Evaluation of Consumer's Response to Waste Disposal Symbols on Product Labels in Southern Nigeria

THOMPSON, OKON MONDAY 2009457004F

DEPARTMENT OF MARKETING FACULTY OF MANAGEMENT SCIENCES NNAMDI AZIKIWE UNIVERSITY, AWKA

AUGUST, 2019

Evaluation of Consumer's Response to Waste Disposal Symbols on Product Labels in Southern Nigeria

THOMPSON, OKON MONDAY 2009457004F

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY DEGREE IN MARKETING

DEPARTMENT OF MARKETING FACULTY OF MANAGEMENT SCIENCES NNAMDI AZIKIWE UNIVERSITY, AWKA

AUGUST, 2019

DECLARATION

I Thompson, Okon Monday, a postgraduate student of the Department of Marketing, Nnamdi Azikiwe University Awka with registration number: 20099457004F do declare that this Ph.D dissertation written by me is my work and to the best of my knowledge has not been submitted either by me or any other person in part or in full, for the award of any degree or diploma in this university or any other institution. Where information has been derived from other sources, I confirm that this has been cited accordingly in the bibliography.

Signature: Date:

APPROVAL

This dissertation by Thompson, Okon Monday with the registration number: 2009457004F has been approved in partial fulfilment of the requirement for the award of a Doctor of Philosophy (Ph.D) degree in Marketing, Faculty of Management Sciences, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria.

Date.....

REV. PROF. ANAYO D. NKAMNEBE

Supervisor Department of Marketing Nnamdi Azikiwe University, Awka Anambra State, Nigeria.

PROFESSOR DENNIS AMOBI

Head, Department of Marketing Nnamdi Azikiwe University, Awka Anambra State, Nigeria.

PROFESSOR CHIZOBA EKWUEME

Dean, Faculty of Management Sciences Department of Accountancy Nnamdi Azikiwe University, Awka Anambra State, Nigeria.

DDOFESSOD DIII OMENA V ICDOVWI

PROFESSOR PHILOMENA K. IGBOKWE

Dean, School of Postgraduate Studies Nnamdi Azikiwe University, Awka Anambra State, Nigeria.

PROFESSOR AHAM ANYANWU EXTERNAL EXAMINER

Date:....

Date:....

Date:....

Date:....

DEDICATION

I dedicate this dissertation to my parents and wife.

ACKNOWLEDGEMENT

The Ph.D journey has been along one, and in the course of this journey certain people have encouraged and stood by me. This part of the dissertation recognises and acknowledges their love and support. I express my sincere gratitude to all those who helped and supported me in the production of this work. I particularly appreciate my academic mentor and supervisor Rev. Professor Anayo D. Nkamnebe who has contributed immensely to the success of this dissertation. I owe intellectual debts to those whose work are listed in the bibliography.

I extend my sincere appreciation to my parents Mr. and Mrs. M. T. Udoh for the God fearing upbringing, which makes me who I am today. My gratitude also goes to my lecturers and friends of my department; Professor I.C. Nwaizugbo, Professor Dennis Amobi, Dr. V.N.O. Aghara, Dr. Moses Olise, Dr. Emma Ezenyelimba, Mr. Walter Anekeoku, Dr. Promise Oparah, Mr. Obinna Ojiaku, Mrs. Chioma Ifeaanyichukwu and the non-academic staff of the department; Mr. Godson Ayaorah, Late Mrs. Goodness Chigbuogwu, and Mrs. Blessing Chigbu for their encouragements and assistance. Dr. Titus Okeke who painstaking coded and analysed the data played a critical part too in this study. Not to forget are my fellow doctoral researchers; Dr. Precious Ezeh and Mrs. Philomena Omodafe for their encouragements.

I would also like to thank my wife (Pharm. Mrs. Abigail Thompson) for the encouragement and support during the period of this programme. I love you!

Above all, I give Jehovah my heavenly father the glory for his protections and journey mercies.

Thompson, Okon M.

TABLE OF CONTENTS

Pages				
Title Page	i			
Declaration				
Approval				
Dedication Acknowledgement List of Tables				
			List of Figures	
			Abstract	Х
CHAPTER ONE: INTRODUCTION				
1.1 Background to the Study	1			
1.2 Statement of the Problem	3			
1.3 Objectives of the Study	4			
1.4 Research Questions	5			
1.5 Formulation of Hypotheses	6			
1.6 Scope of the Study	7			
1.7 Significance of the Study	8			
1.8 Limitations of the Study	9			
1.9 Definition of Terms	10			
CHAPTER TWO: REVIEW OF RELATED LITERATURE				
2.1 Overview of label and waste disposal symbols	13			
2.2 Conceptual Review	24			
2.3 Empirical Review	30			
2.3 Theoretical Review of Related and Relevant Theories/Model	38			
2.6 Gap in the Literature	49			
CHAPTER THREE: METHODOLOGY				
3.1 Research Philosophy	57			
3.2 Research Design	58			
3.3 Population of the Study	58			
3.4 Sample Size Determination and Sampling Procedures	59			
3.5 Sources of Data and Research Instruments	60			
3.5.1 Questionnaire Design	61			
3.5.2 Validity and Reliability of Instrument				
3.5.3 Method of Administration of Instrument	62			
3.6 Statistical Method of Data Analysis	62			

CHAPTER FOUR: PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

4.1	Data Presentation	64
4.2	Descriptive Analysis	76
4.3	Hypotheses Testing	86
СН	APTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND	
	RECOMMENDATIONS	
5.1	Summary of findings	89
5.2	Discussion of findings	90
5.3	Conclusion	92
5.4	Recommendations	93
5.5	Contribution to Knowledge	94
5.6	Suggestions for further Research	96
BIB	LIOGRAPHY	97

APPENDICES 103

LIST OF TABLES

4.1 Demographic Characteristics of Respondents	64
4.2 Awareness of Waste Disposal Symbols	65
4.3 Understanding of Waste Disposal Symbols	66
4.4 General Environmental Knowledge	67
4.5 Attitude towards the Environment	68
4.6 Situational Factors	69
4.7 Responsible Environmental Behaviour	70
4.8 Gender of Respondents	71
4.9 Educational Background of Respondents	73
4.10 Age Bracket of Respondents	74
4.11 Marital Status of Respondents	75
4.12 Descriptive Analysis	77
4.13 Test of Normality	79
4.14 Assessment of Structural Equation Model	87

LIST OF FIGURES

2.1.1 Mobius Loop	16
2.12 Tidy Man	16
2.1.3 The Green Dot	17
2.1.4 Plastic Resin Code 1	18
2.1.5 Plastic Resin Code 2	19
2.1.6 Plastic Resin Code 3	20
2.1.7 Plastic Resin Code 4	21
2.1.8 Plastic Resin Code 5	22
2.1.9 Plastic Resin Code 6	22
2.1.10 Plastic Resin Code 7	23
2.4.1 Knowledge-Attitude-Behaviour Model	38
2.4.2 Theory of Planned Behaviour	39
2.4.3 Early Linear Models	40
2.4.4 Model of Responsible Environmental Behaviour	45
2.4.5 Value-Belief-Norm Theory	48
2.5.1 Research Conceptual Framework	52
4.1 Gender of Respondents	72
4.2 Educational Background of Respondents	73
4.3 Age Bracket of Respondents	74
4.4 Marital Status of Respondents	75
4.5 Research Measurement Model	80
4.6 The Research SEM Model	86

ABSTRACT

Environmental labelling is done in order to encourage sustainable environmental consumption patterns and responsible environmental behaviour. This research is necessitated on the fact that despite the inscriptions "Dispose Properly", "Help keep Nigeria tidy", "Keep our environment clean" or "Recyclable" found on the labels of most fast moving consumer goods (FMCGs) sold in the country, it is noted that majority of Nigerian consumers do not dispose properly the packages of their food and drink items after consumption. This is evident after a rainfall, whereby our roads and gutters are littered with the packages of food and drink items consumed. This suggests that certain factors may be militating against the implementation of the waste disposal symbols and words on the labels of food and drink items consumed. Interestingly, very limited research attention has been directed at unraveling these factors in the Nigerian context. The broad objective of this study is to examine consumers' response to waste disposal symbols and words on product labels. This study adopts descriptive research design which utilised survey research method, wherein questionnaire serves as method of collecting primary data. This study was also supported by secondary data. A total of 790 respondents were surveyed. Partial least squares Structural equation modelling (PLS-SEM) was adopted to analyse and test the hypothesised relationships between the variables in the research model. One of the major findings of the study is that despite consumers' being aware and having understanding of the waste disposal symbols and words on the labels of food and drink items consumed, they do not exhibit responsible environmental behaviour because of the influence of situational factors. Also identified in this study is that possession of environmental knowledge does not lead to exhibiting responsible environmental behaviour. Based on the findings, the researcher concludes that; the reason majority of consumers' in Southern Nigeria do not act responsibly toward the environment is because of the influence of situational factors. The researcher recommends among others; inclusion of incentive schemes to reward consumers returning their pet-bottles and cans and punitive measures for offending consumers', the Public Private Partnership (PPP) synergy to achieve a clean and sustainable environment.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Environmental pollution caused by improper disposal of waste has been identified as one of the main causes of environmental degradation (Kwawaja & Shah, 2013). Ajaegbo, Dashit & Akume (2012) describes littering as an environmental hazard that is detrimental to human health. Scientific investigations (for example: Quartey, Tosefa, Danquah & Obrsalova, 2015); Latif, Omar, Bidin & Awang (2012) overwhelmingly indicate that the negative consequences of man's activities as regards consumption and waste disposal have led to concomitant environmental deterioration, which in turn affects the quality of society's life. Quartey, et al (2015) noted that indiscriminate disposal of waste in various undesired sites such as along the streets, gutters, motor parks, schools, markets, homes, and venues of social functions, etc. poses many environmental threats, because the sachet water bags are made of non-biodegradable synthetic polyethylene (polythene) which does not decompose in the soil even after many years. The polythene when subjected to burning produces major known and harmful greenhouse gases (GHGs) like carbon monoxide, nitrous oxide and carbon dioxide. Owusu, Kwakye, Welbeck & Ofori (2017) further reports that the negative impacts of human activities on the environment, such as environmental degradation and climatic change, have been one of the major challenges ever faced by humanity and businesses, and issues concerning this are expected to grow because of growth in population and technology. It is therefore imperative that individuals and businesses make decisions and choices that will ensure a productive and sustainable environment and hence a sustainable human society. Thus, global warming arising from climatic change, greenhouse gas emission and

consumers' post-consumption attitude have become emerging issues for marketing to promote ecologically consumer behaviour (Taufique, Siwar, Chamburi & Farah 2016).

In order to curtail environmental pollution, marketingorganisations are not only concerned with consumers' purchase of their goods and services, but also with the post-use (waste disposal) because of its implication on the natural environment. Companies have therefore tried to bring attitudinal change on consumers with regards to their consumption and waste disposal pattern, by introducing environmental labels on the packets of fast moving consumer goods. As such, consumers' on a daily basis are exposed to different types of environmental or ecological labelling symbols and words such as, environment-friendly, ozone-friendly, earth-friendly, degradable, recyclable, renewable, reusable or biodegradable (D'souza et al, 2006). Environmental or ecological labels guide consumers to purchase products that are environmentally friendly, and is done to encourage sustainable environmental consumption patterns and responsible environmental behaviour.

Consequently, in Nigeria today there are companies (for example: Nestle Nigeria Plc, Promasidor Nigeria Limited, GlaxoSmithKline Consumer Nigeria Plc, UAC Foods Limited, etc.) that have adopted the sustainability marketing mantra and encourage responsible environmentalbehaviourin the course of their production by having symbols and words like; "Dispose Properly", "Help keep Nigeria tidy", "Keep our environment clean" or "Recyclable" on the labels of their products.

To effectively tackle the threats posed by environmental pollution and minimise the impact of man's activities on the environment, states government in southern Nigeria have set up agencies and programmes to ensure a clean, safe and green environment. For example; Lagos state government has launched a programme tagged "Cleaner Lagos Initiative", Anambra state government sets up "Operation Clean and Healthy Anambra" (OCHA Brigade), while Cross River state government introduced a paramilitary outfit called "Green Sheriff" and task force on refuse evacuation and cleanliness.

Previous studies such as Borin, Cerf & Khrisnan (2011) that investigated consumers' response to eco-labels conclude that consumers' do not really understand the meaning of the environmental labels, that even recognisable symbols can have different meanings. For example, the three chasing arrows recycling symbols can be used to represent a product that is made out of recycled materials or one that is recyclable. Similarly, Dolic, Pibernik & Bilusic (2010) concluded that the current system of packaging labelling is flawed often causing confusion and misinterpretation on the part of the consumers'. Buelow, Lewis, & Sonneveld (2009) added that the plethora of labelling schemes that currently exist, creates confusion and makes understanding of the labels very poor. While Thorgersen (2000) submitted that consumers' often have difficulty understanding what the labels intend to communicate. These investigations were all foreign studies which does not really explain the situation in Nigeria. Hence, the need to examine consumers' response to waste disposal symbols in the Nigerian context.

1.2 Statement of the Problem

Despite the efforts by the three state governments reviewed and the efforts by manufacturing firms to ensure that the inscriptions "Dispose Properly", "Help keep Nigeria tidy", "Keep our environment clean" or "Recyclable" is found on the labels of most fast moving consumer goods (FMCGs) sold in the country, it is noted that majority of Nigerian consumers do not dispose properly the packages of their food and drink items after consumption. This is mostly evident after a rainfall, whereby our roads and gutters are littered with the packages of food and drink items consumed. According to Gibson (2016) aside from causing the deterioration of the ecosystems, litter can negatively affect wildlife, human health and the aesthetic value of an area. It is evident that most of the fast moving consumer goods (FMCG's) sold in Nigeria have waste disposal symbols and words, but the point of concern is that majority of the consumers do not implement the waste disposal information by disposing properly. This suggests that certain factors may be militating against the implementation of the waste disposal symbols and words on the labels of food and drink items consumed.

Thus, the growing incidence of food and drink packages littered everywhere necessitates this research to investigate what could be the reason why the efforts of the manufacturing companies and the efforts by the state Governments are not yielding the desired result. Interestingly, very limited research attention has been directed at unraveling these factors responsible for the minimal implementation of the waste disposal information in the Nigerian context. Hence, there is a gap in exploring the impact of waste disposal symbols and words on the consumers of fast moving consumer goods. This is important to investigate because the purpose of environmental symbols and words on the labels of products is not just promoting the ecologically labelled products, but also to promote responsible environmental behaviour.

1.3 Objectives of the Study

The broad objective of this study is to examine consumers' response to waste disposal symbols and words on the packaging of consumer goods. From this broad objective, the following specific objectives are derived:

- 1. To examine the level of consumers' awareness of the waste disposal symbols and words on product labels.
- 2. To ascertain the level of consumers' understanding of the waste disposal symbols and words on the labels of food and drink items consumed.
- 3. To determine the extent to which situational factors influence the implementation of waste disposal information on product labels.
- 4. To determine the extent to which possession of environmental knowledge influences responsible environmental behaviour.
- To determine the extent to which demographic variables such as: gender, education, occupation, marital status, and age influence consumers' behaviour towards waste disposal information on product labels.

1.4 Research Questions

Based on the preceding objectives, the following research questions are formulated for this study:

- 1. What is the level of consumers' awareness of the waste disposal symbols and words on product labels?
- 2. What is the level of consumers' understanding of the waste disposal symbols and words on the labels of food and drink items consumed?

- 3. What is the extent to which situational factors influence the implementation of waste disposal information on product labels?
- 4. Does possession of environmental knowledge influence responsible environmental behaviour?
- 5. What extent does demographic variables such as: gender, education, occupation, marital status, and age influence consumers' implementation of the waste disposal information on product labels?

1.5 Formulation of Hypotheses

H1: There is a significant relationship between consumers' awareness of the waste disposal symbols and consumers' positive attitude towards the environment.

H2: There is a positive relationship between consumers' awareness of waste disposal symbols/words and exhibition of responsible environmental behaviour.

H3: There is a significant relationship between consumers understanding of the waste disposal information and exhibition of responsible environmental behaviour.

H4: There is a positive relationship between possession of environmental knowledge and exhibiting responsible environmental behaviour.

H5: There is a positive significant relationship between consumers' demographics like gender, education, age, and marital status and the exhibition of responsible environmental behaviour.

H6: There is a positive relationship between situational factors such as; consumers' convenience, availability of waste bins and the exhibition of responsible environmental behaviour.

H7: There is a significant relationship between consumers' attitude towards the environment and Exhibition of responsible environmental behaviour.

1.6 Scope of the Study

The scope of the study refers to the geographical area or territory where a study was conducted. It also includes a statement as to the date and period the study was conducted. The rationale for this is that it allows for standardization/replicability, which is the major characteristic of scientific research (Okeke et al, 2008).

This study on evaluation of consumers' response to waste disposal symbols on product labels in southern Nigeria was conducted in three major cities of southern Nigeria: Lagos, Lagos State for South-West; Awka, Anambra State for South-East and Calabar, Cross River State for South-South. The rationale for situating the study in these cities is because they represent important cities in southern Nigeria. Accordingly, the sample population of this study is unknown because the researcher chooses to generate primary data from graduates of tertiary institutions located in these towns of southern Nigeria. The rationale behind this choice of respondents is because previous studies such as; Eastman, Nunez, Crettier & Thiel (2013); Lefebure & Munoz (2011); Kollmuss & Agyeman (2002) indicates that educational level influences responsible environmental behaviour and that respondents with college and graduate school education never littered.

1.7 Significance of the Study

This research which focused on evaluating consumers' response to waste disposal symbols on product labels is very significant as follows:

Theoretical Significance of the Study

The paucity of empirical studies investigating consumers' response/reaction towards waste disposal symbols and words on product labels, which created a knowledge gap has been filled by this study. Hence, the result of this study will contribute to extend the frontiers of environmental labelling, sustainability marketing and the knowledge-attitude-behaviour (KAB) literature in Nigeria and beyond.

In the course of this study, the researcher has considered several theories and models such as; Taufique et al, (2016) hypothesised model of knowledge, attitude and behaviour, Ajzen (1991) theory of planned behaviour, Ajzen and Fishbein (1980) theory of reasoned action, Kollmuss and Agyeman (2002) early linear models of environmental behaviour, Hines et al, (1987) models of responsible environmental behaviour, Stern et al, (1999) schematic model of variables in value-belief-norm theory, etc.

Being a relatively new area of inquiry, the researcher adopted and applied constructs of Ajzen and Fishbein (1980) theory of reasoned action, Hines et al, (1987) models of responsible environmental behaviour and Taufique et al, (2016) hypothesised model of knowledge, attitude and behaviour, that integrates both general environmental knowledge, awareness and understanding of waste disposal symbols, situational factors and attitude as a moderating factor which in turn is hypothesised to lead to consumer responsible environmental behaviour (CREB).

Social Significance of the study

To prevent further environmental pollution, increased environmental education is a strategic choice recommended and by integration of education into the community, environmental education can moreover establish an essential link between education, community life, and social progress, and then secure the participation of the various groups in a given community.

Economical Significance of the Study

To stop environmental pollution, public private partnership (PPP) synergy is required because proper waste management is not the sole responsibility of the government, as fellow citizens have a part to play. Creating recycling centers which will help keep the environment clean and in turn generate employment opportunities.

1.8 Limitations of the Study

It obvious that carrying out a research of this magnitude will be confronted with constraints such as lack of fund, which has compelled the researcher to prune down the scope of the study to southern Nigeria. Also, this study is limited by paucity of empirical studies in a developing country context, as most of the empirical studies reviewed were investigations conducted in a developed western country context. Hence, it does not shed deeper insight in explaining the factors militating against the implementation of waste disposal symbols and words in a developing country context. In addition, this study coverage area is southern Nigeria (south-west; south-east and south-south).Since this research does not cover all the six geo-political zones of the country, thus the findings of this study cannot be generalised to the whole country.

1.9 Definition of Terms

It is pertinent at this juncture to define some relevant terms used in this research. These include the following:

(i) Label

A label can be anything- a piece of paper, printed statement, imprinted metal, leather which is either a part of package or attached to it. Indicating product name, the value of its content, the quantity, name and location of the manufacturer, manufacturing and expiry date, quality assurance seal, mode of disposal after use, etc. Thus, a label is an informative tag, wrapper or seal attached to a product or products package.

(ii) Labelling

Labelling is another means of product identification like branding and packaging. Labelling is the act of attaching or tagging labels.

(iii) Eco-label

Eco-label is an environmental communication tool that aims to promote ecologically conscious consumer behaviour (Taufique et al, 2016). According to D'Souza et al, (2006) Environmental labels act as a guide for consumers to choose products that are environmentally friendly. It is often used by businesses to differentiate their products, position them and communicate the environmentally friendly message. They indicated further that there are a number of ways by which marketers convey environmental benefits of products, one is through general or specific product claims on product labels, for example, "ecofriendly", "environmentally safe", "recyclable", "biodegradable" and

"ozone-friendly". Thus, eco-label is a standardized label used to indicate sustainability to consumers when they intend to purchase something (Lefebure & Munoz, 2011).

(iiii) Consumer

A consumer is the final user of a product or services. It consists of all the individuals, groups or households buying products for personal consumption. A consumer may be flexible, irrational, unpredictable at one time, then normal and friendly at the other time. In whichever case, what remains the major thrust of a business is to meet the needs of the consumer (Nwaizugbo, 2004).

(V) Pro-environmental Behaviour

Pro-environmental behaviour simply mean behaviour that consciously seeks to minimize the negative impact of one's actions on the natural and built world (e.g. minimize resource and energy consumption, use of non-toxic substances, reduce waste production and disposing waste properly). It is also the conscious actions taken by an individual so as to minimize the negative impact of human activities on the environment or to improve the environment (Kollmuss and Agyeman, 2002).

(Vi) Responsible Environmental Behaviour

Responsible environmental behaviour involves the range of observable behaviour aimed at or intended to contribute to the solution of environmental problems. Also, the term can be understood as any behaviour or action adopted by an individual "consciously attempting to minimize his or her negative impacts on natural and constructed environments" Kollmus & Agyeman, (2002). The term pro-environmental behaviour, environmental responsible behaviour, Eco-friendly behaviour, is used interchangeably in this study.

(Vii) Climate Change

The United Nations Framework Convention on Climate Change (1992) defines climate change as "a change of climate attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods".

(Viii) Environmental Awareness

Environmental awareness is defined in this study as 'knowing of the impact of human behaviour on the environment'. Environmental awareness has both a cognitive, knowledgebased component and an affective, perception-based component (Kollmuss and Agyeman, 2002).

(Xi) Environmental Advertising:

Corporate dissemination of information through the media to consumers by encouraging consumers to purchase products that do not harm the environment and directing consumers' attention to the positive consequences of their purchase and their responsible environmental behaviour.

(Xii) Environmental Labelling:

Environmental labelling is an umbrella term that describes the various means by which companies disclose information on their environmental activities. It guides consumers to purchase products that are environmentally friendly and guides consumers to practice responsible environmental behaviour. Environmental labelling also refers to information a product provides about the environmental impacts associated with the production and use of a product.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The purpose of this chapter is to critically examine past scholarly articles, investigations and related works in the area of eco-labelling, sustainability marketing, and environmental education in order to develop meaningful insight into the research area being examined, which will be used to build the theoretical framework for the empirical study. Accordingly, this chapter is arranged using the following subheadings: overview of label and eco-label, conceptual review, theoretical review and empirical review and observed gap in the literature.

2.1 Overview of Label and Eco-label and Waste Disposal Symbols

According Kotler (2000) a label may be a special tag attached to the product or an elaborately designed graphic that is part of the package. The label might carry only brand name or a great deal of information. He further added that, labels perform several functions such as: 1.Label identifies the product or brand; 2.label might also grade the product; 3. Label might also describe the product, who made it, where it was made, when it was made, what it contains, how it is to be used and how to use it safely; 4. Label might promote the product through it attractive graphics.

The following are the important functions of labelling:

1. **Describes the product and specify its content-** A label provides complete information regarding the product. It mainly includes ingredients of the product, its usage and caution in use, cares to be taken while using it, date of manufacturing, batch number, etc.

2. **Identification of the product brand-** It is easier to identify a particular product among many with the help of labelling. For example, as a consumer you want to select loya milk.

The task of finding the desired milk from a heap of various branded milks becomes easier with the help of labelling.

3. Grading of product – When a product has different qualities, labelling helps to find out which pack contain what type of quality. For example, Promasidor Nigeria Limited manufactures three types of milk and to differentiate each type of milk, the company uses Brown (Loya), Yellow (Miksi) and Blue (Cowbell) coloured labels.

4. Help in promotion of products- The fourth function of labelling is to promote sales. Sometimes a consumer gets encouraged to buy a product simply due to attractive label. Nowadays labelling is used as an effective sale promoting tools.

5. Providing information required by law- Another important function performed by labelling is to provide statutory warning required by law. To put 'Tobacco smokers are liable to die young' on the package of cigarettes sold in Nigeria are example of statutory warning? Similarly, in case of hazardous or poisonous products, appropriate statutory warning need to be put on the label.

The primary role of labels is to inform consumers of the foods nutritional value and ingredients, NAFDAC number, date of manufacture, expiry date, its manufacturer health claims and possible allergens or some other potentially threatening information. All this data helps people decide whether they will eat certain food which is why food producers put a lot of effort into creating perfect labels for their product.

Eco-label

In the quest to explain the term 'eco-label' or 'eco-labelling' many researchers have developed several conceptualisations of the term, Lefebure and Munoz (2011) posits that eco-labelling is the practice of promoting environmentally friendly products. They further noted that it is a standardized label used to indicate sustainability to consumers when they intend to purchase something. Borin and Cerf (2011) in their paper used the terminology "eco-labelling" and "environmental labelling" as synonymous descriptors that refer to information a product provides about the environmental impacts associated with the production or use of a product.

Thogersen et al., (2010) also added that eco-labels provide consumers with product environmental information at the point of purchase to assist consumers in making environmentally informed purchase decision. Similarly, Rex and Baumann, (2006) agreed that eco-labels are intended as a means for consumers to make choices that will reduce environmental impact and enable them to influence how products are made.

According to D'Souza et al, (2006) Environmental labels act as a guide for consumers to choose products that are environmentally friendly. It is often used by businesses to differentiate their products, position them and communicate the environmentally friendly message. They indicated further that there are a number of ways by which marketers convey environmental benefits of products, one is through general or specific product claims on product labels, for example, "ecofriendly", "environmentally safe", "recyclable", "biodegradable" and "ozone- friendly".

Interestingly, as noted earlier there are Nigerian companies (for example Nestle Nigeria Plc, Promasidor Nigeria Limited, GlaxoSmithKline Consumer Nigeria Plc, UAC Foods Limited, etc.) that have adopted the use of eco-labels/waste disposal symbols in the course of their production by having symbols and words like; "Dispose Properly", "Help keep Nigeria tidy", "Keep our environment clean" or "Recyclable" on the labels of their products.

15

Some of the Eco-labels/Waste disposal symbols used in Nigeria:

1. Mobius loop



Figure2.1.1

The Mobius loop (Figure 2.1.1), the universal symbol for recycling, was created for the first anniversary of Earth Day in 1970. In order to raise ecological awareness among people, the Container Corporation of America from Chicago, then big producer of recycled paper and carton, sponsored a contest whose aim was to think of a design which would symbolise the process of recycling. The version of the symbol showing only the arrows of the Mobius loop (white, with a black outline), without a circle or ring, was used to designate packaging or products suitable for recycling.

2. Tidy-man





The history of the Tidy-man symbol is not entirely clear; it is, however, thought that the symbol was first used by the American beer producer Budweiser during the 1950's in order to encourage consumers not to pollute the environment with incorrectly disposed of

packaging. In 1969 the organization Keep Britain Tidy introduced the Tidy-man symbol as a campaign trademark.

The Tidy-man symbol depicts a stylized figure of a man disposing of packaging in a litter bin (Figure 2.1.2). The meaning of the symbol is, "Dispose of this carefully and thoughtfully. Do not litter." Beside the symbol there may appear a text containing further explanations. On Nigerian products, the writings "keep Nigeria clean" or "help keep Nigeria tidy" sometimes appear beside the symbol. The Tidy-man symbol has iconic characteristics and, unlike other symbols described in this paper, it can be interpreted without prior knowledge of its meaning. The use of the symbol is free and unregulated, and the symbol itself belongs to the public domain. That is why it can be found on a wide array of packaging. The Tidy-man symbol simply suggests that the bearer should dispose of the item carefully and thoughtfully.

3. The Green Dot



Figure 2.1.3

The history of the Green Dot symbol starts in 1991, when it was introduced by the company Duales System Deutschland GmbH with the aim of financing its own system of packaging waste collection in Germany. Given the success of the dual system of packaging waste collection in Germany, the same scheme was soon applied in other European countries.

The symbol itself consists of two chasing arrows, coloured with two different shades of green, forming a circle. It is a symbol often found on different types of packaging.

Although the symbol is related to waste management, it is not necessarily related to recyclable packaging or packaging made of recycled material. The Green Dot symbol can be placed on any type of packaging, regardless of the material from which it was made.

Plastic Recycling Codes

In a bid to curb indiscriminate discarding of plastic products, the Society of the Plastics Industry, Inc. (SPI) introduced Plastic recycling codes with its resin identification coding system in 1988. The recycling codes are explained below.

Number 1 Code - Polyethylene Terephthalate, PETE



Figure 2.1.4 Symbol for PETE plastics

Description - PET or PETE is a clear, tough plastic commonly used as single use bottled beverage containers. It is easily recycled, inexpensive, lightweight and poses a low risk of leaching breakdown byproducts into the environment. It is in high demand for remanufacturers but recycling rates are only around 20%. Can also be used as a fibre.
Recycling Method - Collected through most curbside recycling programs

Virgin Plastic Uses - Soft drink, water and plastic beer bottles, pillow, quilt and sleeping bag fillings, food containers.

Recycled Plastic Uses - Polar fleece, packaging film, carpets, tote bags, furniture, building materials like panelling and occasionally new containers.

Number 2 Code - High Density Polyethylene, HDPE



Figure 2.1.5 Symbol for HDPE plastics

Name of Plastic - High Density Polyethylene, HDPE

Description - HDPE is a readily recyclable, versatile plastic commonly used for packaging. It is usually white or coloured and poses a low risk of leaching.

Recycling Method - Collected through most curbside recycling programs. Some programs only allow containers with necks.

Virgin Plastic Uses - Some garbage and shopping bags, milk and cream bottles, bleach, detergent and household cleaner bottles, motor oil containers, butter containers, yoghurt tubs, milk crates, rubbish bins, pipes and moulded products.

Recycled Plastic Uses - Oil bottles, recycling containers, drainage pipes, floor tiles, synthetic timber, fencing, laundry detergent bottles.

Number 3 Code - Polyvinyl Chloride, PVC



Figure 2.1.6 Symbol for PVC plastics

Name of Plastic - Polyvinyl Chloride, PVC

Description - PVC can be either a hard and rigid plastic or flexible and elastic plastic. It can be clear, white or coloured. PVC is a tough polymer and weathers well so is commonly used for siding, pipes and other building materials. PVC contains chlorine so should never be burnt as bruing will release toxic chemicals. The manufacture of PVC can release dangerous dioxins.

Recycling Method - Rarely recycled. May be accepted by synthetic timber or plastic timber makers.

Virgin Plastic Uses - Cleaning product and detergent bottles, shampoo bottles, food packaging, wire conduit, medical equipment, pipes and fittings, siding and hoses.

Recycled Plastic Uses - Pipe and fittings, decks, panelling, truck mudflaps, drainage mats and flooring, speed bumps, mats and shoes.

Number 4 Code - Low Density Polyethylene, LDPE



Figure 2.1.7 Symbol for LDPE plastics

Name of Plastic - Low Density Polyethylene, LDPE

Description - LDPE is a soft, flexible plastic

Recycling Method - LDPE is not often recycled through curbside programs. Many stores have programs that allow for plastic shopping bags to be returned to the store for recycling.

Virgin Plastic Uses - Squeezable bottles, shopping bags, food bags like bread and frozen food bags, dry cleaning bags, clothing, carpet, garbage bags, black plastic sheeting, ice cream container lids

Recycled Plastic Uses - Trash can liners and cans, compost bins, shipping envelopes, paneling, lumber, landscaping ties, floor tile Film for builders, industry, packaging and plant nurseries, bags, agricultural piping.

Number 5 Code - Polypropylene, PP



Figure 2.1.8 Symbol for PP plastics

Name of Plastic - Polypropylene, PP

Description - Polypropylene is a hard, flexible plastic that has a high melting point and is

suited for high temperature applications like holding hot liquids

Recycling Method - Collected through some curbside recycling programs.

Virgin Plastic Uses - Ice cream containers, drinking straws, lunch boxes, potato crisp bags

Recycled Plastic Uses - Brooms, brushes, rakes, compost bins, recycling crates, plant pots,

motor vehicle parts

Number 6 Code - Polystyrene, PS



Figure 2.1.9 Symbol for PS plastics

Name of Plastic - Polystyrene, PS

Description - Polystyrene may be either a rigid, brittle plastic or made into foam products.

Evidence suggests that polystyrene can leach toxins into food.

Recycling Method - Collected through some curbside recycling programs.

Virgin Plastic Uses - Imitation crystal glassware, plastic cutlery, takeaway food containers, hot drink cups, meat trays, egg cartons, CD cases

Recycled Plastic Uses - Insulation, packing materials, rulers, office equipment, clothes pegs, coat hangers, light switches, air conditioning vents

Number 7 Code - Other



Figure 2.1.10 Symbol for other plastics

Name of Plastic - All other plastics

Description - Number 7 plastics simply includes all other plastics. These include compostable and biodegradable plastics like polyactide through to acrylic, nylon and polycarbonate.

Recycling Method - Traditionally not recycled but now being collected through some curbside recycling programs.

Virgin Plastic Uses - Water bottles, CDs and DVDs, bullet-proof materials, sunglasses,

telephone, MP3 player and computer cases, signs and displays, clothing

Recycled Plastic Uses - Plastic timber, outdoor furniture, pipes, injection moulded products

2.2Conceptual Review

Previous researchers' have conducted literature reviews and meta-analysis to examine consumers' perception and attitude towards environmental literacy, eco-labels, and also factors that influence consumers' littering behaviour.

Wu, Lenkic, DiGiacomo, Cech and Kingstone (2018) In their study titled "How does the design of waste disposal signage influences waste disposal behaviour?" Set out to explore the impact of waste disposal signage design on waste disposal behaviour, despite the ubiquity of waste disposal in urban environments. The findings of the study indicate that sign containing either icons or pictures of permitted items improved sorting performance compared to signs containing only words of the items and that consistent positioning of the signs improved sorting performance compared to random positions for both pictures and icons. The study concludes by providing experimental evidence to demonstrate that the design of waste disposal signage can impact waste sorting performance in meaningful ways and highlight the need graphical signage and bin standardisation.

Gocer and Oflac (2017) in their study titled: "Understanding young consumers 'tendencies regarding eco-labelled products", set out to explore different factors influencing young consumers' approaches to eco-labelled products in an emerging country, Turkey. After and in-depth review of the literature to assess key constructs on environment and eco-labelled perceptions. The result of testing the hypotheses using exploratory factor analysis and structural equation modelling reveal that the existence of perceived environmental knowledge has an influence on eco-labelled product purchase tendencies, with environmental concern having a significant mediating effect.

Taufique, Vocino and Polonsky (2016) in their conceptual study titled "The influence of eco-label knowledge and trust on pro-environmental consumer behaviour in an emerging market". Their findings show that environmental and eco-label knowledge is positively associated with attitudes towards the environment, and that positive environmental attitudes and trust in eco-labels affects pro-environmental consumer behaviour.

Onel and Mukherjee (2015) in their research titled "Understanding environmentally sensitive consumer behaviour: an integrative approach research perspective", set out to develop a conceptual model based on an integrative approach to better understand ecosensitive consumer behaviours and their predictors. They reviewed distinct theoretical approaches and based on the integrative perspective, they developed a model using the framework of the goal framing theory (GFT). On the basis of the GFT, they propose that 12 variables influence the pro-environmental behaviours of consumers': biospheric values, egoistic values, altruistic values, environmental concern, awareness of consequences, ascription of responsibility, subjective norms, attitude towards behaviour, perceived behavioural control, personal norms, affect, and behavioral intention. They further categorise environmental behaviours based on three different stages of the consumption process of consumers': purchase, usage and post-use.

McAllister, Jessica (2015) in her conceptual study titled: "Factors influencing solid waste management in the developing world", Indicated that there are multitude of causes that contribute to an increase in public littering rates, such as; lack of social pressure to preventing littering, absence of realistic penalties or consistent enforcement, lack of

25
knowledge of the environmental effects of littering, and convenience because of unavailability of garbage bins.

Quartey, Tosefa, Danquah and Obrsalova (2015) in their conceptual study titled: "Theoretical framework for plastic waste management in Ghana through extended producer responsibility: Case of sachet water waste. They set out to analyse the impact of plastic use and disposal in Ghana and to identify and propose a more sustainable plastic waste recovery strategy in Ghana. The study identified that the ineffective levy system, lack of incentives for the peoples of Ghana to separate waste, coupled with the overall negative attitude of consumers' in Ghana requires an approach that will involve all stakeholders in the plastic pollution problem. They suggested policy approaches like product stewardship, extended producer responsibility and community based approach will help in reducing a greater portion of sachet water waste, which usually end up at dump sites and the environment is recovered efficiently and at low cost.

Wiernik, Ones and Dilchert (2013) in their study captioned: "Age and environmental sustainability: A meta-analysis" set out to examine the relationship between age and a variety of environment sustainability. Having meta-analysed data from relevant studies between 1970-2000, the findings of their study reveals that older individuals appear to be more likely to engage with nature, avoid environmental harm and conserve raw material and natural resources.

Borin, Cerf and Krishnan (2011) in their study titled "Consumer effects of environmental impact in product labelling" set out to investigate the impact of different levels of environmental information on key consumer metrics. Multiple product categories and messages that varied from strongly negative to strongly positive were used to test whether

the accuracy/completeness of information changes consumers view of green products. The findings show that consumers perception of product quality, value and purchase intentions does not differ significantly between products with positive environmental messages and those without any message. The study also found out that the impact of environmental information is greater for consumable products.

Dolic, Pirbernik and Bilusic (2010) in their article titled "Consumer interpretation of recycling symbols used for printed products" set out to examine how consumers' in Croatia interpret recycling symbols on product labels. Since, most packaging display more than one symbol related to recycling and waste management and with several organisations introducing their versions of recycling labels. They concluded that the current system of packaging labelling is flawed often causing confusion and misinterpretation on the part of the consumers.

Arttachariya, Patricia (2009) in the study titled "Individual determinants of responsible environmental behaviour," conducted a literature review on the models and theories noted by other researchers to predict responsible environmental behaviour. The paper presents some major propositions supported by available research and some principles for guiding future research and informing the design of behavioural programmes for responsible environmental behaviour. The study concluded that a good knowledge of environmental concepts is not sufficient. Attitudes, socio-demographic factors, personally and intentions are also necessary for the individual to take action and to act responsibly. The researcher also added that in the future, environmental education should not focus solely on providing environmental knowledge, but should change its approach and of course direction, it should give people concrete and accurate information about the environmental consequences on individuals behaviour and instil in people a sense of environmental efficacy so that they would be aware that the actions of a single individual could contribute to the ultimate resolution of environmental problems.

Kollmuss and Agyeman (2002) in their conceptual research titled; "Mind the gap: why do people act environmentally and what are the barriers to pro-environment behaviour?" They set out to explain the gap between the possession of environmental knowledge and environmental awareness and displaying pro-environmental behaviour. After an in-depth review and analysis of numerous theoretical frameworks and models, they concluded that demographic factors, external factors (e.g. Institutional, economic, social and cultural) and internal factors (e.g. motivation, pro-environmental knowledge, awareness, values, attitude, emotion, locus of control, responsibilities and priorities) have some influences on pro-environmental behaviour.

2.3 Empirical Review

Numerous empirical studies have been conducted to examine consumers' perception and attitude towards environmental literacy, eco-labels, and also factors that influence consumers' littering behaviour.

Struwig and Adenoff (2018) in their study, "Consumers perception of eco-labels in South Africa" set out to investigate the consumers' awareness of eco-labels, consumers' ability to evaluate label information and consumers' degree of environmental concern. A total of 120 respondents were surveyed using a self-administered structured questionnaire. The result showed that most respondents were aware of the labels. The result also indicate that consumers' do struggle to recognise the eco-labels because certain eco-labels are small symbols on product packaging often hidden among cluttered information such as brand

symbol and product information. They suggested that businesses need to increase eco-label identification among consumers', either to increase the size of their eco-label or add features to allow their eco-label to stand out amongst the clutter.

Owusu, Kwakye, Welbeck and Ofori (2017) in their research "Environmental literacy of business students in Ghana" examine the relationship between students' interest in environmental issues and knowledge levels of the environment. A total of 591 business students of the University of Ghana business school were surveyed. The findings indicate that there is a direct and positive relationship between students' interest in environmental issues and their environmental literacy levels. And that students interest and knowledge levels of environmental issues were good predictors of actual students' involvement in activities that promote sustainable environment.

Ifegbesan, Ogunyemi and Rampedi (2017) in their study titled; "Students attitudes to solid waste management in a Nigerian university: Implications for campus-based sustainability education". Set out to investigate prevalent waste management practices and the disposition of under graduate students in a Nigerian University. They adopted both qualitative and quantitative techniques in the study, and a total of 840 students/respondents from 4 academic faculties took part in the research. The findings indicate that while students were positively disposed to innovative ways of addressing the challenge of waste management in the university, there were significant differences in student's awareness and disposition according to sex, age, academic level and faculties.

Verdonk, Chiveralls and Dawson (2017) in their research titled; "The effect of signage on waste disposal" sought to investigate the effectiveness of signages in encouraging proper waste disposals. The study targeted attendees of the world music festival at Adeliade,

Australia to explore how signage's can encourage consumers to correctly dispose of their unwanted materials. The results gained from analyzing the concealed camera footage indicated that the bins under the three motivation signs elicited a greater number of deposits. The findings also suggest that while the attendees were drawn to signs, the messages and graphics did not aid their decision making process. Also, those who visibly thought about their deposits were more likely to dispose of their item correctly.

Taufique, Siwar, Chamhuri and Farah (2016) in their empirical study titled; "Integrating general environmental knowledge and eco-label knowledge in understanding ecologically conscious consumer behaviour". The study adopted the theory of reasoned action (TRA) as a guiding framework to investigate the attitude-behaviour relationship that integrates both general environmental knowledge and knowledge of eco-labels in predicting ecologically conscious consumer behaviour. A total of 381 respondents were conveniently surveyed in four states of Malaysia. The result from the analysis using confirmatory factor analysis (CFA) and structural equation modeling (SEM) shows that general environmental knowledge positively influence consumers' attitudes towards environment in driving environmental conscious consumer behaviour. They further suggest that marketing communication of companies need to focus on educating consumers about specific eco-label knowledge along with general environmental knowledge.

Esmailpour and Rajabi (2016) in their study "The effect of environment –friendly attitude on consumer perception of usability of product packaging", set out to evaluate the impact of environment-friendly attitude of consumer perception of reusability of product packaging. A total of 385 customers in the city of Bushehr, Iran were surveyed. The results indicate that the consumers' environment friendly attitude has a positive and significant effect on his

sensitivity to recyclability of product packaging. Also that the form, colour, and the material of the packaging (label) have a positive and significant effect on consumer perception of reusability of product packaging. Hence, companies should consider the form, colour, and the material of the packaging used on the products.

Cheng and Wu (2015) in their research titled "How do environmental knowledge, environmental sensitivity, and place attachment affect environmentally responsible behaviour? An integrated approach for sustainable island tourism". The research seeks to probe factors influencing tourists' environmentally responsible behaviour, hence 477 tourists' visiting Penghu islands Taiwan were surveyed. Structural equations modelling (SEM) was used to determine the relationships among the variables and the mediating effect, the result indicates that higher levels of environmental knowledge are associated with stronger environmental responsible behaviour.

Grunert, Hieke & Wills (2014) in their study titled: "Sustainability labels on food products: Consumer motivation, understanding and use", they set out to investigate the relationship between consumer motivation, understanding and use of sustainability labels on food products (both environmental and ethical labels) which are increasingly appearing on food products. A total of 4408 respondents from an online survey implemented in the UK, France, Germany, Spain, Sweden and Poland. The findings reveal a low level of use, this imply that sustainability labels currently do not play a major role in consumer food choice and future use of the labels will depend on the extent to which consumers general concern about sustainability can be turned into actual behaviour.

Ibok and Etuk (2014) in the research titled "Socio-economic and demographic determinants of green consumption". Set out to determine the demographic and socio-economic

characteristics of green consumers' and the effect of the characteristics on environmentally friendly behaviour. A total of 102 respondents from the green brigade in Akwa Ibom State were surveyed. The findings revealed that these green consumers' that exhibit environmentally friendly behaviour are mostly graduates of tertiary institutions. Mostly males than females, married with home ownership, mostly middle class citizens with white collar jobs and they consider environment safety and security paramount in every purchase and waste disposal decision they make. Their findings further indicate that the age of respondents, his household income, home ownership, work status, buying pattern, education and residence do significantly influence consumer's social responsibility behaviour in a statistically significant way. They concluded that raising the socio-economic and demographic status of the people will increase consciousness for safe environment among consumers.

Obiora Chinwe (2014) in her research titled "factors responsible for indiscriminate disposal of sachet water wastes in Anambra State Nigeria" set out to identify factors responsible for indiscriminate disposal of sachet water wastes in Anambra State, Nigeria. A total of 161 respondents were surveyed, factor analysis, Pearson's correlation matrix of interrelation and principal component analysis (PCA) were employed for data analysis. The statistical analysis result shows that attitude/behaviour and people's ignorance of the effect of their actions as psychological factors responsible for indiscriminate disposal of sachet water wastes. The study concluded that for proper and adequate disposal of sachet water wastes to be obtained, public enlightenment campaigns

aimed at helping people change their attitude about indiscriminate disposal of sachet water wastes.

Singh and Gupta (2013) in their research titled "Environmental attitude and ecological behaviour of Indian consumers", set out to explore and identify the components of environmental attitude that can drive the specific ecological behaviour of Indian consumers. A total of 300 respondents were surveyed and the findings show that consumers behave ecologically in specific manners depending on the formed attitude. The findings also suggest that environmental attitude components work as predictors of environmental behaviour. They concluded that developing a positive environmental attitude is a step to achieve sustainable environment.

Eastman, Nunez, Crettier and Thiel (2013) in their study "Identification of self-reported user behaviour, education level, and preference to reduce littering on beaches-A survey of S.E pacific". They surveyed 900 beach users throughout Chile to identify factors responsible for beach littering; their results indicated that respondents with college or graduate school education never littered, while those with lower educational background admitted to have littered the beaches in some way.

Ajaegbo, Dashit and Akume (2012) in their study "The determinants of littering attitude in urban neighbourhoods of Jos. After a survey of 200 respondents, they concluded that: attitude towards littering is affected by place of residence, age, and educational status, and installation of signs makes at least some people conscious of the way they dispose items, and of their own behavior and responsibilities.

Pensini, Slugoski and Caltabiano (2012) in their research titled "Predictors of environmental behaviour: a comparison of known groups" seek to examine factors contributing to

ecological behaviours, while also investigating how different community groups differ in the extent to which environmentally behaviour are performed. After a survey of four communities in Australia, results showed that environmentalist engage more in ecological behaviour, are more cooperative, have stronger social and personal norm, a more internal locus of control and feel more collective guilt. Differences in younger and older population revealed that young people engage in less ecological behaviour, cooperate less and have more external locus of control.

Latif, Omar, Bidin and Awang (2012) in their study "Environmental problems and quality of life: Situational factor as a predictor of recycling behaviour", set out to examine the influence of situational factors on recycling behaviour of consumers. Using cluster sampling a total of 300 respondents were surveyed. The result of the structural equation modelling indicate that situational factors have significant influence on actual recycling behaviour. They added that the less recycling facilities provided to consumers, the more inconvenience felt by them in carrying out the process of recycling.

Afangideh, Joseph and Atu (2012) in their research titled: "Attitude of urban dwellers to waste disposal and management in Calabar. They set out to critically examine the attitude of urban dwellers to waste disposal and management. A total of 150 respondents residing in Calabar municipality were surveyed. The finding revealed that family size has a great influence on waste disposal and generation. They concluded that effective environmental enlightenment would help avert the attitude of urban dwellers to waste disposal and management in the area.

Lefebure and Munoz (2011) in their study "Communicating to consumers' in Sweden with eco-labels" set out to determine if Swedish consumers' understand the eco-label message. A

total of 152 respondents were surveyed and the results show that demographic variable (age) was identified as a factor with strong impact that affected consumers' awareness of the ecolabel, and that gender also has an influence on the consumers understanding of the eco-label. Thogersen, Haugaard and Olesen (2010) in their research titled "consumers' responses to eco-labels", 439 consumers in the city of Aahus Denmark were surveyed on their understanding and responses to eco-label of marine fishery products. The results show that the consumers recognized and understand the eco-label message that in turn influence their purchase (adoption) decision process.

Ifegbesan, Ayodeji (2010) in his research "Exploring secondary school students understanding and practices of waste management in Ogun State, Nigeria", examined the level of awareness, knowledge and practices of secondary school's students with regard to waste management. A total of 650 students from six secondary schools across Ogun State were surveyed, the findings indicate that secondary school students surveyed were aware of waste problems in their school compounds. But possessed poor waste management practices, the study also identified significant relationships between students' sex, age, class and their level of awareness, knowledge and practices of waste management.

Halady and Rao (2010) in the research titled "Does awareness to climate change lead to behavioural change?" The study seeks to investigate whether awareness to climate change and its adverse impacts have any significant linkages amongst individual managers who undertake initiatives to minimize/mitigate the impact. After the survey, factor analysis and structural equation model were used to analyse the data to validate the framework and research questions. The result shows that awareness to climate change phenomenon does lead to significant behavioural change amongst managers in the industry. In addition, that awareness to health impacts of climate change has significantly impacted individuals taking up the cause to lead climate change campaigns to counter its onslaught.

Buelow, Lewis and Sonneveld (2009) in their study "The role of labels in directing consumer packaging waste", in an attempt to combat excessive waste and conserve resources, products labelling is adopted to direct consumers in sorting their wastes before disposal, observed that there is a range of methods used to communicate necessary information to consumers', targeted labelling is one method. But how this labelling influences consumers' action to ensure that the packaging component is dispose properly is not clear. The study examines the extent to which consumers, understand recycling information on packaging labels and the actions that results from this understanding. A total of 800 respondents living in Melbourne, Australia were surveyed. The findings show that consumers' understanding of common labelling is often very poor. The confusion surrounding current labelling and recycling schemes can be attributed to incorrect labelling and system complexity, combined with a lack of consumers understanding.

Nkwocha and Okeoma (2009) in their study "Street littering in Nigerian towns: towards a framework for sustainable urban cleanliness. They examine some of the major factors that contribute to street littering. Six thousand respondents living in 20 major towns of the six geo-political zones of Nigeria were surveyed. The results of the analysis showed that the litter problem was quite intense in the towns surveyed, and that the levels of education, age, income of subjects were major determinants of their street littering habit. Also that absence of bins, inefficiencies of local authorities, ignorance, weak legislation, anger, stress, etc. are all factors that leads to littering habit.

D'souza, Taghian and Lamb (2006) in their research titled "An empirical study on the influence of environmental labels on consumers". Empirically investigate consumers' comprehension of labels and how consumers' who differ in terms of environmentalism response to labels. A total of 155 respondents were surveyed. The result of the analysis using both descriptive measures and correlations between variables shows that a proportion of consumers' find product labels hard to understand. They concluded by suggesting that businesses need to provide a clear, accurate and easily legible label design to encourage satisfaction with the accuracy of content and the communication aspect of a label.

Hsu and Roth (1998) in their research tiled "Analysis of predictors of responsible environmental behaviour" Surveyed 300 teachers in the Hualian area of Taiwan to assess their environmental literacy and analysed predictors of the teachers' responsible environmental behaviour. The findings indicate that the predictors of responsible environmental behaviour are: perceived knowledge of environmental action, perceived knowledge of environmental problems and issues.

Horsley, Doyne (1988) in the research titled "The unintended effects of a posted sign on littering attitudes and stated intentions," sought to unravel the effects of an anti-littering sign that read 'we treat litterbug like all insect' and comparing it with 'please save our landscape, don't litter." A total of 350 college students and 100 non college adults were surveyed. The result suggests that the ambiguously worded "litterbug" sign was interpreted differently by individuals within the various groups and also that it did not encourage an anti-littering attitude, nor did it affect stated intentions to litter.

2.4 Theoretical Review of Related and Relevant Theories/Models

In the quest to investigate and explain the factors responsible for consumers' minimal implementation of waste disposal/eco-label symbols on the packaging of consumer goods, previous studies have developed several theoretical frameworks and models to explain the gap between the possession of environmental knowledge, environmental awareness and displaying responsible environmental behaviour such as; the study done by Taufique et al, (2016) in their study "integrating general knowledge and eco-label knowledge" adopted the theory of reasoned action (TRA) Ajzen, 1980. The essence of this model is that attaining factual knowledge about the object is a prerequisite of forming an attitude towards that object (Kaiser et al., 1999). In its purest form, TRA propose that behaviour results from intention which, in turn, is a function of attitude and subjective norms. Their study applies an extended model that integrates both general environmental knowledge and specific knowledge of eco-labels as the antecedents of environmental attitude, which in turn, is hypothesized to lead reported ecologically conscious consumer behaviour.



Figure 2.4.1: Hypothesized model of knowledge, attitudes, and behaviour (Taufique et al, 2016)

Leijdekkers et al, (2015) on their research "determinants of youngsters littering behaviour". The Theory of Planned Behaviour (TPB) (Ajzen, 1991) was adopted which is based on the assumptions that an individual's behaviour is influenced by his attitude, his or her subjective norms, and his or her perceived behavioural control, together form an individual's behavioural intention and the actual behaviour (see Figure 2.4.2). Intention is influenced by the attitude of an individual towards performing the behaviour, the subjective norm that surrounds the behaviour and also by the control an individual thinks he has over performing that behaviour. It is assumed that the stronger the intentions to perform certain behaviour, the more likely the actual behaviour is to occur. The following is the theory of planned behaviour (TPB) of (Ajzen, 1991) adopted by Leijdekkers et al, (2015):



Figure 2.4.2: Ajzen's Theory of Planned Behaviour

The TPB model (see Figure 2.4.2) postulates that the intention to perform a particular behaviour is an outcome of three conceptually independent determinants which are attitudes

towards that behaviour, subjective norms and one's perceived control over the behaviour in question (Ajzen, 1980) (as cited in Taufique et al, 2016). Where attitude towards the behaviour 'refers to the degree to which a person has a favourable or unfavourable evaluation of the behaviour in question' (Ajzen and Madden, 1986)(as cited in Taufique et al, 2016), subjective norm is a social factor and refers to 'the perceived social pressure to perform or not to perform the behaviour' (Ajzen and Madden, 1986) and finally perceived control refers to 'the person's belief as to how easy or difficult performance of the behaviour is likely to be', (Ajzen, 1991) (as cited in Leijdekkers et al, 2011).

The oldest and simplest models of pro-environmental behaviour were based on a linear progression of environmental knowledge leading to environmental awareness and concern (environmental attitudes), which in turn was thought to lead to pro-environmental behaviour. These rationalist models assumed that educating people about environmental issues would automatically result in more pro-environmental behaviour, and have been termed "information deficit models".



Figure 2.4.3: Early linear models of environmental behaviour change (Reproduced from: Kollmuss & Agyeman, 2002).

Many studies have since refuted the effectiveness of these information deficit models, with Taufique et al (2016) observing that 'delivering change in people's attitudes and values is highly contingent on many factors', whilst other studies have shown that increases in knowledge and awareness and strongly held pro-environmental values, attitudes, and intentions do not necessarily lead to pro-environmental behaviour (Kollmuss and Agyeman, 2002).

A number of more complex models have been developed. Generally, of these models there is no one dominant model or framework, though some are more frequently used than others.

ATTITUDES TOWARDS ENVIRONMENT

Attitude towards environment is the center of our model which is viewed as "cognitive and affective evaluation of the object of environmental protection". Many studies establish attitude as one of the strong antecedents influencing behaviour (e.g., Taufique et al, 2016). In most models of pro-environmental behaviour, attitude is placed as the central variable between environmental knowledge and behaviour (Polonsky et al., 2012) where environmental knowledge and pro-environmental attitudes are highly interconnected. In this study, attitude towards environment is measured in terms of both consumers' level of environmental concern and their views on environmental protection.

GENERAL ENVIRONMENTAL KNOWLEDGE

Environmental knowledge refers to "knowledge and awareness about environmental problems and possible solutions to those problems" (Taufique et al, 2016). General environmental knowledge is defined as "general knowledge of facts, concepts, and relationships concerning the natural environment and its major ecosystems". Different researchers use different measures to empirically assess consumers' environmental knowledge. For example, some measures look at consumers' factual knowledge of environment and others attempt to measure the impacts of consumer action-related knowledge (Taufique et al, 2016). This study measures consumers' factual knowledge to

determine the degree to which consumers are familiar with contemporary pressing environmental issues such as 'climate change', 'greenhouse gas' etc. Factual environmental knowledge is considered most appropriate because this knowledge levels assist consumers in making environment friendly consumption decisions (Polonsky et al., 2012).

ECO-LABEL KNOWLEDGE

There is evidence that general environmental knowledge is not always a sufficient condition to predict ecologically conscious consumer behaviour (e.g., Polonsky et al., 2012). This suggests that product specific environmental knowledge such as environmental labels providing appropriate and accurate information is also an important requirement to allow consumers for making environmentally conscious and reasoned decisions (Polonsky et al., 2012). For this, consumers must know about eco-labels' existence, understand their meaning, and trust the information presented (Thogersen, 2000). Eco-labels as an information tool that "aim to internalize the external effects on the environment of the production, consumption, and disposal of products". As it is mentioned in the introduction, there has been a growing research on the market impact of eco-labels, but most past studies focused on consumers' appraisal and purchase of eco-labeled products (e.g., Sammer & Wustehagen, 2006; Taufique et al, 2016). Hence, attention requires putting on an overlooked issue of whether the knowledge of eco-labels helps consumers to adapt ecologically conscious consumer behaviour. Here, the construct 'knowledge' is meant to measure consumers' familiarity with the functional aspects of eco-labels (Taufique et al., 2016) and the meaning of different terms used in eco-labels.

ECOLOGICALLY CONSCIOUS CONSUMER BEHAVIOUR

The term ECCB was first used by Roberts, 1996 (as cited in Taufique et al, 2016) who also developed the popular ECCB scale. According to Roberts (1996): "Ecologically conscious consumers are defined as those who purchase products and services which they perceive to have a positive (or less negative) impact on the environment". ECCB should involve both environmentally conscious purchase behaviour and pro-environmental post-purchase (recycling) behaviour. Taufique et al, (2016) argues that in order to encourage ecologically conscious consumer behaviour, it is essential for public policy makers and marketers to have a clear understanding of the antecedents of such behaviour. Early research on ecological consumer behavior dealt ecological concern (attitudes) and ecological behaviour by applying more or less the same concept, sometimes in a unidimensional construct. Further advancement in research on ECCB suggests that an attitudinal concept might be related to, but methodologically different from behavior. This notion is supported by many further studies that suggest that consumer environmental behaviour stem from their pro-environmental attitudes (Kaiser et al., 1999; Polonsky et al., 2012).

Hines et al, (1987) published their model of Responsible Environmental Behaviour which was based on Ajzen and Fishbein's theory of planned behaviour. They did a meta-analysis of 128 pro-environmental behaviour research studies to determine which of the variable or variables that appear to be the most influential in motivating individuals to take responsible environmental action. Their findings indicate that the following variables are associated with responsible pro-environmental behaviour:

(i) Knowledge of issues: The person has to be familiar with the environmental problem and its causes.

(ii) Knowledge of action strategies: The person has to know how he or she has to act to lower his or her impact on the environmental problem.

(iii) Locus of control: This represents an individual's perception of whether he or she has the ability to bring about change through his or her own behaviour. People with a strong internal locus of control believe that their actions can bring about change. People with an external locus of control, on the other hand, feel that their actions are insignificant, and feel that change can only be brought about by powerful others.

(iv) Attitudes: People with strong pro-environmental attitudes were found to be more likely to engage in pro-environmental behaviour, yet the relationship between attitudes and actions proved to be weak.

(v) Verbal commitment: The communicated willingness to take action also gave some indication about the person's willingness to engage in pro-environmental behaviour.

(vi) Individual sense of responsibility: People with a greater sense of personal responsibility are more likely to have engaged in environmentally responsible behaviour.

Although the framework is more sophisticated than Ajzen and Fishbein's (1980), the identified factors do not sufficiently explain pro-environmental behaviour. The relationship between knowledge and attitudes, attitudes and intentions, and intentions and actual responsible behaviour, are weak at best. There seem to be many more factors that influence pro-environmental behaviour. Hines et al. (1987) called these 'situational factors' which include economic constraints, social pressures, and opportunities to choose different actions. Below is the model of responsible environmental behaviour postulated by Hines et al, (1987):



Figure 2.4.4: Model of Responsible Environmental Behaviour (Hines et al, 1987)

The model proposed by Hines et al. (1987) identifies four factors which explain elements of willingness to perform an individual process: (1) recognition of the problem as a prerequisite for action, (2) knowledge of the courses of action which are available and most effective in a given situation, (3) the ability to implement strategies of action items, and (4) appropriate knowledge. These factors allow individuals to take action. Abilities alone are not sufficient to lead to action. In addition, an individual must possess a desire to act. One's desire to act appears to be affected by a host of personality factors. These include locus of control,5 attitudes, and personal responsibility. Thus, an individual with an internal locus of control, with positive attitudes toward the environment and toward taking action, and with a sense of obligation toward the environment will likely develop a desire to take action.

One remaining category exists which can interrupt this pathway to action: (5) situational factors. Situational factors such as economic constraints, social pressures, and opportunities to choose different actions may enter into the picture and serve either to counteract or to

strengthen the variables in the model. For example, if an individual has the cognitive ability, desire, and opportunity to help stop pollution by contributing to a local toxic waste fund, but simply cannot afford to do so, that person will not engage in the environmental action, and in this instance, the model's main pathway will not be followed. Situational factors include age, income, education, and gender. This model indicates several areas which are amenable to change by the efforts of environmental educators. The knowledge and skill components, and perhaps the personality components of the model, may be affected through the efforts of educators. Approaches which address both affective and cognitive experiences and which provide individuals with opportunities to develop and practice those skills necessary for environmental action must be developed and implemented in educational systems.

Value-Belief-Norm Theory

The value belief norm theory unites the value theory, the norm-activation theory, and the perspective of new ecological paradigm (NEP) through a causal chain of five variables which guide an individual toward behavior: The first latent factor is a set of personal values (altruism, selfishness), traditionalism, and openness to change values; the second factor is the new ecological paradigm (Dunlap et al. 2000); the third and fourth factors take into account the two elements of the norm activation theory (NAT) regarding moral norms, awareness of consequences (AC), and ascription of responsibility (AR) with respect to general conditions of the biophysical environment; and the fifth element includes personal norms for pro-environmental action. This model explains environmental activism, environmental citizenship, support for policies, and behavior in private sphere (Stern et al. 1999; Stern 2000). Previous authors' works support the rationale and empirical causal ordering of factors. The causal chain starts with central elements, such as relatively stable

personality, and belief structures and moves toward beliefs more focused on environmenthuman relationships, its consequences, and individual responsibility to take corrective actions. Stern (2000) hypothesizes that each variable in the chain directly affects nearby variables and can also directly affect variables which appear later in the chain. Personal norms leading to pro-environmental actions are activated by individuals' belief that environmental conditions threaten things which they value and that they can act to reduce the threat. These norms create a general predisposition which affects many types of behaviors carried out with pro-environmental intention. Additionally, specific personal behavioral norms and social-psychological factors can affect individuals' pro-environmental behavior.

Stern (2000) recommends that studies which examine only attitudinal factors probably find effects in an inconsistent manner, because effects are contingent on abilities and contexts. Studies which examine only contextual variables such as material incentives, social norms, or the introduction of new technologies may find effects which depend on people's attitudes or beliefs, although the model attributes these effects to other causes. Studies of simple variables demonstrate that a particular theoretical framework has explanatory strength, but they do not contribute much to the comprehensive understanding of individual behaviors which are environmentally significant which are needed to change people's actions. The following diagram shows the schematic model proposed by Stern et al. (1999).



Figure 2.4.5: Schematic Model of variables in Value-Belief-Norm Theory (based on Stern et al, 1999)

The theoretical framework proposed by Stern et al. (1999), the so-called value-belief- norm theory, explains political activism which is essential to the success of social movements, which seek collective well-being. In some cases, the benefit is distributed among a small and easily identifiable group, but in others, collective benefits are often provided on a local, national, and global scale. This suggests that although some individuals may expect enough personal gain to justify working toward the collective good on egotistical grounds, most are also motivated by a broader, altruistic concern, a willingness to take action even in the face of the Problem.

Stern et al. (1999) find that in the USA, many social movements, including the environmental movement, advocate the public good with reference to altruistic values. Such

movements work to activate personal norms tied to those values. It is also possible, however, for a social movement to try to activate personal norms based on other types of values. For example, some conservative social movements, which see traditional values of duty, family loyalty, and the like as essential for providing public benefit such as social order, refer to these values in attempting to activate feelings of personal obligation to support the movement's objectives.

Stern et al. (1999) propose that norm-based action flow from three factors: (a) acceptance of particular personal values, the personal belief that everything important according to those values is under threat, (b) the belief that actions initiated by the individual can help alleviate the threat, and (c) the belief that these actions will restore the values under threat. Each of these three factors involves a generalization of Schwartz's theory (1977): (1) The original theory presumes altruistic values exist. The revised, broadened theory holds that personal norms may have roots in other values as well as in altruistic values and those levels of altruism and other relevant values may vary across individuals. (2) The original theory emphasizes threats to whatever objects are the focus of the values that underlie the norm. (3) Norm activation depends on ascription of responsibility to oneself for the undesirable consequences to others; the broadened theory emphasizes beliefs regarding responsibility for causing undesirable effects or the ability to alleviate threats to any valued object.

2.5 Gap in the Literature

From the literature review the following were identified as factors influencing consumers' responsible environmental behaviour: Demographic variables (Ibok and Etuk, 2014;

Eastman et al, 2013; Lefebure and Munoz, 2011; Ifegbesan, 2010; Nkwocha and Okeoma, 2009; Kollmuss and Agyeman, 2002). Lack of knowledge of the effect of littering (McAllister, 2015),Situational factors- such as, unavailability of garbage bins near-by (McAllister, 2015), Poor understanding of the eco-labels (Buelow et al, 2009; D'souza et al, 2006), Recognition and understanding of eco-labels messages influences consumers positively (Thogersen et al, 2010), Knowledge levels of environmental issues and eco-label knowledge were good predictors of actual involvement in activities that promote the environment (Owusu et al, 2017; Taufique et al, 2016).

The conceptual, empirical and theoretical reviews done indicates a number of gaps which lends legitimacy to this research, such as; most previous studies investigated the effect of eco-labels in influencing consumers purchase decisions, determinants of littering behaviour, etc. Hence, how consumers respond to sustainable environmental labels is not clear, which is the gap this study fills.

Previous studies such as Borin, Cerf & Khrisnan (2011) that investigated consumers' response to eco-labels conclude that consumers' do not really understand the meaning of the environmental labels, that even recognisable symbols can have different meanings. For example, the three chasing arrows recycling symbols can be used to represent a product that is made out of recycled materials or one that is recyclable. Similarly, Dolic, Pibernik & Bilusic (2010) concluded that the current system of packaging labelling is flawed often causing confusion and misinterpretation on the part of the consumers'. Buelow, Lewis, & Sonneveld (2009) added that the plethora of labelling schemes that currently exist, creates confusion and makes understanding of the labels very poor. While Thorgersen (2000) submitted that consumers' often have difficulty understanding what the labels intend to

communicate. These investigations were all foreign studies which does not really explain the situation in Nigeria. Hence, the need to examine consumers' response to waste disposal symbols in the Nigerian context. Thus, there is an obvious knowledge gap in exploring consumers' response to waste disposal symbols and words on the labels of food and drink items consumed.

Also, there are several factors that influence consumers' decisions towards exhibiting responsible environmental behaviour that have not been studied in previous research, like consumers' comfort, convenience, and availability/nearness of receptacles waste bins, factors that certainly play an important role in shaping our responsible environmental behaviours. The researcher having considered several theories and models such as; Taufique et al, (2016) hypothesised model of knowledge, attitude and behaviour, Ajzen (1991) theory of planned behaviour, Ajzen and Fishbein (1980) theory of reasoned action, Kollmuss and Agyeman (2002) early linear models of environmental behaviour, Hines et al, (1987) models of responsible environmental behaviour, Stern et al, (1999) schematic model of variables in value-belief-norm theory, etc.

Being a relatively new area of inquiry, the researcher adopted and applied constructs of Ajzen and Fishbein (1980) theory of reasoned action, Hines et al, (1987) models of responsible environmental behaviour and Taufique et al, (2016) hypothesised model of knowledge, attitude and behaviour, that integrates both general environmental knowledge, awareness and understanding of waste disposal symbols, situational factors and attitude as a moderating factor which in turn is hypothesised to lead to consumer responsible environmental behaviour (CREB).



Figure 2.6.1: The Research Conceptual Framework.

Predictive Variables in the Research Conceptual Framework

AWARENESS

Awareness can be defined as knowing something, noticing or realising something. Thus, Taufique, Vocino and Polonsky (2016) stated that environmental and eco-label knowledge is positively associated with attitudes towards the environment. Similarly, Halady and Rao (2010) submitted that awareness to climate change phenomenon does lead to significant behavioural change amongst managers in the industry under review.

UNDERSTANDING

Understanding has to do with grasping the meaning of something. Hence, Owusu et al (2017) in their research concluded that knowledge levels of environmental issues were good

predictors of actual students' involvement in activities that promote sustainable environment.

Similarly, Cheng and Wu (2015) indicated that higher levels of environmental knowledge are associated with stronger environmental responsible behaviour. Buelow et al (2009) added that consumers' understanding of common labelling is often very poor. Additionally, D'souza et al (2006) posits that a proportion of consumers' find product labels hard to understand. They concluded by suggesting that businesses need to provide a clear, accurate and easily legible label design to encourage satisfaction with accuracy of content and the communication aspect of a label. Also Struwig and Adenoff (2018) reported that the small nature of the symbols leads to lack of understanding of the eco-label symbols.

ENVIRONMENTAL KNOWLEDGE

McAllister (2015) in her research posited that lack of knowledge of the environmental effects of littering is the reason people exhibit littering behaviour. Similarly, Taufique et al (2016) shows that general environmental knowledge and eco label knowledge positively influences consumers' attitude towards the environment in driving environmental conscious consumer behaviour.

DEMOGRAPHIC VARIABLES

Eastman et al (2013) posited that respondents with college or graduate school education never littered, while those with lower educational background admitted to have littered the beaches in some way. Wiernik et al (2013) added that older individuals appear to be more likely to engage with nature, avoid environmental harm and conserve raw material and natural resources. While Pensini et al (2012) submitted that young people engage in less ecological behaviour. Ajaegbo et al (2012) concluded that attitude towards littering is affected by place of residence, age and educational status.

ATTITUDE

Esmailpour and Rajabi (2016) posited that consumers' environmental friendly attitude has a positive and significant effect on his sensitivity to recyclability of product packaging. While Singh and Gupta (2013) concluded that developing a positive environmental attitude is a step to achieve sustainable environment.

An attitude toward a concept can be defined as a person's general feeling of favourableness or unfavourableness for that concept (Ajzen and Fishbein, 1980). Aipanjiguly, 2001 (as cited in Taufique et al, 2016) reported that; many studies of knowledge and attitudes have found a positive and often significant relationship between the two variables. In a study of the effectiveness of a visitor education strategy in raising levels of knowledge and attitudes toward state nature preserves, it was discovered that a positive relationship between scores on the knowledge test and scores on the attitude test for all concepts measured. They were successful in both raising levels of knowledge and improving attitudes toward environmental management through the use of state park visitor education programmes.

Previous research on consumers' littering and indiscriminate waste disposal behaviour reports that; higher education and awareness of the consequences of littering leads to a negative attitude towards littering (Khawaja and Shah, 2013). Similarly, Eastman et al (2013) concluded that; education of beach users is a determining factor in the success of any beach litter programme. In addition, Gusti (2016) reported thatthe knowledge about sustainable waste management has a significant relationship with attitudes towards

sustainable waste management. Knowledge and attitudes towards sustainable waste management has a significant relationship with the intention of sustainable waste management behaviour. Owusu et al (2017) concluded that students' interest and their knowledge levels of environmental issues were found to be good predictors of actual students' involvement in activities that promote sustainable environment.

In contrast, Kempton et al. (1995) surveyed different groups in the US, ranging from strong environmentalists to those they thought were strong anti-environmentalists. The concluded their study by stating that; "environmental knowledge per se is not a prerequisite for proenvironmental behaviour". Thus, increase in environmental knowledge and awareness did not lead to pro-environmental behaviour. Also, Hungerford and Volks (1990) have also argued that knowledge and awareness alone is not enough for actions.

Therefore, this research was undertaken to contribute to the existing body of knowledgeattitude- behaviour (KAB) debate from a sub-Saharan African context.

SITUATIONAL FACTORS

Situational variable is defined as a given personal situation with regard to behavioural context, individual characteristics and individual knowledge and experience of the behaviour (Latif et al, 2012). It also refers to an approach to personality which holds a concept that people are more influenced by external, situational factors than by internal traits (Krahe, 1993).

Chen and Tung (2010) posited that consumers' perceived lack of facilities, which is another situational factor, does exert moderating effect on determining consumers' recycling intentions.

Similarly, Latif et al (2012) in their empirical study reported that situational factors have significant influence on actual recycling behaviour. Furthermore, situational factors also have significant influence on consumers' intention to recycle. It means that the less the facilities provided to the consumers' and more inconvenience felt by them in carrying out the process of recycling, the lower would be the participation in recycling. While McAllister (2015) added that convenience because of unavailability of garbage bins leads to a situation where people litter the environment.

CHAPTER THREE

METHODOLOGY

This chapter is designed to clarify on the research design and methods applied in this study. It includes; the philosophical stance, population of the study, sampling procedures, sample size determination, sources of data and research instrument, method of administering the research instrument and finally the method for analyzing the collected data.

3.1 Research Philosophy

All researchers have different beliefs and ways of viewing and interacting within their surroundings. As a result, the ways in which research studies are conducted vary. However, there are certain standards and rules that guide a researcher's actions and beliefs. Such standards or principles can be referred to as paradigm. Accordingly, Thomas Kuhn (1962/1970) refers to paradigm as a set of general philosophical assumptions about the nature of the world (ontology) and how we can understand it (epistemology), and the intellectual structure upon which research and development in a field of inquiry is based.

Thus, the decision to use quantitative or qualitative methods is dependent upon the assumptions concerning the nature of knowledge and reality. Two major research philosophies have been identified in the western tradition of science, namely positivist (sometimes called scientific) and interpretivist (also known as antipositivist).

Therefore, a positivist and quantitative research approach have been adopted in this study, in that the researcher will empirically collect facts, study their relationships and explain with logical analysis. Thus, the theories, hypotheses and models in the study were derived from literature. The conceptual framework developed would further the understanding of the factors that are militating against the implementation of the waste disposal symbols and words on the labels of food and drink items consumed.

3.2 Research Design

The research design relates to the general approach adopted to execute the study. According to Hair, Bush & Ortinau (2000) "The research design serves as a master plan of the methods and procedures that should be used to collect and analyse the data needed by the decision maker". In addition, research design may be exploratory, descriptive, or causal.

Thus, the researcher adopts the descriptive research design, which utilised survey research method, wherein administration of questionnaire serves as method of collecting primary data. This study is also supported by secondary data collected through review of relevant and related literatures and statistics relevant to the study. The rationale of descriptive research is not only to collect data, but the discovery of the meaning in data collected, so that the facts and events under consideration can be better understood, interpreted and explained.

3.3 Population of the Study

The study population refers to the sum or aggregation of all the relevant elements in which data and information are sought from the identifiable set elements of interest being investigated by the researcher. Accordingly, previous environmental education investigations focused on innovators and early adopters (i.e Owusu et al, 2017; Thogersen et al, 2010) who are known to be educated and have disposable income. Also, this research is consistent with Ajaegbo et al (2012) that concluded that; age and educational status influence consumers environmental behaviour. The sampling units of this research are

unknown because the researcher chooses to generate primary data from graduates of tertiary institutions located within the geographical area (Southern Nigeria) of this study. The rationale behind this choice of respondents is because previous studies such as; Eastman, Nunez, Crettier & Thiel (2013); Lefebure & Munoz (2011); Kollmuss & Agyeman (2002) indicates that educational level influences responsible environmental behaviour and that respondents with college and graduate school education never littered. In addition, this segment is chosen because these groups of consumers are likely to be aware of the waste disposal symbols and words, which place them in the position to be the first in implementing the waste disposal symbols on product labels sold in Nigeria. Hence, the population of this study are graduates of tertiary institutions located in southern Nigeria (Lagos State for South West, Anambra State for South East and Cross River State for South South). Therefore, the study population is an unknown population.

3.4 Sample Size Determination and Sampling Procedures

Since the population of this study is unknown, an appropriate sample size determination formula for an unknown population characteristic is used. Therefore, an infinite population sample size formula called mean-value method was applied in this research, it states that:

$$n_0 = \frac{z \times \sigma^2}{e^2}$$

Where:

 n_0 = Sample size to be determined

 Z^{x} = Standard deviation given a corresponding confidence level at 70% is 1.65 from a standard normal distribution table.

 σ^2 = Is the variance of an attribute in the population

 e^2 = Is the desired level of precision (in the same unit of measure as the variance) is .01

$$n_0 = (1.65) (30x.70x.3)$$

0.1
 $n_0 = 1,039.5$. Approximated to 1,100

Thus, the researcher worked with a total of 1,100 as sample size, as such 616 questionnaires apportioned for Lagos state, 286 for Anambra State, while 198 Cross River state. The reason for this ratio is that according to National Population Commission (NPC) 2017 report there are 9,113,605 residents in Lagos, 4,177,828 residents in Anambra and 2,892,988 residents in Cross River. Hence, the researcher adopts purposive sampling technique in collecting the primary data from the target respondents who are graduates of tertiary institutions located in the states surveyed.

Purposive sampling also called Judgemental sampling is a method in which the researcher uses his own judgement to decide on which respondents to choose and picks only those who best meet the purposes of the study (Okeke et al (2008 p.125).

The rationale for the choice of this technique is that, the experience of the researcher is used in determining the respondents fit for the study.

3.5 Sources of Data and Research Instruments

Since this is a descriptive research using the survey research method, the researcher adopts the administration of structured questionnaire as a technique for collecting primary data. The rationale for this technique is because the research problem requires first-hand information that can only be gathered by questioning the target respondents or sample who are representative of the study population. However, in conducting a research of this sort, relevant data from secondary sources is also required. Hence, textbooks, journals, website articles and relevant/related discussion papers constitute the secondary data.

3.5.1 Questionnaire Design

Being a descriptive research using the survey research method, the instrument for this study is a structured questionnaire of five-point likert summated rating scale format using the following set of scale descriptors for triggers; (1) Strongly Aware, (2) Aware, (3) Undecided, (4) Not aware (5) Strongly not aware. A five-point scale is considered appropriate: using a seven-or-nine point scale could have made the questions appear more difficult to answer and a larger number of categories would assume that the respondents are able to finely discriminate between the levels of influence each of the variables reasons given had on their behaviour (Thogersen et al, 2010). The questionnaire is divided into two sections: A and B. Section A contains 2 likely questions that reveal the level of awareness and understanding of the waste disposal symbols by the consumers and the likely attitude based on this understanding, while section B deals with the demographic variables. These variables are drawn from related/relevant literatures and journals of previous environmental education, littering and eco-labels studies.

3.5.2 Validity and Reliability of Instrument

The main function of a questionnaire is to capture the respondents' true thoughts and feelings about the issue(s) under consideration (Hair et al, 2000). Therefore, the raw data collected through a survey instrument need to be viewed as critical keys for unlocking and understanding the truth about predetermined elements of a defined problem situation. Thus,
the need to validate and test the reliability of the research instrument, because of the costly consequences a bad questionnaire can bring in terms time, effort and money. A valid research instrument is that which measures what it is supposed to measure.

Hence, content validity which involves asking a number of experts to evaluate the validity of the individual items on the research instrument to see if they are relevant and represents the construct they will be used to measure was adopted.

A pilot study (target 30 respondents) was conducted by the researcher to test the reliability of the questionnaire, also inputs from the pilot study was used to fine tune the questionnaire. This is consistent with previous environmental education, eco-labels and sustainability marketing research (for example; Taufique et al, 2016; Thogersen et al, 2010).

3.5.3 Method of Administration of Instruments

In a bid to minimise delay and loss, the researcher adopted the self-administered format of questionnaire distribution working alongside with research assistants.

3.6 Statistical Method of Data analysis

The researcher applied the use of SmartPLS the primary software used in Partial Least Squares-Structural Equation Modelling (PLS-SEM) to preliminarily examine the variables identified to influence consumers' responsible environmental behaviour. The rationale of PLS-SEM is because the researcher sought first to identify formative indicators to explain the variables in terms of their common underlying dimensions, with a view to defining the underlying structure among the variable in the analysis. Another advantage of using PLS-SEM is the fact that unobservable, hard-to-measure latent variables can be used in SEM which makes it ideal for tackling business research problems (Wong, 2013).

PLS-SEM was used to analyse and test the hypothesised relationships between variables in the research model.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

For the researcher to achieve the objective of this study and come out with a reliable interpretation of the data collected, such data must be properly presented, coded and analysed. Hence, the primary data collected from the field in the course of conducting this research are first of all sorted, coded and analysed. A total of 1100 copies of questionnaire were distributed, being 400 each for Lagos and Anambra State, while 300 for Cross River state. 311 copies from Lagos, 264 copies from Anambra and 215 copies from Cross River were returned as duly filled and usable. This leaves us with a sample of 790 respondents which represent approximately 71.8 per cent response rate which is considered high enough for a study of this nature.

This Chapter is divided into sections. After this preliminary introduction is data presentation, followed by descriptive analysis. The next section is validity and reliability analysis and lastly hypotheses testing and discussion of results.

4.1 Data Presentation

Four demographic variables were used in this study and they include: sex, education, age bracket and marital status and they are presented in the table below:

			1	Valid	Cumulative
		Frequency	Percent	Percent	Percent
Sex:	male	440	55.7	55.7	55.7
	female	350	44.3	44.3	100.0
	Total	790	100.0	100.0	
Education:	ND	120	15.2	15.2	15.2
	HND/Degree	591	74.8	74.8	90.0
	Masters	79	10.0	10.0	100.0
	Total	790	100.0	100.0	
Age:	18-30 years	621	78.6	78.6	78.6
	31-50 years	169	21.4	21.4	100.0
	Total	790	100.0	100.0	
Marital	single	620	78.5	78.5	78.5
status:	married	170	21.5	21.5	100.0
	Total	790	100.0	100.0	

 Table 4.1: Demographic Characteristics of Respondents

Source: Field Survey, 2018

From Table 4.1, 440(55.7%) of the respondents are males while 350(44.3%) are females. On education, 120(15.2%) have National Diploma, 591(74.8%) have HND/Degree, while the remaining 79(10.0%) have Masters' degree. The implication of this is that the respondents have reasonable education to make meaningful contribution to the study. On age, 621(78.6%) are between 18- 30 years while the remaining 169(21.4%) are between 31-50 years of age. Finally, on marital status, 620(78.5%) are single while 170(21.5%) are married. The next is the presentation of the items used to measure the constructs/variables.

Awareness of waste disposal symbols	Strongly	y aware	Aware		Undecid	led	Not awa	ire	Strongly aware	y not
Items	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Help Keep	577	73.0	160	20.3	13	1.6	14	1.8	26	3.3
Nigeria tidy										
Please recycle	337	42.7	215	27.2	67	8.5	92	11.6	79	10.0
Dispose	442	55.0	200	25.3	41	5.2	53	6.7	54	6.8
properly	442	55.9								
Keep our										
environment	176	22.3	240	30.4	68	8.6	175	22.2	131	16.6
clean										
Recyclable	161	20.4	230	29.1	108	13.7	133	16.8	158	20.0

 Table 4.2: Awareness of Waste Disposal Symbols

Source: Field Survey, 2018

The first variable is Awareness of waste disposal symbols measured with five items. For the first item, 577(73%) indicated strongly aware, 160(20.3%) are aware, 13(1.6%) were undecided, 14(1.8%) are not aware while the remaining 26(3.3%) are strongly not aware. For the second item, 337(42.7%) indicated strongly aware, 215(27.2%) are aware, 67(8.5%) were undecided, 92(11.6%) are not aware while the remaining 79(10.0%) are strongly not aware. For item 3, 442(55.9%) indicated strongly aware, 200(25.3%) are aware, 41(5.2%) were undecided, 53(6.7%) are not aware while the remaining 54(6.8%) are strongly not aware. For item 4, 176(22.3%) indicated strongly aware, 240(30.4%) are aware, 68(8.6%)

were undecided, 175(22.2%) are not aware while the remaining 131(16.6%) are strongly not aware. For item 5, 161(20.4%) indicated strongly aware, 230(29.4%) are aware, 108(13.7%) were undecided, 133(16.8%) are not aware while the remaining 158(20.0%) are strongly not aware.

	unu	ondeend	cu	understa	and	not understa	and
Freq.	%	Freq.	%	Freq.	%	Freq.	%
132	16.7	_	_	_	_	40	5.1
296	37.5	41	5.2	118	14.9	53	6.7
216	27.3	14	1.8	54	6.8	13	1.6
95	12.0	189	23.9	133	16.8	119	15.1
203	25.7	107	13.5	145	18.4	146	18.5
	F req. 132 296 216 95 203	Freq. % 132 16.7 296 37.5 216 27.3 95 12.0 203 25.7	Freq. % Freq. 132 16.7	Freq. % Freq. % 132 16.7 - - 296 37.5 41 5.2 216 27.3 14 1.8 95 12.0 189 23.9 203 25.7 107 13.5	Freq. % Freq. % Freq. 132 16.7 - - - 296 37.5 41 5.2 118 216 27.3 14 1.8 54 95 12.0 189 23.9 133 203 25.7 107 13.5 145	understandFreq.%Freq.%Freq.%13216.7 $ -$ 29637.5415.211814.921627.3141.8546.89512.018923.913316.820325.710713.514518.4	Image: Freq.%Freq.%Freq.not understand13216.7 $ -$ 4029637.5415.211814.95321627.3141.8546.8139512.018923.913316.811920325.710713.514518.4146

 Table 4.3: Understanding of Waste Disposal Symbols

Source: Field Survey, 2018

The second variable is understanding of waste disposal symbols measured also with five items. On the first item, 618 respondents being (78.2%) indicated strongly understand, 132(16.7%) indicated understand, while the remaining 40(5.1%) indicated strongly do not understand. For the second item, 282 respondents representing (35.7%) indicated strongly understand, 296(37.5%) indicated understand, 41(5.2%) were undecided, 118(14.9%) are not aware while the remaining 53(6.7%) indicated strongly do not understand. For item 3, 493 respondents representing (62.4%) indicated strongly understand, 216(27.3%) indicated understand, 14(1.8%) were undecided, 54(6.8%) do not understand while 13(1.6%) strongly do not understand. For item 4, 254 respondents being (32.2%) indicated strongly understand, 95(12.0%) understand, 189(23.9%) were undecided, 133(16.8%) do not understand while 119(15.1%) strongly do not understand. For item 5, 189(23.9%) strongly understand,

203(25.7%) understand, 107(13.5%) were undecided, 145(18.4%) do not understand while

146(18.5%) strongly do not understand.

1 abic 4.4. Och		nonnen		ncuge						
General environmental	Strongly	y aware	Aware		Undecid	led	Not awa	ire	Strongly aware	y not
knowledge										
Items	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Climate change	453	57.3	256	32.4	27	3.4	28	3.5	26	3.3
Greenhouse Gas	173	21.9	292	37.0	163	20.6	135	17.1	27	3.4
Emission										
Ozone layer	332	42.0	323	40.9	83	10.5	_	_	52	6.6
Depletion										
Global	360	45.6	338	42.8	53	6.7	13	1.6	26	3.3
Warming										
Sustainable	230	29.1	270	34.2	133	16.8	92	11.6	65	8.2
Waste Disposal										

 Table 4.4: General Environmental Knowledge

Source: Field Survey, 2018

The next variable on Table 4.4 is general environmental knowledge measured with five items. For the first item, 453 respondents representing (57.3%) indicated strongly aware, 256(32.4%) indicated that they are aware, 27(3.4%) were undecided, 28(3.5%) are not aware while the remaining 26(3.3%) indicated strongly not aware. For the second item, 173(21.9%) indicated strongly aware, 292(37.0%) are aware, 163(20.6%) were undecided, 135(17.1%) are not aware while the remaining 27(3.4%) are strongly not aware. For item 3, 332(42.0%) indicated strongly aware, 323(40.9%) are aware, 83(10.5%) were undecided, while the remaining 52(6.6%) are strongly not aware. For item 4, 360(45.6%) indicated strongly aware, 53(6.7%) were undecided, 13(1.6%) are not aware while the remaining 26(3.3%) are strongly not aware. For item 5, 230(29.1%) indicated strongly aware, 270(34.2%) are aware, 133(16.8%) were undecided, 92(11.6%) are not aware while the remaining 65(8.2%) are strongly not aware.

Attitudes	Strongly	y agree	Agree		Undecid	led	Disagre	e	Strongly	y
toward the									disagree	9
environment										
Items	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
I am aware that	431	54.6	293	37.1	40	5.1	_	_	26	3.3
my										
consumption										
and waste										
disposal habit										
has an impact										
on the										
environment.										
It think it is	454	57.5	282	35.7	28	3.5	_	_	26	3.3
important that										
all consumers'										
try to reduce										
their										
environmental										
linpact by										
disposing their										
L always use the	216	27.2	249	44.1	147	106	65	0 1	14	10
I always use the	210	21.5	540	44.1	147	10.0	05	0.2	14	1.0
dispose of my										
waste										
I think that	242	30.6	241	30.5	83	10.5	145	18.4	79	10.0
there is little	272	50.0	271	50.5	05	10.5	145	10.4	17	10.0
point in										
changing my										
littering habit to										
reduce the										
environmental										
impact, if others										
don't do the										
same.										
I find it difficult	134	17.0	215	27.2	79	10.0	229	29.0	133	16.8
to change my										
lifestyle to										
become more										
environmentally										
responsible										

Table 4.5: Attitudes Toward the Environment

Source: Field Survey, 2018

The next variable on Table 4.5 is Attitudes towards the environment measured with five items. On the first item, 431 respondents representing (54.6%) indicated strongly agree, 293(37.1%) indicated that they agreed, 40(5.1%) were undecided, while 26(3.3%) strongly

disagreed. For the second item, 454 respondents (57.5%) indicated strongly agree, 282(35.7%) indicated that they agreed, 28(3.5%) were undecided, while 26(3.3%) strongly disagree. For item 3, 216(23.7%) strongly agreed, 348(44.1%) agreed, 147(18.6%) were undecided, 65(8.2%) disagreed while 14(1.8%) strongly disagreed. For item 4, 242 respondents (30.6%) indicated strongly agree, 241(30.5%) agreed, 83(10.5%) were undecided, 145(18.4%) disagreed while 79(10.0%) strongly disagreed. For item 5, 134 respondents (17.0%) indicated strongly agree, 215(27.2%) agree, 79(10.0%) were undecided, 229(29.0%) disagree while 133(16.8%) indicated strongly disagree.

Situational	Strongly	agree	Agree		Undecid	ed	Disagree		Strongly	
Factors									disagree	
Items	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
While, in a	215	27.2	148	18.7	107	13.5	226	28.6	94	11.9
vehicle, I do										
throw away used										
pet bottles or										
sachets of items										
consumed										
because it is										
convenient for										
me										
While walking	198	25.1	202	25.6	133	16.8	189	23.9	68	8.6
along the street, I										
do throw away										
pet bottles or										
sachets of items										
consumed										
because there are										
no waste-bins or										
receptacles close-										
by.										
When I see others	132	16.7	163	20.6	187	23.7	160	20.3	148	18.7
throwing away										
their empty										
plastic bottles and										
packets after										
consumption, I										
also joined in										
doing the same.										

Table 4.6: Situational Fa	ctors
---------------------------	-------

Source: Field Survey, 2018

The next variable on Table 4.6 is Situational Factors measured with three items. On the first item, 215 respondents representing (27.2%) indicated strongly agree, 148(18.7%) indicated that they agreed, 107(13.5%) were undecided, 226(28.6%) disagreed while 94(11.9%) strongly disagreed. For the second item, 198 respondents being (25.1%) strongly agreed, 202(25.6%) agreed, 133(16.8%) were undecided, 189(23.9%) disagreed, while 68(8.6%) strongly disagreed. For item 3, 132 respondents (16.7%) indicated strongly agreed, 163(20.6%) agreed, 187(23.7%) were undecided, 160(20.3%) disagreed, while 148(18.7%) strongly disagreed.

Responsible environmental	Strongly	y agree	Agree		Undecid	led	Disagre	e	Strongly disagree	y e
behaviour Items	Freq	0/0	Freq	0/0	Freq	0/0	Freq	0/0	Freq	0/0
My understanding of waste disposal symbols is the reason I always dispose my waste properly	297	37.6	256	32.4	105	13.3	79	10.0	53	6.7
Despite the inconvenience caused by unavailability of waste baskets, I endeavour to dispose all my waste properly.	228	28.9	269	34.1	148	18.7	92	11.6	53	6.7
Knowledge of the environmental impact of improper waste disposal has helped me to dispose all my waste properly.	215	27.2	310	39.2	94	11.9	92	11.6	79	10.0

 Table 4.7: Responsible Environmental Behaviour

Source: Field Survey, 2018

The last variable which is the dependent variable on Table 4.7 is Responsible Environmental Behaviour is measured also with three items. On the first item, 297 respondents representing (37.6%) indicated strongly agree, 256(32.4%) agreed, 105(13.3%) were undecided, 79(10.0%) disagreed, while 53(6.7%) strongly disagreed. On the second item, 228(28.9%) strongly agreed, 269(34.1%) agreed, 148(18.7%) were undecided, 92(11.6%) disagreed, while 53(6.7%) strongly disagreed. For item 3, 215 respondents (27.2%) indicated strongly agree, 310(39.2%) agreed, 94(11.9%) were undecided, 92(11.6%) disagreed while 79(10.0%) strongly disagreed. The implication of these responses is that significant proportion of our respondents agreed with the various dimensions of the research model hence we proceed to cross tabulate the socio demographics with the responses on reading of information on product labels before consumption. The cross tabulation is to show the preliminary relationships/associations between the socio demographics and reading of information on product label. The first is on sex/reading product label cross tabulation.

-		Reading of	of Information	on a Product la	bel before con	sumption	
		always	usually	sometimes	rarely	never	Total
Sex	male	26	94	268	39	13	440
	female	53	123	94	80	0	350
Total		79	217	362	119	13	790

Table 4.8: Sex * Reading of information on a product label before consumption crosstabulation



Figure 4.1: Sex*Reading of Product Label Bar Graph.

Table 4.8 is the cross tabulation between respondents' sex and reading of product labels before consumption. As shown in the Table, 26 males against 53 females read always, 94 males and 123 females usually read, 268 males against 94 females read sometimes, 39 males against 80 female respondents rarely read while 13 males and no female respondent never read product labels before consuming such product. This means that more males than female respondents read product labels before consuming a product. This is displayed in the bar graph in Figure 4.1.

		Readir	ng of Informa	tion on a Produ	ct label befo	ore consumption	ſ
		always	usually	sometimes	rarely	never	Total
Educational	ND	0	26	94	0	0	120
Background	HND/Degree	79	165	228	119	0	591
	Masters	0	26	40	0	13	79
Total		79	217	362	119	13	790

Table 4.9: Educational Background * Reading of Information on a Product label before consumption Crosstabulation



Bar Chart

Figure 4.2: Education*Reading of Product Label Bar Graph.

Table 4.9 is the cross tabulation between respondents' educational background and reading of product labels before consumption. From the Table, 26 respondents that are ND holders and 79 HND/Degree holders and no masters' degree holder indicated to always read product labels before consumption; 26 ND holders, 165 HND/degree holders and only 26 masters indicated that they usually read product labels. 94 ND holders, 228 HND/degree holders and

40 master's degree holders read product labels sometimes. This is displayed in the bar graph in Figure 4.2.

Table 4.10: Age Bracket * Reading of Information on a Product label before consumption Crosstabulation

-		Readir	ıg of Inforn	nation on a Produc	ct label befo	ore consumption		
always usually sometimes rarely never								
Age Bracket	18-30 years	66	204	271	80	0	621	
	31-50 years	13	13	91	39	13	169	
Total		79	217	362	119	13	790	



Bar Chart

Figure 4.3: Age bracket*reading of product label bar graph

Table 4.10 is the cross tabulation between respondents age bracket and reading of product labels before consumption. As shown in the Table, 66 respondents within 18-30 years age bracket against 13 within 31-50 years indicated always, 204 within 18-30 years against 13

within 31-50 years ticked reading usually; 271 aged between 18-30 years against 91 aged between 31-50 years read labels sometimes. 80 aged between 18-30 years against 39 aged between 31-50 years rarely read label while only 13 aged between 31-50 years indicated that they never read product labels before consuming such products. The implication of this is that though respondents within 18-30 years dominate the responses, those aged between 31-50 years read product labels more than the youngsters. This is displayed in the bar graph in Figure 4.3.

 Table 4.11: Marital Status * Reading of Information on a Product label before consumption Crosstabulation

		Readi	ng of Infor	mation on a Produ	ict label bef	ore consumption					
		always	usually	sometimes	rarely	never	Total				
Marital Status	single	53 164 297 93 13									
	married	26	53	65	26	0	170				
Total		79	217	362	119	13	790				





Marital Status

Figure 4.4: Marital Status*reading of product labels bar graph.

Table 4.11 is the cross tabulation between respondents' marital status and reading of product labels before consumption. As shown in the Table, 53 singles against 26 married read always, 164 singles and 53 married respondents usually read labels, 297 singles against 65 married read sometimes, 93 singles against 26 married respondents rarely read while 13 singles and no married respondent never read product labels before consuming such product. This means that more singles than married respondents read product labels before consuming a product. This is displayed in the bar graph in Figure 4.4.

4.2 Descriptive Analysis

Preliminary analysis of the data collected from the field was conducted using a number of descriptive statistics. The descriptive statistics were employed to check the behavior of the data and to prepare the data for inferential statistics analysis. The results of the analysis are shown in Table 4.12 and in the Appendix.

							Std.	Excess	
Items	No.	Missing	Mean	Median	Min	Max	Dev.	Kurtosis	Skewness
AWDS1	1	0	1.42	1	1	5	0.882	7.53	2.723
AWDS2	2	0	2.191	2	1	5	1.357	-0.526	0.894
AWDS3	3	0	1.832	1	1	5	1.211	1.076	1.478
AWDS4	4	0	2.804	2	1	5	1.429	-1.37	0.231
AWDS5	5	0	2.87	3	1	5	1.434	-1.336	0.222
UWDS1	6	0	1.37	1	1	5	0.917	9.573	3.153
UWDS2	7	0	2.195	2	1	5	1.254	-0.369	0.902
UWDS3	8	0	1.58	1	1	5	0.942	3.067	1.892
UWDS4	9	0	2.706	3	1	5	1.446	-1.309	0.182
UWDS5	10	0	2.818	3	1	5	1.45	-1.356	0.213
GEK1	11	0	1.63	1	1	5	0.953	3.782	1.955
GEK2	12	0	2.432	2	1	5	1.109	-0.700	0.443
GEK3	13	0	1.882	2	1	5	1.051	2.471	1.601
GEK4	14	0	1.743	2	1	5	0.905	3.651	1.731
GEK5	15	0	2.357	2	1	5	1.24	-0.509	0.702
ATE1	16	0	1.604	1	1	5	0.858	5.645	2.113
ATE2	17	0	1.559	1	1	5	0.844	6.577	2.294
ATE3	18	0	2.13	2	1	5	0.965	0.192	0.762
ATE4	19	0	2.466	2	1	5	1.352	-1.032	0.531
ATE5	20	0	3.015	3	1	5	1.383	-1.37	-0.03
SF1	21	0	2.792	3	1	5	1.412	-1.414	0.044
SF2	22	0	2.654	2	1	5	1.312	-1.208	0.219
SF3	23	0	3.037	3	1	5	1.351	-1.177	-0.017
ReadInfo	24	0	2.709	3	1	5	0.898	-0.23	-0.088
REB1	25	0	2.158	2	1	5	1.22	-0.16	0.916
REB2	26	0	2.333	2	1	5	1.198	-0.447	0.683
REB3	27	0	2.38	2	1	5	1.27	-0.485	0.776

 Table 4.12 Descriptive Analysis

Table 4.12 present the information requested for each of the items used to measure the variables of the study. The next two columns show the minimum and maximum and the highest under maximum is 5 while the least under minimum is 1. This a confirmation that the variables were measured with five-point scale coded one to five. Also from the table all the items have mean above 1.42 and above up to 3.037 while most of the standard deviation values are above one. Standard deviations measure variability hence with standard deviation that the respondents are not in agreement as their

opinions are diverse. Further descriptive analyses are contained in appendix 2 and this shows the 95% confidence interval for the mean; 5% trimmed mean; median among others. The 5% trimmed mean removes the top and bottom 5 per cent of the cases in an item and calculates the new mean (Pallant, 2013). Comparing the new mean and the original mean shows whether the extreme values are having effect on the cases. This is further ascertained with the 95% confidence interval for the mean which if the original mean is outside or close to any of the intervals it shows extreme values that need to be addressed for further analyses.

Descriptives also provide information concerning the distribution of the scores on continuous variables (skewness and kurtosis) (Pallant, 2013). This information is necessary if the variables are to be used in parametric statistical techniques (eg. Pearson correlation, ttests, among others) which is the situation in this study. The skewness value provides an indication of the symmetry of the distribution. Kurtosis on the other hand provides information about the "peakedness" of the distribution. Positive skewness values indicate positive skew (scores clustered to the left at the low values). Negative skewness indicates a clustering of scores at the high end (right-hand side of a graph). Positive kurtosis values indicate that the distribution is rather peaked (clustered in the centre), with long thin tails. Kurtosis values below 0 indicate a distribution that is relatively flat (too many cases in the extremes). With reasonably large samples, skewness will make a substantive difference in the analysis (Pallant, 2013). In Table 4.12, the skewness of the items are mixed with very high values and very low values. Also the kurtosis shows very high and very low or values below zero. This implies that there is a mix of peakedness and flattened values in the items. This problem of distribution was overcome by the fact partial least squares (PLS) structural equations modelling was used in the analysis. One of the advantages of PLS-SEM over other tools of multivariate statistical analysis is that it does not require a normally distributed data (Urbach & Ahlemann, 2010). Also Tabachinick and Fidell (2013) maintain that with reasonably large samples (200+ cases) skewness 'will not make substantive difference in the analysis'.

Test of Normality

Multivariate normality is the assumption that each variable and all linear combinations of the variables are normally distributed Tabachinick and Fidell (2013). They add that when the assumption is met, the residuals of analysis are also normally distributed and independent. The result of the normality test is shown below.

Tests of Normality									
	Kolmogor	ov-Smirno	v^{a}	Shapiro-Wilk					
	Statistic	Df	Sig.	Statistic	Df	Sig.			
AWDS1	.413	790	.000	.523	790	.000			
AWDS2	.255	790	.000	.794	790	.000			
AWDS3	.313	790	.000	.699	790	.000			
AWDS4	.240	790	.000	.864	790	.000			
AWDS5	.223	790	.000	.871	790	.000			
UWDS1	.439	790	.000	.438	790	.000			
UWDS2	.293	790	.000	.806	790	.000			
UWDS3	.355	790	.000	.642	790	.000			
UWDS4	.202	790	.000	.864	790	.000			
UWDS5	.210	790	.000	.870	790	.000			
GEK1	.319	790	.000	.663	790	.000			
GEK2	.240	790	.000	.886	790	.000			
GEK3	.285	790	.000	.735	790	.000			
GEK4	.272	790	.000	.720	790	.000			
GEK5	.246	790	.000	.860	790	.000			
ATE1	.305	790	.000	.660	790	.000			
ATE2	.321	790	.000	.631	790	.000			
ATE3	.268	790	.000	.854	790	.000			
ATE4	.246	790	.000	.852	790	.000			
ATE5	.220	790	.000	.877	790	.000			
SF1	.209	790	.000	.867	790	.000			
SF2	.197	790	.000	.884	790	.000			
SF3	.152	790	.000	.900	790	.000			
ReadInfo	.252	790	.000	.887	790	.000			
REB1	.252	790	.000	.824	790	.000			
REB2	.239	790	.000	.866	790	.000			
REB3	.282	790	.000	.842	790	.000			

a. Lilliefors Significance Correction

Kolmogorov-Smirnov and Shapiro-Wilk statistics were used to test the normality of the data distribution scores and as shown in the output, the values of both statistics are highly statistically significant with ρ values of .000 well below the .05 margin of error. This implies that the normality assumption is violated. The captive sample for this study is 790 and this violation of normality assumption is not a problem. Pallant (2013) avers that violation of normality assumption is 'quite common with large samples p.66.'

The next is the result of the structural equations modelling (SEM) analysis



Figure 4.5: The research measurement model

Partial least squares structural equations modelling (PLS-SEM) was used in testing our research model. After the initial preliminary analysis, items that loaded/measured below 0.6 were eliminated to produce the PLS-SEM measurement model is shown in

Figure 4.5. This is the *rule of thumb;* outer model loadings appear in the graphical model may be considered a form of item reliability coefficients for reflective models: the closer the loadings are to 1.0, the more reliable that latent variable (Garson, 2016). The coefficient of determination R^2 at ATE is 0.452 which means that awareness of waste disposal symbols explains 45.2% of variations in attitude toward the environment (ATE). Also the coefficient of multiple determination R^2 at REB is 0.264 meaning that 26.4% of variations in responsible environmental behavior are explained by five independent variables including ATE. The reliability and validity analysis are shown below.

	Cronbach's		Composite	Average Variance
	Alpha	rho_A	Reliability	Extracted (AVE)
ATE	0.814	0.843	0.914	0.841
AWDS	0.794	0.873	0.854	0.541
Demographic	-0.331	0.258	0.023	0.569
GEK	0.833	0.85	0.9	0.75
REB	0.815	0.835	0.891	0.733
SF	0.853	0.884	0.931	0.87
UWDS	0.76	0.762	0.845	0.579

The properties of the construct show the Cronbach's Alpha, rho_A, composite reliability and the average variance extracted (AVE). Cronbach's alpha addresses the question of whether the indicators for latent variables display convergent validity and hence display reliability. By convention, the same cutoffs apply: greater or equal to .80 for a good scale, .70 for an acceptable scale, and .60 for a scale for exploratory purposes (Garson, 2016). All our constructs fall within good to acceptable scale except for demographic which is a nominal. AVE reflects the average communality for each latent factor in a reflective model, and should be greater than .5 (Hock & Ringle, 2006; in Garson, 2016). *AVE* is used as a test of both convergent and divergent validity. All our constructs are well above 0.5 hence our scale has both convergent and divergent validity. Composite reliability measures internal consistency and the values range from 0 to 1. The closer the values are to 1 the better. All our constructs are above 0.5 and closer to 1 which indicates that our data has internal consistency. The next is the discriminant validity.

	ATE	AWDS	Demographic	GEK	REB	SF	UWDS
ATE	0.917						
AWDS	0.672	0.785					
Demographic	0.244	0.132	0.755				
GEK	0.684	0.539	0.129	0.866			
REB	0.449	0.433	0.221	0.342	0.856		
SF	-0.082	0	-0.1	0.006	-0.14	0.933	
UWDS	0.649	0.735	0.278	0.557	0.357	0.027	0.761

Fornell-Larcker Discriminant Validity Criterion

In the Fornell-Larcker discriminant criterion table, the square root of AVE appears in the diagonal cells and correlations appear below it. If the top number (which is the square root of AVE) in any factor column is higher than the numbers (correlations) below it, there is discriminant validity. Our data satisfies this hence has discriminant validity. The next information/table is the Cross loadings.

Cross l	Loadings

	ATE	AWDS	Demographic	GEK	REB	SF	UWDS
ATE1	0.898	0.56	0.253	0.537	0.333	-0	0.6
ATE2	0.936	0.664	0.202	0.701	0.476	-0.13	0.593
AWDS1	0.769	0.828	0.152	0.705	0.45	-0.04	0.646
AWDS2	0.444	0.785	0.023	0.254	0.251	-0.04	0.622
AWDS3	0.41	0.734	0.005	0.327	0.266	0.034	0.429
AWDS4	0.347	0.696	0.166	0.246	0.231	0.075	0.717
AWDS5	0.278	0.615	0.124	0.189	0.314	0.031	0.486
Age	0.217	0.077	0.822	0.137	0.186	0.073	0.209
GEK1	0.636	0.561	0.135	0.803	0.251	0.185	0.513
GEK3	0.528	0.419	0.137	0.905	0.328	-0.13	0.424
GEK4	0.632	0.445	0.066	0.888	0.302	0.008	0.525
REB1	0.416	0.362	0.236	0.304	0.910	-0.13	0.354
REB2	0.328	0.341	0.041	0.183	0.746	-0.17	0.215
REB3	0.404	0.408	0.264	0.371	0.903	-0.07	0.335
SF2	0.014	0.049	-0.161	0.106	-0.14	0.948	0.031
SF3	-0.191	-0.061	-0.009	-0.12	-0.11	0.917	0.019
Sex	-0.145	-0.13	-0.681	-0.047	-0.15	0.268	-0.214
UWDS1	0.766	0.678	0.227	0.687	0.329	0.013	0.699
UWDS2	0.451	0.585	0.119	0.406	0.261	0.068	0.830
UWDS4	0.288	0.611	0.276	0.237	0.247	0.011	0.767
UWDS5	0.351	0.455	0.220	0.247	0.218	-0.01	0.741

Another method for assessing discriminant validity is by examining the cross loadings of the indicators. Specifically, an indicator's outer loading on the associated construct should be greater than all of its loadings on other constructs (i.e., the cross loadings)(Hair, Hult, Ringle, & Sarstedt, 2014). The presence of cross loadings that exceed the indicators' outer loadings represents a discriminant validity problem. Our data cross loadings do not exhibit this problem hence discriminant validity is further assessed and guaranteed. The next is the variance inflation factor (VIF).

	ATE	AWDS	Demog.	GEK	REB	SF	UWDS
ATE	0.917						
AWDS	0.672	0.735					
Demog.	0.244	0.132	0.755				
GEK	0.684	0.539	0.129	0.866			
REB	0.449	0.433	0.221	0.342	0.856		
SF	-0.082	0	-0.1	0.006	-0.14	0.933	
UWDS	0.649	0.785	0.278	0.557	0.357	0.027	0.761

Heterotrait-Monotrait Ratio (HTMT)

Although examination of cross-loadings and use of the Fornell-Larcker criterion are accepted methods for assessing the discriminant validity of a PLS model, these methods have shortcomings (Garson, 2016). The HTMT ratio is the geometric mean of the heterotrait-hetero method correlations (i.e., the correlations of indicators across constructs measuring different phenomena) divided by the average of the monotrait-heteromethod correlations (i.e., the correlations within the same construct) (Garson, 2016). In a well-fitting model, heterotrait correlations should be smaller than monotrait correlations, meaning that the HTMT ratio should be below 1.0for discriminant validity to be established between a given pair of reflective constructs. Our data satisfies this condition and the values

under the HTMT are same with the Fornell-Larcker criterion hence discriminant validity is further established.

	VIF
ATE1	1.888
ATE2	1.888
AWDS1	1.611
AWDS2	1.995
AWDS3	1.748
AWDS4	1.701
AWDS5	1.465
Age	1.021
GEK1	1.635
GEK3	2.309
GEK4	2.223
REB1	2.772
REB2	1.397
REB3	2.643
SF2	2.234
SF3	2.234
Sex	1.021
UWDS1	1.293
UWDS2	2.066
UWDS4	1.654
UWDS5	2.13

A related measure of collinearity is the variance inflation factor (VIF), defined as the reciprocal of the tolerance (i.e., VIFx₁= 1/TOLx₁) (Hair et al. 2014). The term VIF is derived from the square root of the VIF (\sqrt{VIF}) being the degree to which the standard error has been increased due to the presence of collinearity (Hair, et al. 2014). As a*rule of thumb*a VIF value of 4.00 therefore implies that the standard error has been doubled ($\sqrt{4} = 2.00$) due to collinearity. In the context of PLS-SEM, a tolerance value of 0.20 or lower and a VIF value of 5 and higher respectively indicate a potential collinearity problem (Hair, et al. 2014). In our own case none of the items used in our study show VIF up 4 hence

collinearity/multicollinearity problems are absent in the items. The last item we report under validation is the outer loadings.

aaings						
ATE	AWDS	Demogr.	GEK	REB	SF	UWDS
0.898						
0.936						
	0.828					
	0.785					
	0.734					
	0.696					
	0.615					
		0.822				
			0.803			
			0.905			
			0.888			
				0.91		
				0.746		
				0.903		
					0.948	
					0.917	
		-0.681				
						0.699
						0.83
						0.767
						0.741
	ATE 0.898 0.936	ATE AWDS 0.898 0.936 0.828 0.785 0.734 0.696 0.615	ATE AWDS Demogr. 0.898 0.936 0.828 0.785 0.734 0.696 0.615 0.822 -0.681	ATE AWDS Demogr. GEK 0.898 0.936 0.828 0.785 0.734 0.696 0.615 0.822 0.803 0.905 0.888 -0.681	ATE AWDS Demogr. GEK REB 0.898 0.936 0.828 0.785 0.734 0.696 0.615 0.822 0.803 0.905 0.888 0.91 0.746 0.903 -0.681	ATE AWDS Demogr. GEK REB SF 0.898 0.936 0.828 0.785 0.734 0.696 0.615 0.822 0.803 0.905 0.888 0.91 0.746 0.903 0.948 0.917 -0.681

Outer Loadings

Outer model loadings are the focus in reflective models, representing the paths from a factor to its representative indicator variables. Outer loadings represent the absolute contribution of the indicator to the definition of its latent variable (Garson, 2016). Path output for the measurement (outer) model may be displayed as loadings or weights, shown below. Path "loadings" are those shown by default in the completed path diagram above and are what is usually meant by "path coefficients" in reflective PLS models, as in Figure 4.5. Measurement loadings are the standardized path weights connecting the factors to the indicator variables. As data are standardized automatically in SmartPLS, the loadings vary

from 0 to 1. The loadings should be significant; the larger the loadings, the stronger and more reliable the measurement model. All the items load above 0.6 hence our measurement model is significant, as all the indicators exhibit sufficient level of reliability. We now evaluate the research SEM model.



Figure 4.6: The research SEM model

4.3 Hypotheses Testing

The partial least squares-structural equations modelling (PLS-SEM) method was also used to analyze and test the hypothesized relationships between variables in the research model. The significance of the paths was tested using a bootstrap resample procedure.

Effects/Paths	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
ATE -> REB	0.220	0.220	0.051	4.294	0.000
AWDS -> ATE	0.670	0.671	0.027	24.717	0.000
AWDS -> REB	0.310	0.310	0.072	4.366	0.000
Demogr -> REB	0.140	0.136	0.041	3.341	0.001
GEK -> REB	0.06	0.062	0.050	1.251	0.211
SF -> REB	-0.1	-0.106	0.032	3.277	0.001
UWDS -> REB	-0.1	-0.096	0.073	1.372	0.170

 Table 4.13: Assessment of the Structural Equation Model

Hypothesis 1

As shown in Table 4.13, the part AWDS -> ATE has ($\beta = 0.670$; t-value = 24.717, $\rho = .000$). The ρ -value is less than .05 margin of error and based on this hypothesis one: there is a significant relationship between consumers' awareness of the waste disposal symbols and consumers' positive attitude towards the environment is validated and accepted.

Hypothesis 2

In the part AWDS ->REB (β = 0.310; t-value = 4.366, ρ = .000). The ρ -value is less than .05 margin of error and based on this hypothesis two: there is a positive relationship between consumers' awareness of waste disposal symbols and exhibiting responsible environmental behavior is fully validated and accepted.

Hypothesis 3

In the part UWDS ->REB (β = -0.10; t-value = 1.373, ρ = .170). The ρ -value is more than .05 margin of error and based on this hypothesis three which states that: there is a significant relationship between consumers understanding of the waste disposal information and exhibiting responsible environmental behavior is not validated and the hypothesis is rejected.

Hypothesis 4

In the part GEK ->REB (β = 0.06; t-value = 1.251, ρ = .211). The ρ -value is more than .05 margin of error and based on this hypothesis four which states that: there is a positive relationship between possession of environmental knowledge and exhibiting responsible environmental behaviour is rejected.

Hypothesis 5

The part Demographics ->REB ($\beta = 0.140$; t-value = 3.341, $\rho = .001$). The ρ -value is less than .05 margin of error and based on this hypothesis five which states that: There is a positive significant relationship between consumers' demographics like gender, education, age, and marital status in influencing responsible environmental behavior is fully validated and accepted. Only age bracket and sex loaded well and were used as the demographics.

Hypothesis 6

The part SF ->REB (β = -0.10; t-value = 3.277, ρ = .001). The ρ -value is less than .05 margin of error and based on this hypothesis six which states that: There is a positive relationship between situational factors such as; consumers' convenience, availability of waste bins in influencing responsible environmental behaviour is fully validated and accepted.

Hypothesis 7

The part ATE ->REB (β = 0.220; t-value = 4.294, ρ = .000). The ρ -value is less than .05 margin of error and based on this hypothesis six which states that: There is a significant relationship between consumers' attitude towards the environment and exhibiting responsible environmental behavior is fully validated and accepted.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

This chapter is designed to summarise the study, most especially the field survey, its' findings and implications on sustainability marketing discipline, manufacturing firms, policy makers and the society at large. Hence, this chapter summarises the findings, discusses the findings and concludes with recommendations and suggestions for further research.

5.1 Summary of Findings

After statistical tests of the hypotheses guiding the study, the following findings were made:

1. That there is a significant relationship between consumers' awareness of the waste disposal symbols and consumers' positive attitude towards the environment.

2. That there is a positive relationship between consumers' awareness of waste disposal symbols and exhibiting responsible environmental behaviour.

3. That there is no significant relationship between consumers' understanding of the waste disposal information and exhibiting responsible environmental behaviour.

4. That there is no positive relationship between possession of environmental knowledge and exhibiting responsible environmental behaviour.

5. That there is a positive significant relationship between consumers' demographics like gender, education, age and marital status in influencing responsible environmental behaviour.

6. That there is a positive relationship between situational factors such as; consumers' convenience, availability of waste bins in influencing responsible environmental behaviour.

7. That there is a significant relationship between consumers' attitude towards the environment and exhibiting responsible environmental behaviour.

5.2 Discussion of Findings

This study was embarked upon to examine consumers' response to waste disposal symbols and words on the labels of food and drink items consumed.

Based on the findings of this study and literatures reviewed the researcher discuss as follows:

The findings of this study indicates that consumers in southern Nigeria are aware (see descriptive statistics on page 51) of the waste disposal symbols and words on product labels. The result of the findings also indicates that consumers do understand the symbols (see descriptive statistics on page 52), and that consumers also possess general environmental knowledge (see descriptive statistics on page 53).

However, despite being aware and having understood the symbols and possessing environmental knowledge, majority of the consumers' in southern Nigeria do not exhibit responsible environmental behaviour, because the **possession of environmental knowledge does not lead to exhibiting responsible environmental behaviour**. The statistical analysis shows that; GEK ->REB (β = 0.06; t-value = 1.251, ρ = .211). The ρ -value is more than .05 margin of error and based on this hypothesis four which states that: there is a positive relationship between possession of environmental knowledge and exhibiting responsible environmental behaviour is rejected. This contradicts the previous studies such as; Owusu et al (2017), Taufique et al (2016), Chang and Wu (2015), Halady and Rao (2010) and Kollmuss and Agyeman (2002) that posits that environmental literacy is a good predictor of an individual exhibiting responsible environmental behaviour. However, this study finding is in harmony with the research of Kempton et al (1995) and Hungerford and Volks (1990) which concluded that; environmental knowledge per se is not a prerequisite for proenvironmental behaviour, and that knowledge and awareness alone is not enough for the exhibition of responsible environmental behaviour.

Further insightful probing to unearth why understanding of the symbols and the possession of environmental knowledge does not lead to the exhibition of responsible environmental behaviour indicates that consumers are influenced by situational factors (see descriptive statistics on page 55).

The statistical analysis shows that; the part SF ->REB (β = -0.10; t-value = 3.277, ρ = .001). The ρ -value is less than .05 margin of error and based on this hypothesis six which states that: There is a positive relationship between situational factors such as; consumers' convenience, availability of waste bins in influencing responsible environmental behaviour is fully validated and accepted. This finding is in harmony with the study of Chen and Tung (2010) that submitted that consumers' perceived lack of facilities, which is another situational factor does exert moderating effects on determining consumers' recycling intentions. Similarly, Latif et al (2012) in their empirical study reported that situational factors also have significant influence on consumers' intention to recycle. It means that the less the facilities provided to the consumers', and the more inconvenience felt by them in carrying out the process of recycling, the lower would be the participation in recycling. While, McAllister (2015) added that convenience because of unavailability of garbage bins leads to a situation where people litter the environment.

This factor could be the reason that upon the possession of environmental knowledge the respondents still do not exhibit responsible environmental behaviour.

91

Another finding identified in this study is that **demographic variables have strong** influence on consumers' responsible environmental behaviour. The statistical analysis shows that; The part Demographics ->REB ($\beta = 0.140$; t-value = 3.341, $\rho = .001$). The ρ value is less than .05 margin of error and based on this hypothesis five which states that: There is a positive significant relationship between consumers' demographics like gender, education, age, and marital status in influencing responsible environmental behavior is fully validated and accepted. Only age bracket and sex loaded well and were used as the demographics. This finding is in harmony with the research of Eastman et al (2013) which posited that respondents with college or graduate school education never littered, while those with lower educational background admitted to have littered the beaches in some way. Wiernik et al (2013) added that older individuals appear to be more likely to engage with nature, avoid environmental harm and conserve raw material and natural resources. While Pensini et al (2012) submitted that young people engage in less ecological behaviour. Ajaegbo et al (2012) concluded that attitude towards littering is affected by place of residence, age and educational status.

5.3 Conclusion

The broad objective of this study was to examine consumers' response to waste disposal symbols and words on the packaging of consumer goods. With the findings discovered after the analysis, it can be concluded that the reason majority of consumers' in southern Nigeria do not behave responsibly towards the environment is because of the influence of situational factors. And even those that possess environmental knowledge still do not behave environmentally responsible because; 1. Having knowledge about the negative consequence of an action does not stop the individual from engaging in activities that impact negatively

on the environment. 2. The availability of situational factors has a strong influence in making an individual that possess environmental knowledge not to behave environmentally responsible.

5.4 Recommendations

Based on the findings of this study, the following recommendations are suggested to help consumers' exhibit environmental responsible behaviour:

- 1. As identified, a major factor in this study militating against consumers' implementation of waste disposal symbols and words on the labels of food and drink items consumed is situational factors. Hence, the researcher recommends that the National Environmental Standard and Regulatory Agency (NESREA) to take the lead by initiating great innovation in anti-littering campaigns. One of such initiative is introducing the cleanest city award competition in the country, another is introducing incentive schemes to ensure that consumers' who returns pet-bottles, cans and plastic containers of food and drink items they consume are duly rewarded.
- 2. The general idea is that litter attracts litter, therefore government and its agencies should do more in beautifying the communities as this will reduce littering. Also there should be punitive measures for offenders of littering (either charged with a fine or imprisoned if caught littering.
- 3. There is need for public private partnership (PPP), this synergy is required because proper waste management is not the sole responsibility of the government, as fellow citizens has a part to play. Creating recycling centers which will help keep the environment clean and in turn generate employment opportunities.

5.5 Contribution to Knowledge

The insights emerging from the analysis and interpretation of the data as well as the critical reflection on the literature contributions have generated the following theoretical, policy and managerial implications:

Theoretical Implications

The knowledge-attitude-behaviour (KAB) debate is an area of interest of this study, because a careful review of the literature reveals the different opinions by previous researchers. For example; Braun (2012) noted that early environmental educators believed that increasing people's knowledge about environmental problems and creating a positive attitude towards nature would lead to citizen action to mitigate environmental problems. She added that increased knowledge would lead to a positive attitude regarding the environment and this in turn would translate in behaviour. Kaiser, Ranney, Hatig and Bowler (1999) posits that knowledge about an object is a prerequisite of forming an attitude towards that object. Similarly, Halady and Rao (2010) reported that awareness of climatic change phenomenon leads to responsible environmental behaviour. Also Taufique et al (2016) concluded that environmental knowledge positively influences environmental attitudes and proenvironmental behaviour. In addition, Owusu et al (2017) maintained that students' interest and their knowledge levels of environmental issues were found to be good predictors of actual students' involvement in activities that promote sustainable environment.

In contrast, Kempton, Boster, and Hartley (1995) surveyed different groups in the US, ranging from strong environmentalist to those they thought were strong antenvironmentalists. They concluded their study by stating that; "environmental knowledge per se is not a prerequisite for pro-environmental behaviour". Thus, increase in environmental knowledge and awareness did not lead to pro-environmental behaviour. Also, Hungerford and Volks (1999) have also argued that knowledge and awareness alone is not enough for actions

Hence, with the finding of this study (for example, hypothesis four) that **possession of environmental knowledge does not lead to exhibiting responsible environmental behaviour**, it can be said that this research has contributed theoretically to the academic domain, by extending the frontiers of environmental labelling, sustainability marketing and adding a voice to the knowledge-attitude –behaviour (KAB) debate in Nigeria and beyond.

Policy Implications

This study has identified key policy change for the National Environmental Standard and Regulatory Agency (NESREA).

The implication of this study to governmental policy is to provide a few guidelines for government to formulate promotional incentives to consumers' who are behaving in an environmentally responsible manner by returning pet-bottles, cans and plastics of food and drink items consumed.

Secondly, government should set and implement punitive measures for offenders of littering.

Managerial Implications

The finding of this study has provided empirical evidence for manufacturers of fast moving consumer goods (FMCGs) to alongside fine-tuning their environmental sustainability information dissemination strategy to also introduce incentive scheme for consumers that returns their pet-bottles, cans and plastics of food and drink items consumed.

5.6 Suggestions for Further Research

1. This study is limited to consumers' that graduates of tertiary institutions located in three cities (Lagos, Awka and Calabar) of southern Nigeria. In order to expand the generalizability of the findings, further similar and comparative research regarding consumers' response to the waste disposal symbols and words on products labels should be undertaken with different target population and in other geographical locations.

2. Also further research is encouraged to identify other predictor variables such as; the role consumers' comfort and convenience play in influencing consumers' response to waste disposal symbols which could further assist in explaining consumers' responsible environmental behaviour,

BIBLIOGRAPHY

- Afangideh, A.I., Joseph, K.U. & Atu, J. (2012) Attitude of urban dwellers to waste disposal and management in Calabar, Nigeria. *European Journal of Sustainable Development*. 1(1), 22-34.
- Ajaegbo, E, Dashit, S. I. & Akume, A. T. (2012). The determinants of littering attitude in urban neighbourhoods of Jos. Accessed from: www.ajol.info/journal/jorindon March 7, 2016.
- Arttachariya, P. (2009). Individual determinants of responsible environmental behavior. *ABAC Journal*. 29, (2),14-23.
- Belz, F.M. & Peattie, K. (2009). *Sustainability marketing-A global perspective*. West Sussex: John Wiley & Sons, Limited.
- Borin, N., Cerf, D. C. & Krishanan, R. (2011). Consumer effects of environmental impact in product labelling. *Journal of Consumer Marketing*. 28(1), 76-86. Accessed from: www.emeraldinsight.com/0736-3761.htm on September 2, 2016.
- Braun, N. A. (2012). Investigating environmentally responsible behaviour: A phenomenological study of the personal behaviour of acknowledge leaders in the area of climate change. Unpublished PhD dissertation of Ohio State University. Available at: https://ohiolink.edu/
- Buelow, S., Lewis, H. & Sonneveld, K. (2009). The role of labels in directing consumers packaging waste. A paper presented at the 24th IAPRI Symposium Clemson SC USA. 17-20 May.
- Chan, R.Y. (2004) Consumers response to environmental advertising in China. *Marketing Intelligence and Planning*. Vol. 22, Issue 4, pp.42-437. Accessed from: http://dx.doi.org/10.1108/02634500410542789 on February 26, 2016.
- Cheng, T.M. & Wu, N.C. (2015). How do environmental knowledge, environmental sensitivity and place attachment affect environmentally responsible behaviour? An integrated approach for sustainable island tourism. *Journal of Sustainable Tourism*. 23(4),537-576. Available at: http://dx.doi.org/10.1080/09669582.2014-965177
- Cheng, M, & Tung, P. (2010). The moderating effect of perceived lack of facilities on consumers recycling intentions. *Environment and behaviour*. 42(6), 824-844.
- D'Souza, C. (2004). "Ecolabel programmes: A stakeholder (consumer) perspective", corporate communications: *An International Journal*, 9(3),179 188.
- D'Souza, C., Taghian, M. & Lamb, P. (2006). An empirical study on the influence of environmental labels on consumers' corporate communications. *An International Journal*, 11(2), 162-173.
- Dolic, J., Pibernik, J. & Bilusic, I. (2010). Consumer interpretation of recycling symbols used for printed products. Accessed from: http://bib.irb.hr/datoteka1484068.Dolic-215.doc on August 29, 2017.
- Eastman, L., Nunez, P., Crettier, B. & Theil, M. (2013). Identification of self-reported user behaviour, education level, and preferences to reduce littering on beaches- A survey S.E Pacific. *Ocean and Coastal Management*. 7(8), 1-7. Accessed on March 7, 2016 From: http://dx.doi.org/10. 1016ij.ocecoaman.2013.02.014
- Esmailpour, M. & Rajabi, A. (2016). The effect of environment-friendly attitude on consumer perception of usability of product packaging. *Journal of Applied Packaging Research*. Vol. 8 2, Article 6. Available at:http://scholarworks.rit.edu/japr/vol8/iss2/6 on October 24, 2016.
- Garson, G. D. (2016). Partial least squares: Regression and structural equation models. Glenn Drive Asheboro, NC 27205 USA: *Statistical Publishing Associates*. E-book.
- Gibson, I. (2016). Predictors of litter pollution in suburban parks. Honors scholar theses 489. University of Connecticut. Accessed from: http://digitalcomms.uconn.edu/srhonorstheses/489 on January 23, 2017.
- Gocer, A. & Oflac, B. S. (2017). Understanding young consumers' tendencies regarding eco-labelled products. *Asia Pacific Journal of Marketing and Logistics*. 29(1), 80-97.
- Grunert, K.G; Hieke, S. &Wills, J. (2014) Sustainability labels on food products: consumer motivation, understanding and use. *Food Policy*, 4(4), 177-189 Retrieved from: https://doi.org/10.1016/j.foodpol.2013.12.001
- Gusti, A. (2016). The relationship of knowledge attitudes and behavioural intentions of sustainable waste management on primary schools' students in the city of Padang Indonesia. *International Journal of Applied Environmental Sciences*. 11(5), 1323-1332. Available at: http://www.ripublication.com on January 23, 2017.
- Hines, J. M., Hungerford, H.R. & Tomera, A.N. (1987). Analysis and synthesis of research on responsible environmental behaviour. *The Journal of Environmental Education*. 18, (2), 1-8
- Hair, J.F., Bush, R. P. & Ortinau, D.J. (2000) *Marketing research: A practical approach for the new millennium*. New York: McGraw-Hill.
- Halady, I. R. & Rao, P.H. (2010). Does awareness to climate change lead to behaviour change? *International Journal of Climate Change Strategies and Management*. 2 (1), 6-22. Available at: http://doi.org/10.1108/1756891011020229
- Horsley, D. (1988). The unintended effects of a posted sign on littering attitudes and stated intentions. *The journal of environmental education*. 19(3), 10-14. Accessed from: https://doi.org/10.1080/00958964.1988.994257

- Hsu, S. J. & Roth, R. E. (1998). An assessment of environmental literacy and analysis of predictors of responsible environmental behaviour held by secondary teachers in the Hualien area of Taiwan. *Environmental Education Research*. Accessed on March 7, 2016 from: http://etd.ohiolink.edu/rws_eu/document/get/osu/216990016/inline
- Hungerford, H.R. & Volks, T.L. (1990). Changing learner behaviour through environmental education. *The Journal of Environmental Education*. 21(3), 8-21.
- Ibok, N.I. & Etuk, S.G. (2014). Socio-economic and demographic determinants of green consumption. *International Journal of Managerial Studies and Research*. 2(19), 47-56.
- Ifegbesan, A. P; Ogunyemi, B.; & Rampedi, I. T (2017) Students attitudes to solid Waste management in a Nigerian university: Implications for campus-based sustainability education. *International Journal of Sustainability in Higher Education*. 18(7), 1244-1262, Accessed from: https://doi.org/10.1108/IJSHE-03-2016-0057. On May 1, 2018.
- Jorgenson, A.K (2003) Consumption and analysis of ecological footprint. Social Problems, 50(3), 374-394. Accessed from: irows.ucr.edu/Andrew/papers/jorgensonSP.pdf on August 29, 2016
- JoAnn DeVries (1991) The impact of plastics on the environment. *Reference Services Review*, 19(3), 79-96. Available at: http://dx.doi.org/10.1108/eb049133
- Kaiser, F.G., Ranney, M., Hatig, T. & Bowler, P.A. (1999). Ecological behaviour, environmental attitude and feeling of responsibility for the environment. *European Psychologist*. 4(2), 59-74. Hogrefe & Huber Publishers.
- Kempton, W., Boster, J.S. & Hartley, J.A. (1995). Environmental values in American culture Cambridge, Massachusetts: The MIT Press.
- Khare, A. (2014) Consumers susceptibility to interpersonal influence as a determining factor of ecologically conscious behaviour. *Marketing Intelligence and Planning*. 32 (1), 2-20. Emerald Group Publishing Limited.
- Kollmuss, A.& Agyeman, J. (2002). Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behaviour? *Environmental Education Research* 18(3), 239-260. Accessed online at: http//dx.doi.org/10.1080/13504620220/45401 on September 2, 2016.
- Krahe, B. (1993). Personality and social psychology: Towards a synthesis. London. Sage.
- Kumar, P. & Ghodeswar, B. (2015). Factors affecting consumers' green product purchase decisions. *Marketing Intelligence and Planning*. 33(3), 330-347.
- Kwawaja, F.S. & Shah, A. (2013) Determinants of littering: An experimental analysis. *The Pakistan Development Review*. 52(2), 157-168.

- Latif, S.A; Omar, M.S; Bidin, Y.H. & Awang, Z. (2012). Environmental problems and quality of life: Situational factor as a predictor of recycling behaviour. *Procedia-social and behavioural sciences*. (35) 682-688. Available at: sciencedirect.com on October 28, 2018.
- Lefebure, A. & Munoz, R.R (2011) Communicating to consumers in Sweden with ecolabels-is the message getting through? Unpublished Maters Thesis, Umea Business School, Umea University Sweden.
- Leijdekkers, S., Marpaung, Y., Meesters, M., Neser, A., Penninx, M., Rookhuijzen, M., & Willems, M. (2015) Effective interventions on littering behaviour youngsters.
 Wageningen University Netherlands, MSc students report. Retrieved on January 23, 2017 from:

www.wired.com/2015/06/alejandro-duran-washed-up/?mbid=social_fb

- Magner, L. & Crie, D. (2015) Communicating packaging eco-friendliness: An exploration of Consumers' perceptions of eco-designed packaging. *International Journal of Retail* and Distribution Management, vol.43, Iss:415, pp 350-366.
- McAllister, J. (2015) Factors influencing solid waste management in the developing world. MSc Thesis report of Utah State University. Accessed on September 2, 2016 from: http://digitalcommons.usu.edu/gradreports.
- Nkwocha, E.E & Okeoma, I.O. (2009) Street littering in Nigerian towns: Towards a framework for sustainable urban cleanliness. *African Research Review*. Vol. 3, issue 5, pp147-161
- Obiora, C.J (2014) Factors responsible for indiscriminate disposal of sachet water wastes' I Anambra state Nigeria. *Advances in Life Science and Technology*. Vol. 20. Accessed from: www.iiste.org on March 22, 2019
- Okeke, T.C., Olise, M.C. & Eze, G.A. (2008) *Research Methods in Business and Management Sciences*. Enugu: Iyke Ventures Production.
- Olson, E.G. (2009) Business as environmental steward: The growth of greening. *Journal of Business Strategy*. Vol. 30. No.5, pp 4-13. Emerald Group Publishing.
- Onel, N. & Mukherjee (2015) Understanding environmentally sensitive consumer behaviour: An integrative research perspective. World Journal of Entrepreneurship, Management and Sustainable Development. 11(1), 2-16. Accessed on April 6, 2015 and from: http://dx.doi.org/10.1108/WJEMSD-07-2014-0021
- Owusu, G.; kwakye, T.; Welbeck, E. &Ofori, C. (2017) Environmental literacy of business students in Ghana. *International Journal of Sustainability in Higher Education*. Vol. 18, Issue: 3, pp. 415-435. Accessed on May 5, 2017 from: <u>http://dx.doi.org.10.1108/IJSHE-</u>02 - 2016-0025.

- Pensini, P. M., Slugoski, B.R. & Caltabiano, N.J. (2012). Predictors of environmental behaviour: A comparison of known groups. *Management of Environmental Quality: An International Journal*. Vol. 23, Issue 5.pp 536-545. Accessed on September 2, 2016 from: https://doi.org/10.1108/1477783/21125514
- Polonsky, M. J., Vocino, A., Grau, S. L., Garma, R. & Ferdous, A. S. (2012) The impact of general and carbon-related environmental knowledge on attitudes and behaviour of US consumers. *Journal of Marketing Management*. 28(3), 238-263.
- Quartey, E.T., Tosefa, H., Danquah, K.A.B & Obrsalova, I. (2015) Theoretical framework for plastic waste management in Ghana through extended producer responsibility: Case of sachet water waste. *International Journal of Environmental Research and Public Health* 12(8), 9907-9919. Retrieved from: https://doi.org/10.3390/ijerph120809907
- Revell, Kristy L.(2015) Sustainable lifestyles: Local government, citizens and the impact of pro-environmental behaviour change programmes. An Unpublished Doctoral Thesis, University College London. Accessed from: *http://discovery.ud.ac.uk/1467257*
- Rex, E. & Baumann, H. (2006) Beyond ecolabels: What green marketing can learn from conventional marketing. *Journal of Cleaner Production*. 1(5), 567-576. Available at: www.sciencedirect.com on March 7, 2016.
- Sammer, K. & Wustenhagen, R. (2006) The influence of eco-labelling on consumers behaviour- result of a discrete choice analysis for washing machines. *Business Strategy and the Environment*. No. 15, pp 185-199. Available at: www.interscience.wiley.com
- Singh, N. & Gupta, K. (2013). Environmental attitude and ecological behaviour of Indian consumers. *Social Responsibility Journal*. 9 (1),4-18. Accessed from: http://dx.doi.org/10.1108/17471111311307787 on April 6, 2015
- Stern, P. C., Dietz, T., Abel, T., Guagnano, G. A. & Kalof, L. (1999) A value-belief-norm theory of support for social movements: The case of environmentalism. *Human Ecology Review*, No.6, pp.81–97.
- Stern, P. C. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*, 56(3), 407–424.
- Taufique, K., Siwar, C., Chamhuri, N. & Farah, H.S. (2016). Integrating general environmental knowledge and eco-label knowledge in understanding ecologically conscious consumer behaviour. *Procedia Economics and Finance*. 3(7), 39-45. Accessed from: www. sciencedirect.com on August 22, 2016.
- Taufique, K.R., Vocino, A. & Polonsky, M.J. (2016). The influence of eco-label knowledge and trust on pro-environmental consumer behaviour in an emerging market. *Journal of Strategic Marketing*. 1(19), 1-19. Accessed from: http://dx.doi/10.1080 /0965254X.2016.1240219 on January 23, 2017.

- Thorgersen, J. (2000). Psychological determinants of paying attention to ecolabel in purchase decisions: Model development and multinational validation. *The Journal of Consumer Policy*. 23(3), 285-315.
- Thogersen, J., Haugaard, P. & Olesen, A. (2010). Consumers response to ecolabels. *European Journal of Marketing*. Vol. 44, No.11/12, pp.1787-1810. Accessed from: http://dx.doi/10.1108/03090561011079882 on December 27, 2016.
- Tzilivakis, J., Green, A., Warner, D., McGeevor, K. & Lewis, K. (2012). A framework for practical and effective eco-labelling of food products. *Sustainability Accounting Management and Policy Journal*. 3 (1), 50-73.
- Ukenna, S., Nkamnebe, A.D., Nwaizugbo, I.C., Moguluwa, S.C. & Olise, M.C. (2012). Profilling the environmental sustainability- conscious consumer: Proposing the S-P-P model. *Journal of Management and Sustainability*. 2(2),197-210.
 - Verdonk, S., Chiveralls, K. & Dawson, D. (2017). The effect of signage on waste disposal. Sustainability. 9(3), 44. Available at: www.mdpi.com/journal/sustainability.
 - Wiernik, B.M., Ones, D.S. & Dilchert, S. (2013). Age and environmental sustainability: A meta- analysis. *Journal of Managerial Psychology*. 28(7/8), 826-856. Available at https://doi.org/110.1108/JMP-07-2013-0221 on September 2, 2016.
 - Wong, K. (2013) Partial least squares structural equation modelling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24(1), 1-32. Retrieved from: http://marketingbulletin.Massey.ac.nz
 - Wu, D.W; Lenkic, P.J; DiGiacomo, A; Cech, P; Zhao, J. & Kingstone, A. (2018). How does the design of waste disposal signage influences waste disposal behaviour? *Journal of Environmental Psychology*. 5(8),77-85. Accessed from: www.elsevier.com/jep on October 28, 2018.

APPENDIX 1

Department of Marketing Faculty of Management Sciences Nnamdi Azikiwe University, Awka. 4th June, 2018.

Dear Respondent,

ENVIRONMENTAL MARKETING SURVEY

This research titled: Evaluation of Consumers' Response to Waste Disposal Symbols on Product Labels, is part of an ongoing Doctor of Philosophy (PhD) dissertation in the above mentioned school and department.

Your participation will aid in unraveling the extent to which consumers are aware and understand the waste disposal symbols and words on the labels of food and drink items they consumed. The results of this survey will not only extend existing literature of environmental/sustainability marketing, but will provide policy makers, food and drinks manufacturers, and other stakeholders with additional insight on how to organised and disseminate environmental sustainable information in a manner that will benefit the consumer, the manufactures and more importantly our environment (planet earth).

You are please requested to fill the questionnaire overleaf. Participation is voluntary, confidential, and appreciated, as the data will be used for research purposes only.

Thank you for complying.

Yours Faithfully,

Thompson, Okon Monday

ENVIRONMENTAL MARKETING SURVEY

SECTION A

1. To what extent have you notice these symbols and words on the labels of the products you consume? Please tick (\checkmark) as appropriate and indicate how strong you are aware of these waste disposal symbols and words on the label of the products you consume.

	1	2	3	4	5					
St	rongly	Aware	Undecided	Not Aware	Strongly No	ot Av	ware			
A	AWAREN	NESS OF TI	HE WASTE D	ISPOSAL SYN	ABOLS	1	2	3	4	5
1										
2	Z Z									
3										
4										
5	PE									

2. To what extent do you understand these symbols and words on the labels of the products you consume? Please tick (\checkmark) as appropriate and indicate how strong you understand these waste disposal symbols and words on the labels of the products you consume.

1		2	3	4			5			
Stro	ongly	Understand	Undecided	Do Not		Str	ongl	у		
Uno	derstand			Understand	Do	o no	t Un	ders	tand	
	UNDE	RSTANDING	OF THEWA	STE DISPOS	AL	1	2	3	4	5
	SYMB	OLS								
6		Ì								
7	2									
8										
9										
10	2 PI									

3. To what extent are you aware of the following words? Please tick (\checkmark) as appropriate and indicate how strong you are aware these environmental words.

	1	2	3	4	5					
St	rongly	Aware	Undecided	Not Aware	Strongly					
A	ware				Not Aware					
	GENE	ERAL EN	VIRONMEN	TAL KNOW	LEDGE	1	2	3	4	5
11	Clima	te Change	e							
12	Green	house Gas	Emission							
13	Ozone	layer Dep	oletion							
14	Globa	l Warming	5							
15	Sustai	inable Wa	ste Disposal							

4. The following questions ask about your attitude towards the environment. Please tick (\checkmark) as appropriate and indicate how much you agree or disagree to the following statements.

	1	2	3	4	5						
St	rongly	Agree	Undecided	Disagree	Strongly						
Ag	Agree Disagree										
	ATTITUDE TOWARDS THE ENVIRONMENT							2	3	4	5
16	I am av	ware that n	ny consumpti	on and was	te disposal	habit has an					
	impact	on the envi	ronment								
17	I think	it is imp	ortant that a	ll consume	ers' try to	reduce their					
	environ	mental imp	act by disposi	ng their wa	ste properly						
18	I always	s use the wa	aste bin to dis	pose of my	waste						
19	I think	that there	is little poin	t in changi	ng my litter	ing habit to					
reduce the environmental impact, if others don't do the same.											
20	I find	it difficu	lt to change	e my lifes	style to be	come more					
	environ	mentally re	sponsible.								

5. The following questions ask about how situational factors such convenience, comfort and unavailability of waste bins influence your responsible environmental behaviour. Please tick (\checkmark) as appropriate and indicate how much you agree or disagree to the following statements.

	1	2	3	4	5						
St	rongly	Agree	Undecided	Disagree	Strongly						
Ag	gree				Disagree						
	SITUA	TIONAL 1	FACTORS				1	2	3	4	5
21	While i	n a vehicle	e, I do throw	away used	pet bottles of	r sachets of					
	items consumed because it is convenient for me.										
22	While y	walking al	ong the stree	t, I do thr	ow away pe	t bottles or					
	sachets	of items	consumed be	ecause there	e are no wa	aste-bins or					
	receptac	cles close-b	y.								
23	When I	see other	s throwing av	way their en	mpty plastic	bottles and					
	packets	after consu	imption, I also	joined in d	oing the same	е.					

24. Do you read the information on the product label before consumption? 1. Always (), 2. Usually (), 3. Sometimes (), 4. Rarely (), 5. Never ()

SECTION B: BIO DATA

- 1. Sex: Male() Female()
- 2. Educational Background: OND () Degree/HND () Masters () Ph.D ()
- 3. Age: 18-30 () 31-50 () 51 & Above ()
- 4. Occupation
- 5. Marital Status: Single () Married () Divorced () Separated () Widow () Widower ()
- 6. Religion

APPENDIX 2

Frequencies

Frequency Table

	Help Keep Nigeria tidy									
		Frequency	Percent	Valid Percent	Cumulative Percent					
Valid	strongly aware	577	73.0	73.0	73.0					
	aware	160	20.3	20.3	93.3					
	undecided	13	1.6	1.6	94.9					
	not aware	14	1.8	1.8	96.7					
	strongly not aware	26	3.3	3.3	100.0					
	Total	790	100.0	100.0						

	Please recycle								
		Frequency	Percent	Valid Percent	Cumulative Percent				
Valid	strongly aware	337	42.7	42.7	42.7				
	aware	215	27.2	27.2	69.9				
	undecided	67	8.5	8.5	78.4				
	not aware	92	11.6	11.6	90.0				
	strongly not aware	79	10.0	10.0	100.0				
	Total	790	100.0	100.0					

Dispose properly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly aware	442	55.9	55.9	55.9
	aware	200	25.3	25.3	81.3
	undecided	41	5.2	5.2	86.5
	not aware	53	6.7	6.7	93.2
	strongly not aware	54	6.8	6.8	100.0
	Total	790	100.0	100.0	

Keep our environment clean

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly aware	176	22.3	22.3	22.3
	aware	240	30.4	30.4	52.7
	undecided	68	8.6	8.6	61.3
	not aware	175	22.2	22.2	83.4
	strongly not aware	131	16.6	16.6	100.0
	Total	790	100.0	100.0	

	Recyclable								
		Frequency	Percent	Valid Percent	Cumulative Percent				
Valid	strongly aware	161	20.4	20.4	20.4				
	aware	230	29.1	29.1	49.5				
	undecided	108	13.7	13.7	63.2				
	not aware	133	16.8	16.8	80.0				
	strongly not aware	158	20.0	20.0	100.0				
	Total	790	100.0	100.0					

	Help Keep Nigeria tidy								
		Frequency	Percent	Valid Percent	Cumulative Percent				
Valid	strongly understand	618	78.2	78.2	78.2				
	understand	132	16.7	16.7	94.9				
	strongly do not understand	40	5.1	5.1	100.0				
	Total	790	100.0	100.0					

		Please rec	ycle		
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly understand	282	35.7	35.7	35.7
	understand	296	37.5	37.5	73.2
	undecided	41	5.2	5.2	78.4
	do not understand	118	14.9	14.9	93.3
	strongly do not understand	53	6.7	6.7	100.0
	Total	790	100.0	100.0	

	Dispose properly								
		Frequency	Percent	Valid Percent	Cumulative Percent				
Valid	strongly understand	493	62.4	62.4	62.4				
	understand	216	27.3	27.3	89.7				
	undecided	14	1.8	1.8	91.5				
	do not understand	54	6.8	6.8	98.4				
	strongly do not understand	13	1.6	1.6	100.0				
	Total	790	100.0	100.0					

Keep our environment clean

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly understand	254	32.2	32.2	32.2
	understand	95	12.0	12.0	44.2
	undecided	189	23.9	23.9	68.1
	do not understand	133	16.8	16.8	84.9
	strongly do not understand	119	15.1	15.1	100.0
	Total	790	100.0	100.0	

	Recyclable								
		Frequency	Percent	Valid Percent	Cumulative Percent				
Valid	strongly understand	189	23.9	23.9	23.9				
	understand	203	25.7	25.7	49.6				
	undecided	107	13.5	13.5	63.2				
	do not understand	145	18.4	18.4	81.5				
	strongly do not understand	146	18.5	18.5	100.0				
	Total	790	100.0	100.0					

Climate change

					Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	strongly aware	453	57.3	57.3	57.3
	aware	256	32.4	32.4	89.7
	undecided	27	3.4	3.4	93.2
	not aware	28	3.5	3.5	96.7
	strongly not aware	26	3.3	3.3	100.0
	Total	790	100.0	100.0	

Greenhouse Gas Emission

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly aware	173	21.9	21.9	21.9
	aware	292	37.0	37.0	58.9
	undecided	163	20.6	20.6	79.5
	not aware	135	17.1	17.1	96.6
	strongly not aware	27	3.4	3.4	100.0
	Total	790	100.0	100.0	

Ozone layer Depletion

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly aware	332	42.0	42.0	42.0
	aware	323	40.9	40.9	82.9
	undecided	83	10.5	10.5	93.4
	strongly not aware	52	6.6	6.6	100.0
	Total	790	100.0	100.0	1

	Global Warming								
	Frequency Percent Valid Percent Percent								
Valid	strongly aware	360	45.6	45.6	45.6				
	aware	338	42.8	42.8	88.4				
	undecided	53	6.7	6.7	95.1				
	not aware	13	1.6	1.6	96.7				
	strongly not aware	26	3.3	3.3	100.0				
	Total	790	100.0	100.0					

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly aware	230	29.1	29.1	29.1
	aware	270	34.2	34.2	63.3
	undecided	133	16.8	16.8	80.1
	not aware	92	11.6	11.6	91.8
	strongly not aware	65	8.2	8.2	100.0
	Total	790	100.0	100.0	

Sustainable Waste Disposal

I am aware that my consumption and waste disposal habit has an impact on the environment.

					Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	strongly agree	431	54.6	54.6	54.6
	agree	293	37.1	37.1	91.6
	undecided	40	5.1	5.1	96.7
	strongly disagree	26	3.3	3.3	100.0
	Total	790	100.0	100.0	

It think it is important that all consumers' try to reduce their environmental impact by disposing their waste properly

					Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	strongly agree	454	57.5	57.5	57.5
	agree	282	35.7	35.7	93.2
	undecided	28	3.5	3.5	96.7
	strongly disagree	26	3.3	3.3	100.0
	Total	790	100.0	100.0	

I always use the waste bi to dispose of my waste

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	216	27.3	27.3	27.3
	agree	348	44.1	44.1	71.4
	undecided	147	18.6	18.6	90.0
	disagree	65	8.2	8.2	98.2
	strongly disagree	14	1.8	1.8	100.0
	Total	790	100.0	100.0	

I think that there is little point in changing my littering habit to reduce the environmental impact, if others don't do the same.

		Freewooner	Dereent) (alid Daraant	Cumulative
		Frequency	Percent	valid Percent	Percent
Valid	strongly agree	242	30.6	30.6	30.6
	agree	241	30.5	30.5	61.1
	undecided	83	10.5	10.5	71.6
	disagree	145	18.4	18.4	90.0
	strongly disagree	79	10.0	10.0	100.0
	Total	790	100.0	100.0	

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	134	17.0	17.0	17.0
	agree	215	27.2	27.2	44.2
	undecided	79	10.0	10.0	54.2
	disagree	229	29.0	29.0	83.2
	strongly disagree	133	16.8	16.8	100.0
	Total	790	100.0	100.0	

I find it difficult to change my lifestyle to become more environmentally responsible

While, in a vehicle, I do throw away used pet bottles or sachets of items consumed because it is convenient for me

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	215	27.2	27.2	27.2
	agree	148	18.7	18.7	45.9
	undecided	107	13.5	13.5	59.5
	disagree	226	28.6	28.6	88.1
	strongly disagree	94	11.9	11.9	100.0
	Total	790	100.0	100.0	

While walking along the street, I do throw away pet bottles or sachets of items consumed because there are no waste-bins or receptacles close-by.

-		_			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	strongly agree	198	25.1	25.1	25.1
	agree	202	25.6	25.6	50.6
	undecided	133	16.8	16.8	67.5
	disagree	189	23.9	23.9	91.4
	strongly disagree	68	8.6	8.6	100.0
	Total	790	100.0	100.0	

When I see others throwing away their empty plastic bottles and packets after consumption, I also joined in doing the same.

		_	_		Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	strongly agree	132	16.7	16.7	16.7
	agree	163	20.6	20.6	37.3
	undecided	187	23.7	23.7	61.0
	disagree	160	20.3	20.3	81.3
	strongly disagree	148	18.7	18.7	100.0
	Total	790	100.0	100.0	

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	always	79	10.0	10.0	10.0
	usually	217	27.5	27.5	37.5
	sometimes	362	45.8	45.8	83.3
	rarely	119	15.1	15.1	98.4
	never	13	1.6	1.6	100.0
	Total	790	100.0	100.0	

Reading of Information on a Product label before consumption

My understanding of waste disposal symbols is the reason I always dispose my waste properly

-					Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	strongly agree	297	37.6	37.6	37.6
	agree	256	32.4	32.4	70.0
	undecided	105	13.3	13.3	83.3
	disagree	79	10.0	10.0	93.3
	strongly disagree	53	6.7	6.7	100.0
	Total	790	100.0	100.0	

Despite the inconvenience caused by unavailability of waste baskets, I endeavour to dispose all my waste properly.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	228	28.9	28.9	28.9
	agree	269	34.1	34.1	62.9
	undecided	148	18.7	18.7	81.6
	disagree	92	11.6	11.6	93.3
	strongly disagree	53	6.7	6.7	100.0
	Total	790	100.0	100.0	

Knowledge of the environmental impact of improper waste disposal has helped me to dispose ______all my waste properly._____

					Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	strongly agree	215	27.2	27.2	27.2
	agree	310	39.2	39.2	66.5
	undecided	94	11.9	11.9	78.4
	disagree	92	11.6	11.6	90.0
	strongly disagree	79	10.0	10.0	100.0
	Total	790	100.0	100.0	

Explore

	30-JUL-2018 11:10:26		
Data	C:\Users\DR TITUS		
	OKEKE\Documents\SPSS ANALYSIS 4		
	Clients (Output&Data)\Thompson Okon.sav		
Active Dataset	DataSet1		
Filter	<none></none>		
	<none></none>		
Split File	<none></none>		
N OF ROWS IN WORKING Data File	790 Lloor defined missing values for dependent		
Deminion of Missing	User-defined missing values for dependent		
Cases Used	Statistics are based on cases with no missing		
	values for any dependent variable or factor		
	used.		
	EXAMINE VARIABLES=AWDS1 AWDS2		
	AWDS3 AWDS4 AWDS5 UWDS1 UWDS2		
	UWDS3 UWDS4 UWDS5 GEK1 GEK2 GEK3		
	GEK4GEK5 ATE1 ATE2 ATE3 ATE4 ATE5		
	SF1 SF2 SF3 ReadInfo REB1 REB2 REB3		
	/PLOT BOXPLOT HISTOGRAM NPPLOT		
	/COMPARE GROUPS		
	/STATISTICS DESCRIPTIVES		
	/CINTERVAL 95 /MISSING LISTMUSE		
Processor Time	00.00.16.00		
Flapsed Time	00:00:12.31		
	Data Active Dataset Filter Weight Split File N of Rows in Working Data File Definition of Missing Cases Used Processor Time Elapsed Time		

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
AWDS1	790	100.0%	0	0.0%	790	100.0%
AWDS2	790	100.0%	0	0.0%	790	100.0%
AWDS3	790	100.0%	0	0.0%	790	100.0%
AWDS4	790	100.0%	0	0.0%	790	100.0%
AWDS5	790	100.0%	0	0.0%	790	100.0%
UWDS1	790	100.0%	0	0.0%	790	100.0%
UWDS2	790	100.0%	0	0.0%	790	100.0%
UWDS3	790	100.0%	0	0.0%	790	100.0%
UWDS4	790	100.0%	0	0.0%	790	100.0%
UWDS5	790	100.0%	0	0.0%	790	100.0%
GEK1	790	100.0%	0	0.0%	790	100.0%
GEK2	790	100.0%	0	0.0%	790	100.0%
GEK3	790	100.0%	0	0.0%	790	100.0%
GEK4	790	100.0%	0	0.0%	790	100.0%
GEK5	790	100.0%	0	0.0%	790	100.0%
ATE1	790	100.0%	0	0.0%	790	100.0%
ATE2	790	100.0%	0	0.0%	790	100.0%
ATE3	790	100.0%	0	0.0%	790	100.0%
ATE4	790	100.0%	0	0.0%	790	100.0%
ATE5	790	100.0%	0	0.0%	790	100.0%
SF1	790	100.0%	0	0.0%	790	100.0%
SF2	790	100.0%	0	0.0%	790	100.0%
SF3	790	100.0%	0	0.0%	790	100.0%
ReadInfo	790	100.0%	0	0.0%	790	100.0%
REB1	790	100.0%	0	0.0%	790	100.0%

REB2	790	100.0%	0	0.0%	790	100.0%
REB3	790	100.0%	0	0.0%	790	100.0%

Descriptives

		Statistic	Std. Error
AWDS1	Mean	1.42	.031
	95% Confidence Interval for MeanLower Bound	1.36	
	Upper Bound	1.48	
	5% Trimmed Mean	1.26	
	Median	1.00	
	Variance	.779	
	Std. Deviation	.882	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interguartile Range	1	
	Skewness	2 723	087
	Kurtosis	7.530	.174
AWDS2	Mean	2.19	.048
	95% Confidence Interval for MeanLower Bound	2.10	
	Upper Bound	2.29	
	5% Trimmed Mean	2.10	
	Median	2.00	
	Variance	1.843	
	Std. Deviation	1.358	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	2	
	Skewness	.894	.087
	Kurtosis	526	.174
AWDS3	Mean	1.83	.043
	95% Confidence Interval for MeanLower Bound	1.75	
	Upper Bound	1.92	
	5% Trimmed Mean	1.70	
	Median	1.00	
	Variance	1.468	
	Std. Deviation	1.212	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	1	
	Skewness	1.478	.087
	Kurtosis	1.076	.174
AWDS4	Mean	2.80	.051

	95% Confidence Interval for MeanLower Bound	2.70	
	Upper Bound	2.90	
	5% Trimmed Mean	2.78	
	Median	2.00	
	Variance	2 044	
	Std. Deviation	1 430	
	Minimum	1.400	
	Maximum	5	
	Range	3	
		4	
		2	097
	Kurtosis	-1 370	.007
AWDS5	Mean	2.87	.051
	95% Confidence Interval for MeanLower Bound	2.77	
	Upper Bound	2.97	
	5% Trimmed Mean	2.86	
	Median	3.00	
	Variance	2 060	
	Std. Deviation	1 435	
	Minimum	1.400	
	Maximum	5	
	Range	J 4	
		4	
		2	0.07
	Kurtosis	.222	.087
UWDS1	Mean	1.37	.033
	95% Confidence Interval for MeanLower Bound	1.31	
	Upper Bound	1.43	
	5% Trimmed Mean	1.19	
	Median	1.00	
	Variance	.842	
	Std. Deviation	917	
	Minimum	1	
	Maximum	5	
	Range	J 4	
		4	
	Skowposs	0	097
	Kurtosis	9.573	.007
UWDS2	Mean	2.19	.045
0	95% Confidence Interval for MeanLower Bound	2.11	
	Upper Bound	2.28	
	5% Trimmed Mean	2.11	
	Median	2.00	
	Variance	1 57/	
	Std. Deviation	1.074	
		1.255	
	IVIII IIITIUITI	1	

	Maximum	5	
	Range	4	
	Interquartile Range	2	
	Skewness	.902	.087
	Kurtosis	369	.174
UWDS3	Mean	1.58	.034
	95% Confidence Interval for MeanLower Bound	1.51	
	Upper Bound	1.65	
	5% Trimmed Mean	1.46	
	Median	1.00	
	Variance	.888	
	Std. Deviation	.942	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	1	
	Skewness	1.892	.087
	Kurtosis	3.067	.174
UWDS4	Mean	2.71	.051
	95% Confidence Interval for MeanLower Bound	2.61	
	Upper Bound	2.81	
	5% Trimmed Mean	2.67	
	Median	3.00	
	Variance	2.094	
	Std. Deviation	1.447	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	3	
	Skewness	.182	.087
	Kurtosis	-1.309	.174
UWDS5	Mean	2.82	.052
	95% Confidence Interval for MeanLower Bound	2.72	
	Upper Bound	2.92	
	5% Trimmed Mean	2.80	
	Median	3.00	
	Variance	2.106	
	Std. Deviation	1.451	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	2	
	Skewness	.213	.087
	Kurtosis	-1.356	.174
GEK1	Mean	1.63	.034
	95% Confidence Interval for MeanLower Bound	1.56	
	Upper Bound	1.70	

	5% Trimmed Mean	1.50	
	Median	1.00	
	Variance	.910	
	Std. Deviation	.954	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interguartile Range	1	
	Skewness	1 955	087
	Kurtosis	3.782	.174
GEK2	Mean	2.43	.039
	95% Confidence Interval for MeanLower Bound	2.35	
	Upper Bound	2.51	
	5% Trimmed Mean	2.39	
	Median	2.00	
	Variance	1.232	
	Std. Deviation	1.110	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	1	
	Skewness	.443	.087
	Kurtosis	700	.174
GEK3	Mean	1.88	.037
	95% Confidence Interval for MeanLower Bound	1.81	
	Upper Bound	1.96	
	5% Trimmed Mean	1.76	
	Median	2.00	
	Variance	1.105	
	Std. Deviation	1.051	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	1	
	Skewness	1.601	.087
	Kurtosis	2.471	.174
GEK4	Mean	1.74	.032
	95% Confidence Interval for MeanLower Bound	1.68	
	Upper Bound	1.81	
	5% Trimmed Mean	1.62	
	Median	2.00	
	Variance	.820	
	Std. Deviation	.905	
	Minimum	1	
-		-	-
	Maximum	5	

	Interquartile Range	1	
	Skewness	1.731	.087
	Kurtosis	3.651	.174
GEK5	Mean	2.36	.044
	95% Confidence Interval for MeanLower Bound	2.27	
	Upper Bound	2.44	
	5% Trimmed Mean	2.29	
	Median	2.00	
	Variance	1.540	
	Std. Deviation	1.241	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	2	
	Skewness	.702	.087
	Kurtosis	509	.174
ATE1	Mean	1.60	.031
	95% Confidence Interval for MeanLower Bound	1.54	
	Upper Bound	1.66	
	5% Trimmed Mean	1.49	
	Median	1.00	
	Variance	.736	
	Std. Deviation	.858	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	1	
	Skewness	2.113	.087
A TE 6	Kurtosis	5.645	.174
ATE2	Mean	1.56	.030
	95% Confidence Interval for MeanLower Bound	1.50	
		1.62	
	5% Trimmed Mean	1.44	
	Median	1.00	
	Variance	.713	
	Std. Deviation	.845	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	1	
	Skewness	2.294	.087
	Kurtosis	6.577	.174
ATE3	Mean 05% Confidence Interval for Mean lower Downd	2.13	.034
		2.06	
		2.20	
	5% I rimmed Mean	2.07	
	Median	2.00	

	Variance	.932	
	Std. Deviation	.966	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interguartile Range	2	
	Skewness	762	087
	Kurtosis	.192	.174
ATE4	Mean	2.47	.048
	95% Confidence Interval for MeanLower Bound	2.37	
	Upper Bound	2.56	
	5% Trimmed Mean	2.41	
	Median	2.00	
	Variance	1.831	
	Std. Deviation	1.353	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	2	
	Skewness	5 531	087
	Kurtosis	-1.032	.174
ATE5	Mean	3.02	.049
	95% Confidence Interval for MeanLower Bound	2.92	
	Upper Bound	3.11	
	5% Trimmed Mean	3.02	
	Median	3.00	
	Variance	1.916	
	Std. Deviation	1.384	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range		
	Skewness	- 030	087
	Kurtosis	-1.370	.174
SF1	Mean	2.79	.050
	95% Confidence Interval for MeanLower Bound	2.69	
	Upper Bound	2.89	
	5% Trimmed Mean	2.77	
	Median	3.00	
	Variance	1.997	
	Std. Deviation	1.413	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range		
	Skowness	о 014	087
	Kurtosis	-1.414	.174

SF2	Mean	2.65	.047			
	95% Confidence Interval for MeanLower Bound	2.56				
	Upper Bound	2.75				
	5% Trimmed Mean	2.62				
	Median	2.00				
	Variance	1.725				
	Std. Deviation	1.313				
	Minimum	1				
	Maximum	5				
	Range	4				
	Interquartile Range	3				
	Skewness	.219	.087			
	Kurtosis	-1.208	.174			
SF3	Mean	3.04	.048			
	95% Confidence Interval for MeanLower Bound	2.94				
	Upper Bound	3.13				
	5% Trimmed Mean	3.04				
	Median	3.00				
	Variance	1.828				
	Std. Deviation	1.352				
	Minimum	1				
	Maximum	5				
	Range	4				
	Interquartile Range	2				
	Skewness	017	.087			
	Kurtosis	-1.177	.174			
ReadInfo	Mean	2.71	.032			
		2.65				
	5% Trimmed Meen	2.77				
	5% minined Mean	2.71				
		3.00				
		.807				
		.899				
	Minimum	1				
	Maximum	5				
	Range	4				
	Interquartile Range	1				
	Skewness	088	.087			
	Kurtosis	230	.174			
REBI	95% Confidence Interval for MeanLower Bound	2.10	.043			
	Linner Round	2.07				
	5% Trimmed Mean	2.24				
	Modian	∠.06				
		2.00				
		1.490				
	Std. Deviation	1.220				
	Minimum	1				

	Maximum	5	
	Range	4	
	Interquartile Range	2	
	Skewness	.916	.087
	Kurtosis	160	.174
REB2	Mean	2.33	.043
	95% Confidence Interval for MeanLower Bound	2.25	
	Upper Bound	2.42	
	5% Trimmed Mean	2.26	
	Median	2.00	
	Variance	1.437	
	Std. Deviation	1.199	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	2	
	Skewness	.683	.087
	Kurtosis	447	.174
REB3	Mean	2.38	.045
	95% Confidence Interval for MeanLower Bound	2.29	
	Upper Bound	2.47	
	5% Trimmed Mean	2.31	
	Median	2.00	
	Variance	1.615	
	Std. Deviation	1.271	
	Minimum	1	
	Maximum	5	
	Range	4	
	Interquartile Range	2	
	Skewness	.776	.087
	Kurtosis	485	.174

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
AWDS1	.413	790	.000	.523	790	.000
AWDS2	.255	790	.000	.794	790	.000
AWDS3	.313	790	.000	.699	790	.000
AWDS4	.240	790	.000	.864	790	.000
AWDS5	.223	790	.000	.871	790	.000
UWDS1	.439	790	.000	.438	790	.000
UWDS2	.293	790	.000	.806	790	.000
UWDS3	.355	790	.000	.642	790	.000
UWDS4	.202	790	.000	.864	790	.000
UWDS5	.210	790	.000	.870	790	.000
GEK1	.319	790	.000	.663	790	.000
GEK2	.240	790	.000	.886	790	.000
GEK3	.285	790	.000	.735	790	.000
GEK4	.272	790	.000	.720	790	.000
GEK5	.246	790	.000	.860	790	.000
ATE1	.305	790	.000	.660	790	.000
ATE2	.321	790	.000	.631	790	.000
ATE3	.268	790	.000	.854	790	.000
ATE4	.246	790	.000	.852	790	.000
ATE5	.220	790	.000	.877	790	.000
SF1	.209	790	.000	.867	790	.000
SF2	.197	790	.000	.884	790	.000
SF3	.152	790	.000	.900	790	.000
ReadInfo	.252	790	.000	.887	790	.000
REB1	.252	790	.000	.824	790	.000
REB2	.239	790	.000	.866	790	.000
REB3	.282	790	.000	.842	790	.000

Tests of Normality

a. Lilliefors Significance Correction