* 2017).

Factors influencing the intake of organic supplement among the staff of FCAI

The probit regression estimates identify several statistically significant factors influencing organic supplement intake among staff of FCAI, with the model demonstrating strong explanatory power (pseudo $R^2 = 0.6029$, $p < 0.001$). Age shows a positive and significant effect (coefficient = 0.2621, $p < 0.10$), indicating that older staff members are more likely to consume organic supplements, possibly due to greater health awareness or prevalence of age-related health concerns (Nunn and Williams, 2011). Years of working experience (coefficient = 0.4333, $p < 0.05$) also positively influences intake, which may reflect accumulated knowledge and disposable income over time. Income (coefficient = 1.2750, $p < 0.10$) is positively associated with supplement use, consistent with studies showing that higher-income individuals can more readily afford premium organic products (Dettmann and Dimitri, 2009). Having a health issue (coefficient = 3.8572, $p < 0.05$) and perceived health benefit (coefficient = 5.293, $p < 0.05$) are the strongest positive predictors, reinforcing that personal health status and beliefs are primary drivers of organic supplement consumption (Chel *et al.,* 2018). Trust in organic products (coefficient = 2.7456, $p < 0.05$) and availability (coefficient = 1.9218, $p < 0.10$) also positively affect intake, highlighting the importance of product credibility and market access. Conversely, cost of the supplement (coefficient = -1.1086, $p < 0.10$) is negatively associated, confirming price sensitivity as a barrier, a finding widely reported in organic consumption literature (Hughner *et al.,* 2007).

Conclusion and Recommendations

This study examined consumer attitudes toward organic supplement intake and determinant factors among staff of FCAI, Ebonyi State. The findings revealed that while awareness of organic supplements is universal, actual consumption remains moderate, indicating a significant attitude-behavior gap. Staff demonstrated positive perceptions toward organic supplements and strongly agreed on health benefits such as improved immunity and overall health. The probit regression identified age, working experience, income, having a health issue, perceived health benefit, trust, and availability as significant positive drivers of organic supplement intake, while cost served as a major barrier. The observed shift toward traditional remedies and greens or superfoods reflects growing cultural preference and health consciousness among respondents. Based on these findings, it is recommended that management of FCAI should organize regular health awareness seminars emphasizing the preventive benefits of organic supplements, particularly targeting younger staff who showed lower uptake. Policymakers should consider subsidizing organic supplements or integrating them into staff health insurance schemes to reduce cost barriers. Additionally, the college should collaborate with certified organic vendors to ensure consistent availability and authentic product label1ling to build consumer trust.

Table 1: ***Average Characteristics of the Staff***

Variables	Minimum	Maximum	Mean	Std. Deviation
age	38.00	61.00	45.1667	5.60362
Income	150000.00	200000.00	196666.6667	12524.48582
Household size	1.00	6.00	4.4500	1.28893
Working experience	6.00	24.00	13.7667	4.00574
Dummy (%)				
Sex(male)	82(68.30)			
Married	88(73.30)			
Education (PhD)	52(43.30)			
Aware of organic supplement	120(100.00)			
Take organic supplement	76(63.30)			
Still taken organic supplement	32(26.70)			
Have not, but will like to take	50(41.70)			
Have not, and will not want to take any even if is available	22(18.30)			
Any health challenge	22(18.3)			

Source: Staff Survey: 2026
Figures in parentheses are the percentages

Table 2: Type of Organic supplement available and Intake status

Types	Before	Now
Vitamins and minerals (vit. C, D, Vit. B-complex, Calcium, Iron, Magnesium, Multivitamin	52(43.30)	34(28.30)
Herbal/botanical (Turmeric, Ginger, Garlic, Ashwagandha, Ginseng, Aloe vera, bitter leaves, scent leaves etc).	38(31.70)	5848.30)
Greens and superfoods (concentrated plant nutrition e.g. Spirulina, Moringa, Wheatgrass, Chlorella, Mixed greens powders)	24(20.00)	35(29.20)
Protein and fitness (for muscle building and recovery e.g. Plant-based protein (pea, soy, hemp), Organic whey protein, Amino acids (BCAAs)	19(15.80)	6(5.00)
Gut Health Supplements *(Digestive support e.g. 1*Probiotics, Prebiotics, Fiber supplements)	11(9.20)	3(2.50)
Specialty/Functional Supplements *(Target specific health needs e.g.* Omega-3 (flaxseed, fish oil alternatives, Antioxidants, Green tea extract, Collagen)	9(7.50)	4(3.30)
Traditional and Natural Remedies *(Culturally used organic supplements e.g.* Honey, Bitter leaf extracts, Neem, Local herbal mixtures	32(26.70)	48(40.00)

Source: Staff Survey: 2026
Figures in parentheses are the percentages

Table 3: Licket Analysis of Staff on Perception of Staff Toward Organic Supplement Intake

Responses	SA	A	U	D	SD	Mean	Remark
I prefer organic supplements to conventional ones	38(190)	46(184)	14(42)	14(28)	8(8)	3.77	Agree
Organic supplements are safer for consumption	22(110)	60(240)	14(42)	16(32)	8(8)	3.6	Agree
I am willing to pay more for organic supplements	16(80)	52(208)	22(66)	6(12)	24(24)	3.25	Agree
I regularly consume organic supplements Organic supplements worth the cost	8(40)	14(56)	40(120)	42(84)	16(16)	2.63	Undecided
	24(120)	62(248)	28(84)	6(12)	0(0)	3.87	Agree
Grand mean						3.42	Agree

Source: Staff Survey: 2026
Figures in parentheses are the percentages
SA=Strongly Agree (5), A=Agree (4), U=Undecided (3), D=Disagree (2), SD=Strongly Disagree (1)

Table 4: Licket Analysis on the perceived benefits of Organic supplement intake

Responses	SA	A	U	Mean	SD	Remark
Organic supplements improve overall health	24(120)	82(328)	14(42)	4.08	0.56	SA
Boost immunity	24(120)	90(360)	6(18)	4.15	0.47	SA
More nutritious than conventional supplements	16(80)	54(216)	50(150)	3.71	0.48	A
Reduce the risk of diseases	16(80)	68(272)	36(108)	3.83	0.69	A
Grand mean				3.94		A

Source: Staff Survey: 2026
Figures in parentheses are the percentages
SA=Strongly Agree (5), A=Agree (4), U=Undecided (3), D=Disagree (2), SD=Strongly Disagree (1)

Table 5: Probit Regression Estimates of Factors influencing the intake of organic supplement among the staff of FCAI

Variables	Coefficient	Std. error	T-value
Sex (dummy Male =1, female =0)	1.8744	1.4018	1.34
Age (years)	0.2621	120	
Marital status (Dummy Married=1, single =0)	-0.	0.1171	2.24*
Household size(number)	1.7224	1.3715	-1.26
Educational level (years)	0.4106	0.5916	0.69
Years of working experience (years)	0.8530	0.5372	1.59
Income (Naira)	0.4333	0.1593	2.72**
Have health issue (Dummy, Yes =1, No =0)	1.2750	0.6918	1.85*
Perceived health benefit(Dummy, Yes =1, No =0) Cost of the supplement (Dummy, Yes =1, No =0) Availability (Dummy, Yes =1, No =0)	3.8572	1.2756	3.02**
	5.293 -	2.1608	2.45*
	1.1086	0.4762	-2.33*
Trust (Dummy, Yes =1, No =0)	1.9218	1.0961	1.75*
Constant	2.7456 -	1.1976	2.29*
Number of observation	9.2597	4.3973	-2.11*
LR Chi2(11)	32.54		
Prob >chi2 Log likelihood	0.0000		
	24.1099		
Pseudo R2	0.6029		

Source: STATA 13 Results. * and ** = Significant at 10%, and 5% respectively.

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