

Examining Knowledge, Attitude and Practice Towards Food Labels Among Consumers in Enugu State, Nigeria – A Baseline Survey

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Abstract: Food is an essential component of human existence but it must be healthy and nutritionally balanced to perform its functions effectively. Hence emphasis is placed on labelling of pre-packed foods at global and national levels. Nigeria operates a mandatory food labelling system. The sector regulator, the National Agency for Food and Drug Administration and Control (NAFDAC) has, over the years, issued successive regulations on labelling of pre-packaged foods, the latest being the Pre-Packaged Food, Water and Ice (Labelling) Regulations 2019 which repealed and replaced the Pre-Packaged Food (Labelling) Regulations 2005 and Bottled Water Labelling Regulations 1996 (NAFDAC Web, 2019). This study examined the knowledge, attitude and practice towards food labels among consumers in Enugu State, Nigeria. Among the issues covered were the laws regulating food labelling in Nigeria; level and sources of knowledge about food labels; attitude of consumers in Enugu State towards food labels; how uneducated consumers cope with accessing food label information; and willingness of consumers to purchase or consume unlabelled food products. The study was a cross-sectional, descriptive survey involving consumers and sellers of pre-packaged foods in two Local Government Areas in Enugu State, namely Enugu East (urban) and Nkanu (rural) using both qualitative and quantitative methods. Data from the survey showed that 30 consumers, representing 14.9% of the consumers in the study were not aware of the laws that require mandatory food labelling in Nigeria. Similarly, many consumers in both the In-depth Interviews (IDIs) and Focus Group Discussions (FGDs) displayed lack of awareness of such laws. The study further revealed a correlation between the level of knowledge and attitude towards food labels on one hand and the level of education, geographical location and socio-economic standing of consumers on the other. Intensive enlightenment programmes to educate consumers on the need to read and be guided by food labels are recommended.

Keywords: Consumer Protection, Consumer Knowledge, Consumer Attitude, Consumer Practice, Food Labels, Labelling Regulations

1. Introduction

Food is an essential component of human existence but it must be healthy and nutritionally balanced to perform its

functions effectively. There have been several global efforts at increasing awareness about food safety including the World Consumer Rights Day and World Health Day 2015 with the themes: "Consumers' Right to Healthy Food" and "Safe Food" respectively [1, 2]. One major area of

control of unhealthy foods is labelling which entails disclosure of compositional ingredients.

Nigeria operates a mandatory food labelling system. The sector regulator, the National Agency for Food and Drug Administration and Control (NAFDAC) has, over the years, issued successive regulations on labelling of pre-packaged foods, the latest being the Pre-Packaged Food, Water and Ice (Labelling) Regulations 2019 which repealed and replaced the Pre-Packaged Food (Labelling) Regulations 2005 and Bottled Water Labelling Regulations 1996 [3]. The provisions of the current Regulations are highlighted in subsequent paragraphs.

1.1. Statement of the Problem

Unsafe food is linked to the death of an estimated two million people annually and is responsible for more than 200 diseases, ranging from diarrhoea to cancers [1]. This necessitates the need to educate consumers on how to detect unhealthy foods. One possible way of doing this is through food labelling. The relevance of food labelling is that it helps to bridge the information gap between producers and consumers and enables consumers to make rational dietary choices and generally adopt healthier eating patterns [4-7]. Food labels also ensure that manufacturers are accountable and transparent so as to ensure that what is on the label is what the consumer gets.

There have been concerted efforts globally to create awareness about the harmful effects of unhealthy foods. The World Health Organisation (WHO) has noted that food containing harmful bacteria, viruses, parasites or chemical substances is linked to the death of an estimated two million people annually and is responsible for more than 200 diseases, ranging from diarrhoea to cancers [1]. Similarly, poor diet is linked to a number of health risks such as high blood pressure, high blood glucose, overweight and obesity and high cholesterol that cause death [8].

Food labels, often used interchangeably with nutrition labels, are an important component of food nutrition. Priority is given to this issue in many countries. In some countries, food labelling is mandatory while in others, it is left to the discretion of manufacturers. Scott-Dixon [9] writes that countries such as the United States, Canada, Australia, Korea and New Zealand have mandatory food labelling. In the member States of the European Union, food labelling is mandatory for pre-packaged food and manufacturers are required to provide food information to consumers (Regulation No. 1169/2011). Nigeria operates a mandatory food labelling system as provided for by the Pre-Packaged Food, Water and Ice (Labelling) Regulations 2019 made by NAFDAC.

Authors of works consulted in the course of this work are unanimous on the necessity for food labelling. Darkwa [10] writes that food labels are a useful source of information through which consumers' food choices are shaped. He notes that it is important to educate consumers to read food labels and apply the information when making food choices. Labels can also be used as time-effective marketing tools to generate

consumer confidence in food quality and communicate healthfulness of food items [11]. According to Adeniyi et al [12], this is very important especially in the quest to achieve nutrition security, which involves ensuring a good nutritional outcome. Some literature [12, 13] noted that this is more so given the fact that about 29% of Nigerian population is said to be chronically undernourished and this translates to about 5.4% of the total undernourished people in Sub-Saharan Africa. Borra [14] reveals that an important goal of nutrition and ingredient information is to help consumers to make healthful dietary choices.

Food labelling is the primary means of communication between the producer and seller of food on one hand, and the purchaser and consumer on the other [15]. It helps to bridge the information gap between producers and consumers and enables consumers to make rational dietary choices and generally adopt healthier eating patterns [4-7].

One cannot but agree with these assertions. The food label can say a great deal about a food item – its nutritional quality, active ingredients, proportion of each ingredient (vitamins, fat, carbohydrates, protein, as the case may be), net weight, details of the manufacturer, manufacture and expiry dates. By reading the food label, a consumer can glean the nutritional value of the food as well as possible allergies.

Desk research carried out by the European Food Information Council (EUFIC) in 2003 [16] reveals that a certain amount of consumer research is already available concerning consumer understanding of the nutrition label content and format but the research also identifies significant gaps one of which is that most of the research that had been done focused on the UK (with some research in the Nordic countries, and France). Multi-country data is scarce. In the developed countries, several studies have been carried out on various aspects of food labelling [17-20].

This contrasts with the situation in Nigeria where there are only a few studies on labelling of consumer products [13, 21, 22]. A study conducted in Enugu and Onitsha [21] on labelling of consumer products reveals, among other things, that most consumers do not take time to study the labels on products before buying. The findings indicate that the terms used to describe products, particularly pharmaceutical products, are too technical for respondents to comprehend. Furthermore, consumers' awareness of consumer protection laws is rather low, which results in the absence of litigations against sellers even in cases of obvious infringement. A baseline study in Delta State, Nigeria, shows that of the 294 respondents in the survey only twenty-seven percent said they were aware of laws that protect consumers in Nigeria [23].

Falola [13] reveals that consumers perceive traceability, determination of registration status of food products, advertisements, legal requirements, expiry dates and difficulty in distinguishing food items of competitors as the major reasons why food packages are labelled. It also indicates that females are more willing to read food labels than males and that, willingness to read food labels is positively influenced by the level of nutritional knowledge of

food planners, age of food consumers, level of household income and educational status of food planners. Oghoja *et al.* [22], in a study in Lagos State report that some Nigerian consumers consciously search for nutrition information, which significantly influences their buying decisions on packaged food products. It shows that a greater percentage of consumers in that state read, comprehend, and are significantly aware of nutritional labelling of packaged food products. Furthermore, the study reveals that consumers trust that nutritional information are authentic and are able to relate the effects of nutritional information to their health. However, these studies reveal that most consumers do not take time to study the labels on products before buying; that consumers' awareness of consumer protection laws is rather low and that many consumers appear ignorant about their rights in this regard [24, 25].

1.2. Laws Regulating Food Labelling in Nigeria

The principal law regulating food and drug products in Nigeria is the Food and Drugs Act 1976. This Act regulates the manufacture, importation, storage, advertisement and sale of food, drugs, cosmetics and medical devices. It prohibits certain conducts relating to regulated products which include food. Food is defined in section 21 of the Act to include:

any article manufactured, processed, packaged, sold or advertised for use as food or drink for human consumption, chewing gum and any ingredient which may be mixed with food for any purpose whatsoever and excludes-

- (a) live animals, birds or fish; and
- (b) articles or substances used as drugs.

The Act, however, does not contain detailed provisions on labelling of food products. It merely prohibits the labelling and packaging of food and other regulated products in a manner that is false or misleading or is likely to create a wrong impression as to their quality, character, value, composition, merit or safety. It also prohibits the labelling, packaging, selling or advertising of any substance or article in a manner that it is likely to be mistaken for food or other regulated products unless the substance or article complies with the standard prescribed for any food or other regulated products.

Another major law that regulates food products in Nigeria is the National Agency for Food and Drug Administration and Control Act (Cap N1, LFN 2004.) This Act establishes the National Agency for Food and Drug Administration and Control (NAFDAC) which is the regulatory agency charged with the responsibility for the enforcement of food and drugs laws in Nigeria. The functions of the Agency include the regulation and control of the importation, exportation, manufacture, advertisement, distribution, sale and use of food, drugs, cosmetics, medical devices, bottled water and chemicals. The functions of the Agency include: to undertake inspection of both imported and locally packaged food and other regulated products (food, drugs, cosmetics, medical devices, detergents bottled water and chemicals – section 31) and establish relevant quality assurance systems; compile standard specifications and guidelines for the production, importation, exportation, sale and distribution of regulated

products; undertake the registration of regulated products; advise Federal, State and local governments, the private sector and other interested bodies regarding the quality, safety, and regulatory provisions on regulated products; and issue guidelines, approve and monitor the advertisement of regulated products. Under the Food, Drugs and Related Products (Registration, Etc) Act (Cap. F33, LFN 2004), no processed food shall be manufactured, imported, exported, advertised, sold or distributed in Nigeria unless it has been registered by the Agency.

In exercise of the powers conferred by sections 5 and 30 of the National Agency for Food and Drug Administration and Control Act, the Governing Council of the Agency has, with the approval of the Honourable Minister of Health, made and published several regulations over the years, the current version being the Pre-Packaged Food, Water and Ice (Labelling) Regulations 2019. These Regulations prohibit the sale of any pre-packaged food unless a label has been affixed thereto with stipulated information. In addition, it is required that pre-packaged food must contain the list of all ingredients in descending order; name, address and other contact details of the manufacturer; date marking instructions: "Use-by Date", "Expiration Date", "Best-Before Date" or "Best Quality Before Date" as applicable; batch number; storage conditions; registration number, language (English); and directions for use. Furthermore, a food label shall not contain any false or misleading information. The statements on the label shall be clear, prominent and legible and must be of contrasting colour to that of the background.

The penalties for contravening a provision of these Regulations are, in the case of an individual, imprisonment for a term not exceeding one year or a fine not exceeding ₦50,000.00 or both imprisonment and fine and in the case of body corporate, a fine not exceeding ₦100,000. Where an offence is committed by a body corporate or firm or other association of individuals, every director, manager, secretary, other similar officer of the body corporate; every partner, officer of the firm; or every trustee of the body concerned; or every persons concerned in the management of the affairs of the association is severally guilty of that offence and liable to be prosecuted and punished for that offence in the same manner as if himself had committed the offence unless he proves that the act or omission constituting the offence took place without his knowledge, consent or connivance. In addition to these penalties, a person convicted of an offence under the instant Regulations shall forfeit to the Federal Government any asset or property constituting proceeds derived from or obtained, directly or indirectly as a result of the offence; and any of the person's property or instrumentalities used in any manner to commit or facilitate the commission of the offence.

Despite the fact that food labelling has been a legal requirement in this country for over 20 years, many consumers appear ignorant about their rights in this regard. As revealed by this literature review, there seems to be no comprehensive study on food labelling in Nigeria. The present study is, therefore, intended to fill this gap and pave the way for a more comprehensive work in the field.

1.3. Objectives of the Study

The main aim of this study is to examine the knowledge, attitude and practice of consumers in Enugu State towards food labels. The specific objectives are to:

- determine the level of knowledge of consumers in Enugu State about food labels;
- determine the attitude of consumers in Enugu State towards food labels;
- determine the practice of consumers in Enugu State as regards food labels;
- ascertain how uneducated consumers cope with accessing food label information;
- make recommendations based on the results of the survey to enhance the health of consumers; and
- improve awareness about food labels among consumers and other stakeholders in Enugu State

This study examined the knowledge, attitude and practice towards food labels among consumers in Enugu State, Nigeria. It is expected that the data generated by the study will help to improve awareness about food labels among consumers and other stakeholders in Enugu State.

2. Methodology

2.1. Study Design and Study Area

The study utilized a mixed method comprising quantitative and qualitative methods. The study area consisted of two Local Government Areas in Enugu State, namely Enugu East (urban) and Nkanu West (rural).

2.2. Sampling of Subjects

Study participants were selected using convenience sampling method. Study participants found in the study sites were recruited and interviewed for the study. These included one hundred and forty-one (141) participants comprising one hundred (100) consumers and forty-one (41) sellers of pre-packaged food items in Enugu East Local Government Area and one hundred (100) consumers and forty two (42) sellers in Nkanu West Local Government Area, giving a total of 283 participants who were selected for the quantitative survey. Table 1 below depicts the socio-demographic characteristics of the respondents.

Sixteen participants were purposively selected for the in-depth interviews. They comprised ten community leaders comprising males and females, three participants from food regulating agencies, and three from manufacturing organizations. The regulating agencies covered were the National Agency for Food and Drug Administration and Control (NAFDAC), the Standards Organisation of Nigeria (SON); the defunct Consumer Protection Council (CPC) (replaced after the field work by the Federal Competition and Consumer Protection Commission); and the State Consumer Protection Committee under the defunct CPC. The state/zonal offices of the selected agencies and three food packaging companies located within Enugu and immediate

environs were used for in-depth interviews (IDIs). Sixteen community members, eight from each local government, comprising four males and four females were also purposively selected for the focus group discussions (FGDs). The socio-demographic characteristics of the IDIs and FGDs participants are shown in Tables 2 and 3 below.

Table 1. Socio-demographic Characteristics of Survey Respondents (n=283).

	Frequency	Percentage
LGA or Location		
Enugu East	141	49.8
Nkanu West	142	50.2
Group		
Sellers	82	29
Consumers	201	71
Gender		
Male	140	49.5
Female	143	50.5
Educational level		
<FSLC	85	30
FSLC attempted	32	11.3
FSLC	18	6.4
Some years in Secondary	21	7.4
SSCE	72	25.4
Degree	45	16
PG	10	3.5
Occupation		
Food packaging	2	0.7
Sale of packaged food	96	34
Others outside food packaging	185	65.3
Monthly Income (Naira)		
<₦20,000	85	30
₦20,000 to ₦50,000	87	30.7
₦51,000 to ₦100,000	79	27.9
₦101,000 to ₦200,000	32	11.4
>₦200,000	-	-

2.3. Data Collection

Survey data were collected using a pre-tested, structured questionnaire designed to elicit information on basic demographic characteristics and knowledge, attitudes and practices of consumers towards food labels. IDIs and FGDs were conducted to obtain greater insight and to validate the responses from the questionnaire, using pre-tested IDI and FGD guides. The IDIs and FGDs were carried out by trained facilitators and recorded with a tape recorder to accurately capture their responses. Their consent was obtained before the use of the tape recorder. To ensure confidentiality and privacy, the personal identities of the IDI and FGD discussants were anonymised with codes. The IDIs and FGDs were conducted in secluded environments at the convenience of the discussants.

Table 2. Socio-demographic Characteristics of IDIs Participants (n=16).

	Frequency	Percentage
LGA or Location		
Enugu East	6	37.5
Nkanu West	5	31.25
Others	5	31.25
Group		
Community leaders	10	62.5
Food Regulators	3	18.75
Food Manufacturers	3	18.75
Gender		
Male	9	56.25

	Frequency	Percentage
Female	7	43.75
Educational level		
<FSLC	2	12.5
FSLC attempted	-	-
FSLC	2	12.5
Some years in Secondary	-	-
SSCE	4	25
Degree	6	37.5
PG	2	12.5
Occupation		
Food packaging	3	18.75
Sale of packaged food	2	12.5
Food Regulators	3	18.75
Others	8	50
Monthly Income (Naira)		
<₦20,000	2	12.5
₦20,000 to ₦50, 000	6	37.5
₦51, 000 to ₦100,000	4	25
₦101, 000 to ₦200,000	4	25
>₦200,000	-	-

Table 3. Socio-demographic Characteristics of FGDs Participants (n=16).

	Frequency	Percentage
LGA or Location		
Enugu East	8	50
Nkanu West	8	50
Gender		
Male	8	50
Female	8	50
Educational level		
<FSLC	2	12.5
FSLC attempted	-	-
FSLC	4	25
Some years in Secondary	2	12.5
SSCE	4	25
Degree	2	12.5
PG	2	12.5
Occupation		
Trading	3	18.75
Farming	3	18.75
Civil servant	4	25
Politician	2	11.5
Others	4	25
Monthly Income (Naira)		
<₦20,000	2	12.5
₦20,000 to ₦50, 000	4	25
₦51, 000 to ₦100,000	4	25
₦101, 000 to ₦200,000	4	25
>₦200,000	2	12.5

Table 4. Level and sources of knowledge about Food Labels.

Variables	Sellers F (%)	Consumers F (%)	CHI SQUARE (P-VALUE)	Overall F (%)
Whether respondents are aware that labelling is mandatory				
Yes	75 (91.5)	171 (85.1)	2.092 (0.148)	246 (86.9)
No	7 (8.5)	30 (14.9)		37 (13.1)
Sources of information				
Company sensitisation	30 (39.0)	7 (3.9)		37 (14.5)
Church sensitisation	8 (10.4)	38 (21.2)		46 (19.0)
Street awareness	1 (1.3)	4 (2.2)	59.734 (0.000)	5 (2.0)
Electronic sensitisation	36 (46.8)	130 (72.6)		166 (64.8)
Handbills	2 (2.6)	0 (0)		2 (0.8)

Data from the qualitative study show that manufacturers and regulators have more knowledge about food product labelling than consumers. Some stated that labelling of pre-packaged food products is an act of providing information about the product for the consumption of the end user. One FGD participant stated that “It is an act of indicating or

3. Data Analysis

3.1. Method of Data Analysis

Quantitative data collected from the field were analysed using Statistical Package for Social Sciences (SPSS). Summary statistics was carried out for demographic characteristics and responses pertaining to knowledge, attitude and practice. The correlation between knowledge, attitude and practice respectively, was explored. Qualitative data were transcribed, then coded and analysed using Nvivo software package.

3.2. Ethical Approval

The University of Nigeria, Nsukka has a Research Ethics Committee that is responsible for screening and approving research on human subjects. Ethical approval was sought and obtained from the Committee.

4. Results

4.1. Level and Sources of Knowledge About Food Labelling

Majority of the respondents, both sellers and consumers have adequate knowledge of food labelling. 86.9% of respondents indicated that they were aware that labelling is mandatory for pre-packaged food products. A high proportion of the respondents (64.8%) got information about labelling of food products from electronic media. This comprises 36 (46.8%) of sellers and 130 (72.6%) of consumers. Other sources of this knowledge included sensitisation by companies (14.5%); church sensitisation (19%); street awareness (2%) and handbills (0.8%). Table 4 below shows the level of knowledge about labelling of packaged food products and sources of the knowledge across sellers and consumers.

showing the consumer what the product is all about, the uses of the product, how to dispose it and the ingredients of the product” (IDIM1).

Another respondent stated that there are basically two types of labelling of pre-packaged food products that are in existence, namely: normal labelling that has to do with

detailing information about the product and secondly customised labelling that provides additional information according to demand of the buyer such as food products used at hotels, weddings and other ceremonies. One consumer stated that labelling implies information about the product such as expiry dates and NAFDAC registration numbers.

Majority of the respondents seem to believe that only a few consumers are aware of the requirement as regards food labelling and stated the following factors as reasons for the low level of awareness:

(a) Educational background: This implies that those who are educated and can read and write well are able to understand the contents of food labels better than the uneducated. *"The educated know more because they can read and understand"* (FGDW2).

(b) Geographical locations: This implies that those living in the urban areas will have more information concerning food labelling than those that live in rural areas. *"To me, I doubt if the level of awareness is high; I guess the educated and the urban dwellers know more than the illiterate and rural dwellers"* (IDIE1).

(c) Socio-economic background of consumers: This means that those that own electronic gadgets will have more information than others without such gadgets.

Some participants expressed the necessity for consumers to know the protection provided by the law in relation to food labelling as this would facilitate rational choice of food products.

On the laws that provide for food labelling, the manufacturers and regulators in the qualitative study identified the National Agency for Food and Drug Administration and Control Act; Pre-packaged Food Labelling Regulations 2005, the Bottled Water (Labelling) Regulations 1996 (both of which were in force at the time of the field work); and the Public Health Law of Enugu State 2004. On the other hand, consumers both at the FGD and IDI levels seemed unaware of any law that governs labelling of pre-packaged food in Nigeria. Although some opined that they had a feeling that there should be some laws but did not know any specific law on the subject. According to one respondent:

"I cannot point out any particular law about food labelling but I know the law states that any food product that is packaged must have full direction on the usage and must be packaged in a hygienic environment" (IDIE3).

On the reason for food labelling, 59% of the survey participants, stated that the major reason is to give clear information about the product; 38% stated that it is to make the products look nice; 4% indicated that it is just to enable the manufacturer to comply with regulatory requirements; while 1% did not know the reason for food labelling. Figure 1 below is a graphical representation of the reasons for labelling of pre-packaged food products as indicated by respondents. A significant difference exists in the levels of awareness of food labelling by sellers and consumers, ($p < .05$).

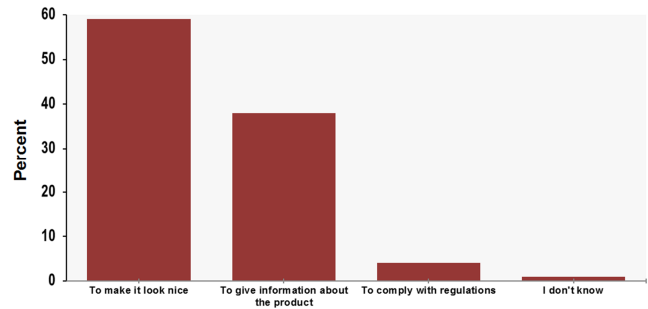


Figure 1. Reasons for labelling pre-packed food products.

Data from the qualitative survey substantially corroborate the results from the survey. Participants in the qualitative study enumerated the purposes of food labelling to include, the need to beautify the pre-packaged food product; itemise useful information about the product; know the producer and the expiry date; and to provide information on the nutritional contents of the food product. Other stated purposes are to know whether the product is fit for consumption or detrimental to health; enable consumers to have value for their money; differentiate good and bad products; show the level of superiority between one product and another; display the NAFDAC's registration number and trade mark; and show the batch number of the product.

4.2. Attitude Towards Food Labels

As depicted in Table 5 below, 279 of the respondents, representing 98.6% consider it important that pre-packaged food products should be labelled. Only one respondent (0.4%) did not think that food labelling is important; while three (1.0%) did not know whether or not it is important that pre-packaged food products should be labelled. Those who considered that food labelling is important feel so for various reasons, namely: to generally provide information about the product (46%); make the product attractive (19.4%); help to differentiate brands as well as genuine products from fake ones (19.1%); identify the expiry date (13.3%); prevent the product from contamination (1.4%) and to ensure that a product is approved by the regulatory agency (0.7%).

Majority of the respondents (260, representing 91.9%) stated that they usually look out for the date of manufacture and expiration on food labels. Other pieces of information that the respondents look out for include: name and contact of the manufacturer (48.8%); ingredients (20.8%); nutritional information (13.4%); instruction on usage (13.4%) and registration details (60.1%).

On whether respondents would buy a pre-packaged food product that is not labelled, majority (200 representing 70.7%) stated that they would not; 33, representing 11.7% stated that they would while 50 (17.7) were not sure of avoiding such products.

On the question whether respondents would buy and use pre-packaged food products that are not labelled, opinions were divided at both the FGDs and IDIs. About half of the respondents indicated that they would since such products are normally cheaper and considering the prevailing economic

situation in the country. “I will buy because of cost of the items. That is the economic situation in the country. And they will always be cheaper.” IDIW1. Some, however, emphatically stated that they would not buy irrespective of price as unlabelled food products may not be suitable for consumption. “Will not buy. I will take it that our country does not support the product. The ingredients are not good for health” (IDIW2). Some of the participants who showed a positive attitude towards unlabelled food products however expressed exception as regards drugs.

4.3. Practices Relating to Food Labels

Majority of the respondents in the survey (173, representing 61.1%) read labels of pre-packaged food products before buying; eleven, representing just 3.9% do not read the labels while 99, representing 35% read only sometimes. For 217, representing 76.7% of the respondents, the contents of food labels influence their decision to buy the product; 16 (5.7%), are not influenced by food labels; 50 respondents, representing 17.7%, are sometimes influenced.

Table 5. Consumers' Attitude towards Food Labels.

Variables	Sellers F (%)	Consumers F (%)	CHI SQUARE (P-VALUE)	Overall F (%)
Whether it is important to label packaged food				
Yes	81 (98.8)	198 (98.5)	0.436 (0.804)	279 (98.6)
No	0 (0)	1 (0.5)		1 (0.4)
Don't know	1 (1.2)	2 (1.0)		3 (1.0)
Reasons for saying yes				
To differentiate brands and fake	12 (14.8)	41 (20.8)	0.571 (0.061)	53 (19.1)
To identify expiry dates	12 (14.8)	25 (12.7)		37 (13.3)
To provide information on the product	31 (38.3)	97 (49.2)		128 (46.0)
Make product more attractive	24 (29.6)	30 (15.2)		54 (19.4)
Prevent product from contamination	2 (2.5)	2 (1.0)		4 (1.4)
Ensure product is approved by NAFDAC	0 (0)	2 (1.0)		2 (0.7)
Information respondents would look out for				
Name and contact of manufacturer	47 (57.3)	91 (45.3)	3.381 (0.066)	138 (48.8)
Date of manufacture and expiration	73 (89.0)	187 (93.0)	1.255 (0.337)	260 (91.9)
Ingredients	19 (23.2)	40 (19.9)	0.377 (0.524)	59 (20.8)
Nutritional information	18 (22.0)	40 (19.9)	0.150 (0.698)	58 (20.5)
Instruction on usage	14 (17.1)	24 (11.9)	1.320 (0.251)	38 (13.4)
Registration to bodies	57 (69.5)	113 (56.2)	4.291 (0.038)	170 (60.1)
Whether respondents will buy unlabelled food products				
Yes	14 (17.1)	19 (9.5)	10.300 (0.006)	33 (11.7)
No	62 (75.6)	138 (70.7)		200 (70.7)
Not sure	6 (7.3)	44 (21.9)		50 (17.7)

A statistical difference (P values are <0.05) exist between the sellers and consumers of labelled food products as regards date of manufacturing, instruction on usage and registration with regulatory bodies. This analysis is presented in detail in Table 6 below which shows the practices of respondents towards food labels.

Table 6. Practices of consumers regarding food labels.

Variables	Sellers F (%)	Consumers F (%)	CHI SQUARE (P-VALUE)	Overall F (%)
Whether respondents read food labels before buying				
Yes	59 (72.0)	114 (56.7)	5.733 (0.057)	173 (61.1)
No	2 (2.4)	9 (4.5)		11 (3.9)
Sometimes	21 (25.6)	78 (38.8)		99 (35.0)
Whether contents of label influence decision of respondents to buy a food product				
Yes	63 (76.8)	154 (76.6)	1.036 (0.596)	217 (76.7)
No	3 (3.7)	13 (5.7)		16 (5.7)
Sometimes	16 (19.5)	34 (16.9)		50 (17.7)

At the FGD and IDI levels, there were also divergent opinions as to whether respondents look out for and read the labels on pre-packaged food products before buying. About 40% of the participants in the interviews stated that they always check for and go through the labels before buying a product. Of particular interest to participants are expiry dates and NAFDAC registration number. A participant stated: “I check always especially expiring date” (IDIW1). One respondent stated that she checks the label because she would not want her children to eat bad food products (IDIW1). Some other respondents stated that they read pre-packaged

food labels but not all the time. One respondent stated that she reads always in the case of drugs but only sometimes in the case of food products. However, one participant stated emphatically that he reads for both drugs and food, “so as to know the expiry date for both because every expired food is equivalent to poison” (FGDE5).

Only two respondents at the IDIs responded to the question on the level of compliance with existing laws on food labelling. Both were of the opinion that there is a high level of compliance since there are fewer defaulters due to high level of sensitisation by manufacturers in the state and at national level. “Since we are

now sensitising, there is high level of compliance and we have also attached sanctions to non-compliance. This is both at the state and national levels. So for them to avoid the sanction, they are forced to comply” (IDIR2).

Respondents itemised the sanctions imposed on defaulters to include: warning, criminal prosecution, administrative fines and closure of factory. These sanctions serve, not only as punishment against defaulters but as deterrence to other manufacturers thereby resulting in increased compliance with the law.

Ways of ensuring that manufacturers comply with legal requirements as expressed by respondents are:

- 1) responsible agencies should carry out routine and unannounced visits to factories, conduct market surveillance, carry out test purchases of products from markets and shops and subject them to laboratory analysis to confirm the information on the label and consistency with prescribed standards;
- 2) responsible agencies should organise training for food handlers, sellers, and manufacturers;
- 3) government should publicise the need to label or reduce the cost of labelling;
- 4) support for small scale producers through provision of soft loans and tax rebates and other incentives in order

to reduce the cost of production;

- 5) regulatory agencies to closely monitor the activities of producers;
- 6) establishment of a consumer complaints commission to handle reports from consumers;
- 7) responsible agencies should reduce the cost of registering products by manufacturers;
- 8) government should organise consumer education on the dangers of unlabelled and improperly labelled food products and the need to avoid such products;
- 9) consumers should be encouraged to report cases of infringement to responsible agencies.

4.4. How to Improve Awareness of the Importance of Food Labels

On what should be done to ensure that consumers are aware of the need to use/buy only food products that are properly labelled, 233, representing 82.6% of the respondents stated that there is a need for awareness campaign on food products label; 17 (6%) and 1 (0.4%) of the respondents suggested advertising on electronic and print media respectively while 32 (11%) suggested the use of social media (see table 7 below).

Table 7. How to improve awareness of the importance of food label.

Variables	Sellers F (%)	Consumers F (%)	CHI SQUARE (P-VALUE)	Overall F (%)
Recommendations to improve consumers' awareness to use labelled products				
Advert-Electronic Media	73 (89.0)	160 (80.0)	8.671 (0.034)	233 (82.6)
Print Media	5 (6.1)	12 (6.0)		17 (6.0)
Social Media	1 (1.2)	0 (0)		1 (0.4)
Street Campaigns	3 (3.7)	29 (14.0)		32 (11.0)

Majority of the respondents at the IDI and FGD levels expressed the opinion that a prominent way to improve awareness about food labels among consumers and other stakeholders is through awareness workshops. As regards producers, respondents felt that there should be proper sensitisation, strict monitoring and mentoring and imposition of sanctions against defaulters. It was further suggested that consumers should desist from patronising products that are not labelled. *“There is a need for proper sensitisation, strict monitoring and sanctioning of defaulters, enlightening the consumers to desist from buying food not labelled, as well as to reduce the cost of labelling if it is high”* (IDIE1). Almost all the FGD respondents were of the opinion that sensitisation to improve awareness of consumers and other stakeholders should be conducted through radio, TV, print media, churches, market places and community leaders. *“This can be done by sensitisation through: radio, printed media, churches, publicity in the market places and use of the town leaders to educate their people”* (FGDW3). Some of the participants also emphasised that this could be done by the National Orientation Agency (NOA), NAFDAC, schools and churches to achieve wide coverage. *“NOA should enlighten people that this is how things should be, even by going to the villages”* (FGDE4). Another participant suggested that NAFDAC and other

responsible agencies should educate members of the public in the same way as with case of drugs. One respondent emphasised that not only government should be involved in the campaign but also teachers and churches.

5. Summary of Findings, Recommendations and Conclusion

5.1. Summary of Findings

In summary, the main findings of the study are as follows:

1. Knowledge about Food Labelling

Knowledge about food labelling is wide spread among manufacturers, sellers and consumers in Enugu State. The results of both the survey and the qualitative study show that the manufacturers and consumers know the meaning, purposes and importance of food labelling. However, as revealed by the study, regulators, manufacturers and sellers of food products have more knowledge of food labelling than consumers. Data from the survey show that 30 consumers, representing 14.9% of the consumers in the study were not aware that labelling is mandatory while only 7 respondents (representing only 8.5%) sellers were unaware that labelling is mandatory. Majority of the respondents in the IDIs and the

FGDs believe that only a few consumers are aware of the law imposing mandatory food labelling while majority were not. The respondents identified the factors that affect the level of awareness to include:

- (a) *educational background*: those who are educated and can read and write are more aware of this legal requirement than the uneducated;
- (b) *geographical location*: those living in urban areas have more information concerning labelling than those in rural areas; and
- (c) *socio-economic background of consumers*: those that own electronic gadgets have more information than otherwise.

Consumers in both the IDIs and FGDs largely displayed lack of awareness of laws that require mandatory food labelling in the country. Those that claimed to be aware of the existence of such laws did not know any specific law on the subject. In contrast, manufacturers in the IDIs were able to identify some, but not all the laws that deal with food labelling.

5.2. Level of Compliance by Manufacturers to Food Labelling Laws

Two regulators in the IDIs claimed that there is a high level of compliance with food labelling laws by manufacturers as a result of the high level of sensitisation of manufacturers being conducted at state and national levels. These regulators attributed the claimed high level of compliance to the sanctions attracted by infringement which include fines, closure of factory and prosecution of the offender. It was, however, disclosed that there were a few cases of non-compliance which could be attributed to the cost of product registration and production of labels especially for new businesses. Apart from such cases, any non-compliance will mean that the product is a fake, and the producer deliberately does not want to be identified with the product.

It is pertinent to note that the above assertion was made by the regulatory agencies whose responsibility it is to enforce compliance. Further research is needed to validate this assertion.

5.3. Attitude of Consumers in Enugu State Towards Food Labels

On the question as to the willingness of respondents to buy and use unlabelled pre-packaged food products, opinions were divided. Nineteen (representing 9.5%) of the consumers in the quantitative study indicated that they would buy such products while 44 (21.9%) were not sure whether they would.

About half of the consumer-respondents in the IDI and FGD indicated that they would go on to buy and use unlabelled pre-packaged food products due to the fact that such products are cheaper than the labelled brands. On the other hand, some of the respondents emphatically stated that they would not buy unlabelled food products irrespective of price differential as such products are not approved as suitable for consumption. Respondents generally made exceptions as regards drugs expressing unwillingness to buy unlabelled drugs.

5.4. Practice of Consumers in Enugu State Regarding Food Labels

Here again, respondents had divergent views. There was no consensus on the question whether consumers always look out for and check labels before buying or using food products. 114 (56.7%) of the consumers in the survey said they read food labels before buying; 9 (4.5%) said they do not while 78 (38%) read such labels sometimes. 13 (5.5%) of the consumers indicated that food labels do not influence their decision to buy a product while 34 (16.9%) said they are sometimes influenced. Some of the participants in the FGD said they do not check labels before buying food products but do so in the case of drugs.

On whether the contents of food labels influence the decision to buy pre-packaged food products, most of the participants said they would buy an unlabelled brand if it is cheaper than the labelled one.

5.5. How Uneducated Consumers Cope with Accessing food Label Information

The study reveals that educated consumers who can read and write are more aware of their right to have pre-packaged food products properly labelled than uneducated consumers. Educated consumers can also read and understand information on a label unlike uneducated consumers. Participants in FGD were unanimous that only those that can read understand the information on food labels. *“Not everybody: It is only those who can read, whether in the village or in the township.”* (FGDW8). Thus, only those who can read, whether they reside in the urban area or rural area can read and understand information on food labels on their own.

Those who cannot read on their own depend on the sellers or other persons in getting food label information, although they can identify particular brands of packaged food products with the design or pictorial on the packets. The question is whether sellers are obliged to and do provide the illiterate consumer with accurate and comprehensive food label information. According the respondents, such consumers are entitled to the information.

“Because we are buying with our money and need to know what is inside the package.” (FGW6); *“To know the company and quality of the product.”* (FGDW9); and *“To know if the government agency approved the food.”* (FGDW1).

Respondents in the IDIs and FGDs suggested vigorous enlightenment campaigns through print and electronic media, churches and markets to sensitise the public on the benefits of food labels and the need for consumers who cannot read to insist on their right to have the food label information read and explained to them by the sellers. There is also need for a further study to ascertain whether sellers of packaged food products provide consumers who cannot read with adequate and comprehensive food label information.

6. Recommendations

This study recommends as follows:

6.1. Awareness Creation

Awareness is an important factor in considering issues relating to the knowledge, attitudes and practices of consumers in Nigeria. This study has revealed that majority of consumers are not aware of the legal requirements regarding proper labelling of food products. Vigorous consumer education is, therefore, needed to equip consumers with the knowledge to use food labels to make rational choices.

Relevant government agencies should, on a regular basis, undertake public enlightenment campaigns on both electronic and print media to educate the public on the importance of food labels. In addition, sensitisation programmes on food labelling should be organised periodically for manufacturers of pre-packaged food, community leaders, market associations and religious leaders.

Consumer protection should be introduced in the curriculum of primary and secondary schools as part of civic education to equip pupils and students with basic consumer rights including the rights relating food labelling.

6.2. Amendment of Laws

The stipulated penalties for contravening the extant regulations are, in the case of an individual, imprisonment for a term not exceeding a year or a fine not exceeding ₦50,000.00 or both, and in the case of a body corporate, a fine not exceeding N100, 000.00. These penalties are too meagre when compared with huge profits that may accrue from fake or substandard unlabelled food products. There is a need for an upward review of these penalties in order to deter prospective violators.

To improve accessibility and inclusiveness, it is important to amend the regulations by imposing an obligation on sellers to interpret food labels for uneducated buyers on request. This of course presupposes awareness of food labelling requirement which in turn buttresses the need for intensive awareness creation.

6.3. Effective Enforcement of Regulations

It is one thing to have laws on a subject but another to effectively enforce the laws. A law that is not effectively enforced is of no benefit to the intended beneficiaries. Relevant agencies should ensure strict enforcement of the laws governing food labelling in Nigeria through constant monitoring and market surveillance to fish out violators.

7. Conclusion

Majority of consumers are aware of the importance of food labels and the right of consumers regarding proper labelling of pre-packaged food products. The level of knowledge and attitude towards food labels depend on the level of education, geographical location and socio-economic status of consumers. Consumers who can read and understand the

contents of food labels, those residing in urban areas and those who have access to radio, television and other modern means of communication have better knowledge and positive attitude towards food labels.

Although majority of consumers in the study are aware of the importance of food labels, some indicated their willingness to buy and consume unlabelled food products due to price differential and the prevailing economic situation in the country. This calls for vigorous consumer education especially in the rural areas to create awareness on the importance of food labels. It also underscores the need for improvement in the enforcement of existing regulations to eliminate unlabelled or improperly labelled food products from the markets. The study recommends intensive enlightenment programmes to educate consumers on the need to read and be guided by food labels.

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