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# An empirical determination of consumers' reaction to nutritional labeling of pre-packaged food products in Lagos, Nigeria

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## Abstract

The incidence of diet induced diseases such as cancer, high blood pressure, stroke, cardiovascular/heart disease, diabetes, obesity, osteoporosis and malnutrition are rampant in our world today and therefore topical. The practice of nutritional labeling is being advocated as a panacea for this malaise and hence a sizeable number of researches are being undertaken in this direction. Large chunk of these studies are concentrated in the advanced countries. Unfortunately, there is dearth of such studies in developing countries including Nigeria. Consequently, this study sought to empirically determine consumers' reaction to nutritional labeling of pre-packaged food products in Nigeria. The study was purely descriptive and data collected aptly analyzed through the instrumentality of pertinent statistical tools. Findings show that consumers read, comprehend, trust the authenticity and are significantly aware of nutritional labeling and are able to relate the effects of nutrition information to their health. Not surprising therefore, consumers consciously search for nutrition information, which significantly influence their purchase decisions of these kinds of products. These results hold some implications for both policy-makers and pre-packaged food marketers. Further research should be in areas of quantity and position of disclosure of nutrition information and use of symbols in nutritional labeling in Nigeria.

**Keywords:** Package labeling, Nutrition information, Pre-packaged food marketing, Consumer choice, Nigeria

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## 1. Introduction

Information is communicable knowledge of something (wiktionary.org). Marketers have to communicate information to potential customers about their organizations and various brands. As a result, marketers engage in various promotion activities summarily in order to inform, educate and influence their present and potential customers. In addition, Ladipo et al. (2012) have found that product information serves to create awareness and product knowledge; simplify purchases in the market place; helps consumers to drop many brands from consideration, and equally help consumers to make informed choice and reduce incidence of cognitive dissonance.

Nutritional labeling is one type of information which pre-packaged food marketers communicate to their customers. It is the profiling of a product's content of nutrients (including protein, fat, carbohydrates and vitamins) and energy value, through the medium of packaging.

Lack of time, poor knowledge of healthy eating, and irrationality of the consumer when making food choices have been identified in literature as fuelling diet related diseases with major risk factors for a range of chronic diseases, including cardiovascular diseases, cancer, diabetes and other conditions linked to obesity (Mieczkowska and Panfil-Kuncewicz, nd; WHO, 2011).

As a panacea for poor choice of pre-packaged food products and to curb diet related health problems, nutrition labeling has been mentioned in past studies as one of the major instruments in helping people make better food purchase decisions and adopt healthier eating patterns (Nayga, 1996; Drichoutis et al., 2006; Grunert and Wills, 2007; Mhurchu and Gorton, 2007; Feunekes et al., 2008; Nørgaard and Brunsø, 2009, cited in Aygen, 2012).

Many studies have covered the practice of nutrition labeling and use in developed countries of United States of America and United Kingdom, interspersed with recent studies in United Arab Emirate (Washi, 2012) and Turkey (Aygen, 2012). It is the challenge of this present study to investigate the reaction of consumers to nutritional labeling in Nigeria, a sub-Saharan and developing country.

### 1.1. Research problems

The research problems addressed in this study bother on the following:

1. Issue of consumers' awareness of nutritional labeling.
2. Issue of consumers reading nutritional information on product labels.
3. Issue of consumers' comprehension of nutritional information profiled on product labels.
4. Issue of consumers using nutritional labeling to aid purchase decisions.
5. Issue of consumers relating the reading of nutritional labeling and its effect on health.
6. Issue of consumers' conscious search for nutrition information on product labels.
7. Issue of consumers' trust of nutritional information on product labels.

## 1.2. Research objectives

1. To determine whether consumers are aware of nutritional labeling of pre-packaged food products.
2. To determine whether consumers do read nutrition information on pre-packaged food product labels.
3. To determine whether consumers understand the nutritional labeling on pre-packaged food products.
4. To determine whether nutritional labeling influences consumers' purchase decisions of pre-packaged food products.
5. To determine whether consumers are able to relate the effect of nutrition information on health.
6. To determine whether consumers consciously search for information on nutritional content of pre-packaged food products.
7. To determine whether consumers trust the information on nutritional labels of pre-packaged food products.

## 1.3. Research questions

The research questions examined in this study are:

1. Are consumers really aware of nutritional labeling?
2. Do consumers even read nutritional information on product labels?
3. Do consumers understand the nutritional information profiled on product labels?
4. Do consumers make purchase decisions based on nutritional information disclosed on packaging?
5. Are consumers able to relate the issues of reading and understanding nutritional labeling to health?
6. Do consumers consciously search for information on nutrition?
7. Do consumers trust nutritional information on product packaging?

## 2. Literature review

### 2.1. Theoretical literature review

It is vital to marketing success for organizations to maintain robust communication links with current and potential customers. This is particularly so as even good products cannot sell themselves; their existence, benefits, problem solutions and cost efficiencies must have to be brought to the knowledge of customers (Hutt and Speh, 2007).

Organizations wishing to communicate information must do so at every customer touch-point using various promotional vehicles. Thus, as Kotler and Armstrong (2004) noted, a product's design, its price, its shape, colour of its package and even the store that sells it must be coordinated for greatest communication impact.

Nutritional labeling is one type of problem-solution information which pre-packaged food marketers communicate to their customers. It is the profiling of a product's content of nutrients (including protein, fat, carbohydrates and vitamins) and energy value, through the instrumentality of its packaging.

Past studies have shown that customers obtain information about brand that aid choice through multifarious sources that include packaging. Other sources identified by Jacoby, Speller and Berling (1974) are advertising, word of mouth communications, and private and public rating services.

Marketing organizations engage in communication activities in order to inform, educate and influence their customers using various communication vehicles. Hence, product information serves to create awareness and product knowledge; simplify purchases in the market place; helps consumers to drop many brands from consideration, and equally help consumers to make informed choice and reduce incidence of cognitive dissonance (Ladipo et al., 2012).

For communication objectives to be realized capturing the attention of the customer is paramount. Unfortunately, competitive activities breed information overload and clutter which discount customers' attention and thus, "the power of marketing is eroding . . . from lack of attention" (Sacharin, 2001). Attention has been referred to as the scarcest resource in today's business (Adler and Firestone 1997; Davenport and Beek 2001). Consequently, Pieters and Wedel (2004) warn that effective communication is hampered by failure of a communication medium to both attract and retain the attention of the customer which in turn jeopardizes the long term marketing goals.

For effectiveness in communication, marketing communicators must ensure that their encoding process enmesh with the audiences' decoding process such that the message must be made of words and symbols that the audience are familiar with. This is to guarantee that the audience perfectly understands the message being communicated (Kotler and Armstrong, 2004). Harkening to this advice is vital to all marketing communicators no matter the medium of communication.

## 2.2. Empirical literature review

Due to time constraints and insufficient knowledge about healthy eating, consumers often act irrationally or at random when choosing food products, which may lead to obesity and nutrient deficiencies. Thus, fuelling the incidence of diet related diseases (Mieczkoska & Panfil-Kuncewicz, nd). "An unhealthy diet is one of the major risk factors for a range of chronic diseases, including cardiovascular diseases, cancer, diabetes and other conditions linked to obesity" (WHO, 2011a; cited in Aygen, 2012).

Diverse aspects of poor diet, physical inactivity and consequences of diet-related health problems have been recognized by many researchers and nutrition labeling has been mentioned as one of the major instruments in helping people make better food purchase decisions and adopt healthier eating patterns (Nayga, 1996; Drichoutis et al., 2006; Grunert and Wills, 2007; Mhurchu and Gorton, 2007; Feunekes et al., 2008; Nørgaard and Brunsø, 2009, cited in Aygen, 2012).

Typically, nutritional labeling is important for two reasons. The first is to simply provide information about the product, in order to assist consumers to make their food choices, and, in theory, specifically to

assist them to use nutritional criteria, when making these food choices. The second is to promote the particular nutritional benefits of a food as a marketing tool (Sunley, 2012).

A product's nutritional value comprises its content of nutrients (including protein, fat, carbohydrates, and vitamins) and energy value. This information enables consumers to select food products corresponding to their individual needs and dietary recommendations as well as to incorporate a balanced diet into their nutritional regime (Mieczkoska and Panfil-Kuncewicz, nd).

The practice of nutritional labeling by food and beverage marketers is very prevalent in advanced countries such as United States of America and United Kingdom where it is obligatory to do so. The US Nutrition Labeling and Education Act (NLEA) sought to eliminate untruthful nutrition claims and to improve consumers' abilities to access and process nutrition information at the point of sale. It required manufacturers to provide a "Nutrition Facts" label displaying standardized information on all nutrients, recommended daily values, and an ingredient list on food products by May 1994 (US Food Labeling Regulations 1993, cited in Moorman, Ferraro and Huber, 2011).

However, in Nigeria which is a developing country, it is a legal requirement for manufacturers to have a list of ingredients on the label of their pre-packaged food products. On the other hand, it is not legally mandatory for them to disclose the nutritional content of such pre-packaged food products, except when the manufacturer makes such nutritional claim (NAFDAC'S pre-packaged food labeling regulations, 2005).

In spite of the non-mandatory legal requirement for nutritional labeling, a visit to a grocery store in Nigeria reveals that many pre-packaged food products available have their nutritional information profiled on their label. Perhaps, as observed by Washi (2012), these marketers could be responding to the impact of globalization, a phenomenon which has impacted on consumers and their countries all over the world and requires necessary actions from countries to prove that their manufactured products; including food; are able to compete in the open market.

But whether as a response to the current global clamour for more healthful food products or due to competitive marketing forces, nutritional labeling encourages the food manufacturers to improve the nutrient profile of their products. To be able to gain the benefit(s) associated with nutritional labeling, the consumer should read these labels, understand the information on these labels, believe that the information on these labels are correct and truthful, and then base their purchase decision (though moderated by such factors as taste, price, convenience, and cost) on the information so read.

### 2.3. Hypotheses

- H<sub>0</sub> 1: Consumers may not be significantly aware of nutritional labeling of packaged food products.
- H<sub>0</sub> 2: Consumers may not significantly read information provided on packaged food products.
- H<sub>0</sub> 3: Consumers may not significantly understand nutrition information profiled on packaged food products.
- H<sub>0</sub> 4: Consumers may not significantly make purchase decisions based on nutritional information provided on packaged food products.

- H<sub>0</sub> 5: Consumers may not significantly be able to relate the content of nutrition information to their health.
- H<sub>0</sub> 6: Consumers may not significantly search for nutrition information on product packaging.
- H<sub>0</sub> 7: Consumers may not significantly trust that nutrition information on packaged food products is authentic.

### **3. Methodology**

#### **3.1. Research design**

Descriptive and cross-sectional research design was used as the variables investigated are purely descriptive.

#### **3.2. Population of study**

Consists of male and female residents of mainland part of Lagos State, which is the commercial nerve centre of Nigeria and the converging point for all tribes and ethnic groups of the country. Commercial activities are mainly concentrated in this part of Lagos. The mainland is more populated than the island part of the state.

#### **3.3. Sample selection and size**

Sample size of 280 respondents, employing cluster sampling approach was involved in the study. Ten (10) localities were randomly selected from Lagos mainland and 28 respondents obtained from each locality to arrive at 280 sample respondents.

#### **3.4. Instrumentation**

The instrument for data collection is a structured multiple choice questionnaire. The questionnaire was designed with multiple-choice and close-ended questions. The choice of this design is influenced by the ability of the instrument to generate better response rate than open-ended questionnaire. It has the property of self administration.

#### **3.5. Validity and reliability test of the instrument**

To ensure the suitability of the instrument for data collection, it was originally subjected to validity and reliability test through a pilot study. This was conducted through the use of half-Split technique and the resulting data correlated using Pearson product moment correlation statistical tool resulting in a co-efficient of 0.95. On the strength of this parameter, conclusion was reached about the reliability and validity of the instrument and hence the suitability of the instrument for data collection.

### 3.6. Administration of the instrument

Having determined the suitability of the instrument for data collection, same were immediately administered on the respondents through mail questionnaire approach. This approach is considered suitable because of its ability to accord the respondents the freedom to operate freely and so avoid the introduction of any bias into the outcome of the exercise. It promotes higher response rate compared with its open-ended counterpart.

### 3.7. Procedure for data analysis

Relevant data were obtained and analyzed through the agency of SPSS statistical package. 280 copies of the questionnaire were administered to the respondents who completed and returned 250 copies, giving a success rate of about 89.3 percent.

## 4. Results

The analysis of demographic data of the 250 respondents who actively participated in this study indicates that 121 (48.4%) were men while 129 (51.6%) were women. 48 (19.2%) of this population are 25 years and below; 165 (66%) of respondents are between 26 and 40 years old; 35(14%) are between 41 and 55 years of age, while 2 (8%) of the respondents are 50 years and above. On the type of work they do, 113 (45.2%) are either civil servants/youth corps members on national assignment or work for others; 55 (22%) are self employed; 71 (28.4%) are students, while 10 (4%) are unemployed.

Categorizing the respondents by annual income, 76 (30.4%) earn #500,000.00 and below; 51 (20.4%) earn between #500,001 and #1,000,000.00; 57 (22.8%) earn #1,000,001 and above while 66 (26.4%) do not earn income. Also, on educational attainment, 41 (16.4%) have school certificate and below; 49 (19.6%) are Ordinary National Diploma (OND) certificate holders; 109(43.6%) are first degree/ higher national diploma certificate holders, while 50 (20%) are post graduate certificate holders. There was a case of 1 (0.4%) missing data.

Further analysis of the respondents show that 222 (88.8%) personally buy packaged food products for personal consumption while 28 (11.2%) do not. On their best outlet for the purchase of packaged food products, 29 (11.6%) shop at department stores; 133 (53.2%) shop at supermarkets; 12(4.8%) buy from discount stores; 68 (27.2%) shop at the open market; 5 (2%) buy from street hawkers, while 3 (1.2%) were cases of missing data. On whether packaged food products provide convenience when shopping for this kind of goods, 220 (88%) believe that packaged food products do indeed provide convenience when buying this kind of goods, 21 (8.4%) do not believe so, while 9 (3.6%) had no idea.

On the diet related disease(s) whose avoidance trigger the need for respondents to search for nutrition information on packaged food products, 47 (18.8%) reported Obesity; 22 (8.8%) reported cardiovascular/heart disease; 47 (18.8%) indicated diabetes; 12 (4.8%) chose high blood pressure; 61

(24.4%) highlighted malnutrition; 19 (7.6%) reported cancer; 38 (15.2%) seek to avoid multiple diet-related diseases while, 4 (1.6%) were cases of missing data.

Also, the frequency tables of variables under investigation are presented as below.

Table 1. Awareness of nutritional labeling on packaged food products

<i>Response Variables</i>		<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
<i>Valid</i>	<i>Strongly Disagree</i>	6	2.4	2.4	2.4
	<i>Disagree</i>	9	3.6	3.6	6.0
	<i>No Idea</i>	26	10.4	10.4	16.4
	<i>Agree</i>	119	47.6	47.6	64.0
	<i>Strongly Agree</i>	90	36.0	36.0	100.0
	<i>Total</i>	250	100.0	100.0	

On awareness of nutritional labeling on packaged food products about 209(83.6%) of respondents are affirmative about their awareness of this information while 15 (6%) are not aware; 26(10.4%) were neutral as they had no idea.

Table 2. Reading of nutritional information on the packs of packaged food products before purchase

<i>Response Variables</i>		<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
<i>Valid</i>	<i>Strongly Disagree</i>	4	1.6	1.6	1.6
	<i>Disagree</i>	29	11.6	11.6	13.2
	<i>No Idea</i>	15	6.0	6.0	19.2
	<i>Agree</i>	111	44.4	44.4	63.6
	<i>Strongly Agree</i>	91	36.4	36.4	100.0
	<i>Total</i>	250	100.0	100.0	

On whether consumers read nutritional label information prior to purchase, the result show that about 202 (80.8%) claim they read; 33 (13.2%) do not read, while 15(6%) do not have idea whether they read or not.



Table 3: Lack of comprehension of information on nutritional labels of packaged food

<i>Response Variables</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
<i>Strongly Agree</i>	6	2.4	2.4	2.4
<i>Agree</i>	34	13.6	13.6	16.0
<i>No Idea</i>	45	18.0	18.0	34.0
<i>Disagree</i>	105	42.0	42.0	76.0
<i>Strongly Disagree</i>	60	24.0	24.0	100.0
<i>Total</i>	250	100.0	100.0	

On comprehension of nutritional information on packaged food labels, 165 (66%) claim they understand these information. 40 (16%) do not understand while 45 (18%) do not have idea of their comprehension.

Table 4. The influence of Nutritional label on purchase choice of packaged food products

<i>Response Variables</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
<i>Strongly Disagree</i>	9	3.6	3.6	3.6
<i>Disagree</i>	40	16.0	16.0	19.6
<i>No Idea</i>	12	4.8	4.8	24.4
<i>Agree</i>	119	47.6	47.6	72.0
<i>Strongly Agree</i>	70	28.0	28.0	100.0
<i>Total</i>	250	100.0	100.0	

On the effect of nutritional information on purchase choice 189 (75.6%) concur that nutrition information on labels influence their purchase decisions. 49 (19.6%) reported that nutrition information on packaged food products do not influence their buying decisions while 12 (4.8%) have no idea whether nutritional information influence their choice or not.

Table 5. Ability to relate the effect of nutrition information to health

<i>Response Variables</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
<i>Strongly Disagree</i>	2	.8	.8	.8
<i>Disagree</i>	22	8.8	8.8	9.6
<i>No Idea</i>	19	7.6	7.6	17.2
<i>Agree</i>	135	54.0	54.0	71.2
<i>Strongly Agree</i>	72	28.8	28.8	100.0
<i>Total</i>	250	100.0	100.0	

On customers' ability to relate the effect of nutrition information to health, 207 (82.8%) of the respondents agree and strongly agree that they are able to relate the effect of nutrition information on their health; 24 (9.6%) are not able to relate the effect of nutrition information on health while 19 (7.6%) have no idea of whether or not they can relate the effect of nutrition information on health.

Table 6. Understanding the impact of nutrition information on health

<i>Response Variables</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
<i>Strongly Disagree</i>	22	8.8	8.8	8.8
<i>Disagree</i>	29	11.6	11.6	20.4
<i>No Idea</i>	4	1.6	1.6	22.0
<i>Valid Agree</i>	108	43.2	43.2	65.2
<i>Strongly Agree</i>	86	34.4	34.4	99.6
<i>6.00</i>	1	.4	.4	100.0
<i>Total</i>	250	100.0	100.0	

In agreement with the result of customers' ability to relate nutrition information with health, the data on consumers' understanding of the impact of nutrition information on their health reveals that 194 (77.6%) respondents comprehend the impact of nutrition information on health. On the other hand, 51 (20.4%) are ignorant of impact of nutritional labeling on health; 4 (1.6%) of the respondents have no idea of whether or not there is effect; while there is 1 (0.4%) case of missing data.

Table 7. Conscious search for nutrition information prior to making choice of food products

<i>Response Variables</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
<i>Valid Strongly Disagree</i>	6	2.4	2.4	2.4
<i>Disagree</i>	46	18.4	18.4	20.8
<i>No Idea</i>	14	5.6	5.6	26.4
<i>Agree</i>	117	46.8	46.8	73.2
<i>Strongly Agree</i>	67	26.8	26.8	100.0
<i>Total</i>	250	100.0	100.0	

On respondents' conscious search for nutrition information, 184 (73.6%) reported that they consciously search for nutrition information prior to purchase of food products. 52 (20.8%) reported that they do not engage in such behavior, while 14 (5.6%) do not have idea of whether they do or do not consciously search for nutrition information before making choice of food products.

Table 8. Consumers' trust in the authenticity of information on nutritional labels of packaged food products

<i>Response Variables</i>		<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
<i>Valid</i>	<i>Strongly Disagree</i>	9	3.6	3.6	3.6
	<i>Disagree</i>	38	15.2	15.3	18.9
	<i>No Idea</i>	38	15.2	15.3	34.1
	<i>Agree</i>	112	44.8	45.0	79.1
	<i>Strongly Agree</i>	52	20.8	20.9	100.0
	<i>Total</i>	249	99.6	100.0	
<i>Missing</i>	<i>System</i>	1	.4		
	<i>Total</i>	250	100.0		

On whether consumers trust the authenticity of nutrition information on packaged food products, 164 (65.6%) respondents reported in the affirmative that they trust that the nutrition information on food labels are authentic. 47 (18.8%) do not trust the authenticity of the nutrition information on food labels while 38 (15.2%) were neutral and thus not sure whether or not they trust the authenticity of nutrition information on food product labels; 1 (0.4%) was a case of missing data.

Table 9. Packaged food products are properly prepared and are not harmful

<i>Response Variables</i>		<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
<i>Valid</i>	<i>Strongly Disagree</i>	11	4.4	4.4	4.4
	<i>Disagree</i>	59	23.6	23.6	28.0
	<i>No Idea</i>	27	10.8	10.8	38.8
	<i>Agree</i>	98	39.2	39.2	78.0
	<i>Strongly Agree</i>	55	22.0	22.0	100.0
	<i>Total</i>	250	100.0	100.0	

Again, the result of the frequency analysis of customers' perception that packaged food products are well prepared and not harmful, corroborated their trust in the authenticity of information on nutrition labels as 153 (61.2%) of respondents believe that packaged food products are well prepared and are not harmful; 70 (28%) perceive packaged food as harmful and not well prepared while 27 (10.8%) had no idea whether packaged food products are harmful or not.

To test the stated hypotheses for this study, one -sample t-test (with a test value of 3) was used and the results obtained are shown in table 10.

Table 10. One-sample t-test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
<i>I am aware of nutritional labeling on packaged food products</i>	19.479	249	.000	1.11200	.9996	1.2244
<i>I read the nutrition information on the packs of packaged food products before I buy</i>	15.910	249	.000	1.02400	.8972	1.1508
<i>I do not understand the information put on nutritional labels of packaged food products each time I read</i>	10.776	249	.000	.71600	.5851	.8469
<i>Nutritional label influences my choice of packaged food products</i>	11.331	249	.000	.80400	.6643	.9437
<i>I do understand the impact of nutrition information on my health</i>	10.458	249	.000	.84000	.6818	.9982
<i>I am able to relate the effect of nutrition information to my health</i>	17.991	249	.000	1.01200	.9012	1.1228
<i>I consciously search for this information before I make a choice of food products</i>	11.011	249	.000	.77200	.6339	.9101
<i>I trust that the information on nutritional labels are authentic</i>	9.357	248	.000	.64257	.5073	.7778

From the results,  $H_01$  is rejected ( $p < 0.000$ ) and therefore it can be concluded that consumers are significantly aware of nutritional labeling of packaged food products.  $H_02$  is rejected ( $p < 0.000$ ), it is then concluded that consumers significantly read information provided on packaged food products; also  $H_03$  is rejected ( $p < 0.000$ ) conclusion is therefore reached that consumers significantly understand nutrition information profiled on packaged food products.  $H_04$  is equally rejected ( $p < 0.000$ ) and the alternative accepted that consumers significantly make purchase decisions based on nutritional information provided on packaged food products.  $H_05$  is rejected ( $p < 0.000$ ) and thus, it is concluded that consumers are significantly able to relate the content of nutrition information to their health.  $H_06$  is rejected ( $p < 0.000$ ) and conclusion reached that consumers consciously and significantly search for nutrition information on product packaging. Finally,  $H_07$  is also rejected ( $p < 0.000$ ) and conclusion reached that consumers significantly trust that nutrition information on packaged food products is authentic.

## 5. Discussion, conclusion and implication

The prevalence of diet related and life threatening diseases such as cancer, high blood pressure, stroke, cardiovascular/heart disease, diabetes, obesity, osteoporosis and malnutrition are becoming rampant in our world today and is thus attracting attention of various experts.

Review of related literature shows that the practice of nutritional labeling is being advocated as a means of reducing this incidence and thus a sizeable number of researches are being undertaken in this area. While much work seem to have been done in the advanced countries of America and Great Britain the same cannot be said of developing and third world countries of Africa of which Nigeria is one.

Consequently, legislation has made it mandatory for nutrition information to be one type of information that marketers must communicate to consumers. Again the depth and breadth of this legislation differ from country to country, for example, while it is compulsory for total disclosure of both ingredient and nutritional labeling of pre-packaged food products by marketers in United States of America, in Nigeria it is different, as marketers are only obligated to have a list of ingredients on the label of their pre-packaged food products only disclosing the nutritional information when the marketer makes such a claim (NAFDAC's pre-packaged food labeling regulations, 2005).

Thankfully, however, marketers seem to be adopting the practice of total disclosure perhaps due to globalization and the growing number of health conscious consumers (Washi, 2012). How this current practice of nutritional labeling is impacting on consumers purchase behavior in Nigeria is the central theme of this study. Thus, the study sought to empirically determine consumers' reaction to nutritional labeling of pre-packaged food products in Nigeria. The study was purely descriptive and data collected aptly analyzed through the instrumentality of pertinent statistical tools; and relevant literature reviewed.

Findings show that consumers read, comprehend, and are significantly aware of nutritional labeling of packaged food products. Consumers trust that this nutritional information are authentic, and are able to relate the effects of nutrition information to their health. Not surprising therefore, consumers consciously

search for nutrition information, which significantly influence their purchase decision of these kinds of products.

These results hold some implications on the practice and regulation of nutritional labeling in Nigeria and perhaps other third world countries where this subject is still at infancy. The regulatory body of pre-packaged food products in Nigeria (NAFDAC) should go the whole hog and make nutritional labeling compulsory and mandatory whether the marketer of such products makes claim for such nutrition contents or not. Marketers of these kinds of products should also adopt this level of disclosure as it has become a global practice and as the result of this study show, this practice could be a compelling source of competitive advantage.

Again, more awareness campaign should be carried out to further educate consumers on the need to read nutrition information on product labels before buying. Though only 13.2 percent of the research respondents do not read nutrition labels, when this number is extrapolated to the whole population of over 160 million people, this number could be huge, more so when the level of illiteracy is high.

This study props up the need for further research in order to understand those issues that will encourage readability of nutritional information in such areas as the amount of information disclosure, position of information disclosure and use of symbols in nutritional labeling.

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