



**Dissertation**  
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**DEPARTMENT OF VOCATIONAL  
TEACHER EDUCATION  
UNIVERSITY OF NIGERIA NSUKKA**

**STRATEGIES FOR ENHANCING THE ENVIRONMENTAL  
AWARENESS OF HOME-MAKERS IN ENUGU STATE:  
IMPLICATION FOR ENVIRONMENTAL EDUCATION**

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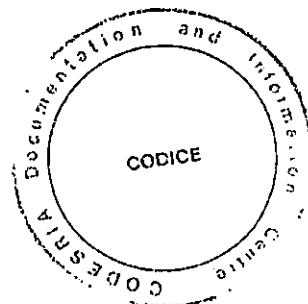
**MAY, 1998**

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**BY**

29 AVR. 1999

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**DEPARTMENT OF VOCATIONAL TEACHER EDUCATION  
UNIVERSITY OF NIGERIA NSUKKA**

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**STRATEGIES FOR ENHANCING THE ENVIRONMENTAL  
AWARENESS OF HOME-MAKERS IN ENUGU STATE:  
IMPLICATION FOR ENVIRONMENTAL EDUCATION**

**A THESIS  
PRESENTED TO THE DEPARTMENT OF  
VOCATIONAL TEACHER EDUCATION  
(HOME ECONOMICS), UNIVERSITY OF NIGERIA,  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
AWARD OF MASTER OF EDUCATION IN HOME ECONOMICS**

**BY**

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**MAY, 1998**

APPROVAL PAGE

THE PROJECT HAS BEEN APPROVED FOR THE DEPARTMENT OF VOCATIONAL TEACHER EDUCATION (HOME-ECONOMICS), UNIVERSITY OF NIGERIA, NSUKKA.

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## CERTIFICATION

Esiobu Obiamaka, M.; a post-graduate student in the Department of Vocational Teacher Education – Home Economics and with the Registration Number PG/M.ED/93/14424 has satisfactorily completed the requirements for course and research work for the degree of Master of Education in Home Economics. The work embodied in this thesis is original and has not been submitted in part or full for any other diploma or degree of this or any other University.

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## DEDICATION

This work is dedicated to Almighty God who at the demise of my beloved husband (Late Mr. B.N. Esiobu) has taken over my affairs and in whom my soul shall dwell at ease.

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## ACKNOWLEDGEMENT

I wish to use this opportunity to express my profound gratitude to the following institution and people for their various contributions towards the accomplishment of this research project: COUNCIL FOR THE DEVELOPMENT OF ECONOMIC AND SOCIAL SCIENCE RESEARCH IN AFRICA (CODESRIA 1995 AWARD) for the funding of this project. I also express my sincere and unquantifiable gratitude to my supervisor, Dr (Mrs.) E.U. Anyakoha whose rigorous and objective supervision of this project cannot be over emphasised. I am particularly challenged by her humility and hard work.

My unreserved gratitude goes to all the lecturers in the department of Vocational Teacher Education, their critical prognosis of the study served a useful guide during analysis. My deep and sincere appreciation to Dr. M. Uzochukwu for his fatherly love and care.

Finally, I wish to acknowledge with special thanks my very deep indebtedness to my reader, Dr. O.M. Okoro and also B.C. Okpukpala, Mr. J.B.C. Okonkwo, as well as all others, who contributed in various dimensions to the success of this project.

March, 1998

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# TABLE OF CONTENTS

TITLE PAGE	i
APPROVAL PAGE	ii
CERTIFICATION PAGE	iii
DEDICATION	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vi
ABSTRACT	viii
<b>CHAPTER ONE: INTRODUCTION</b>	<b>1</b>
Background of the study.....	1
Statement of the Problem .....	3
Purpose of the Study .....	5
Research Questions .....	5
Research Hypothesis .....	6
Significance of the Study .....	6
Scope of the Study .....	7
Definition of Terms .....	8
<b>CHAPTER TWO: LITERATURE REVIEW</b>	<b>10</b>
<i>The Environmental Issues</i> .....	10
Population Growth .....	11
Pollution .....	13
Water pollution .....	13
Atmospheric/Air pollution .....	16
Pollution of Land/living Environment .....	17
Environmental Awareness .....	20
Environmental Education .....	24
Women and Environment .....	26
Women and Environmental Awareness and Education .....	29
<b>CHAPTER THREE: METHODOLOGY</b>	<b>33</b>
Area of the Study .....	33
Population of the Study .....	33
Sample of the Study .....	33
Development of Instrument for the Study .....	34
Validation of the instrument .....	34
Reliability of the instrument .....	35
Administration of the instrument .....	35
Data Analysis .....	35



<b>CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS</b>	<b>37</b>
Research Question 1 .....	37
Hypothesis .....	40
Research Question 2 .....	42
Research Question 3 .....	44
Discussion of Findings: FINDINGS .....	45
DISCUSSION .....	45
	47
<b>CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS</b>	<b>56</b>
Re-Statement of the Problem .....	56
Procedures used for the study .....	56
Principal findings .....	57
Implication of the Findings .....	59
Conclusion .....	60
Recommendations .....	61
Suggestions for further research .....	63
<b>REFERENCES</b>	<b>65</b>
<b>APPENDIX</b>	
Appendix A - Questionnaire	69

## ABSTRACT

This study dealt with strategies for enhancing the environmental awareness of home-makers in Enugu State. It sought answers to the following research questions:

- (1) To what extent are home-makers in Enugu State aware of their environment?
- (2) What are the environmental education needs of home-makers in Enugu State?
- (3) What delivery systems could be employed to extend environmental education to the home-makers in Enugu State.

The population for the study was made up of home-makers in Enugu State. A sample of a hundred and sixty (160) home-makers was randomly selected from Nsukka and Enugu urban. The instrument for data collection was a questionnaire. Data collection was carried out by the researcher and trained research assistants. Data were analysed using descriptive statistics (frequencies, mean, standard deviation) and chi-square analysis. The major findings include:

1. home-makers are aware of:
  - (i) 60% of the components of environment;
  - (ii) 54.5% of the causes of environmental degradation
  - (iii) 40% of consequences of environmental degradation.
2. the environmental awareness of the home-makers in Enugu State is significantly independent of their educational status as well as their family size and the type of house they occupy.

3. Nineteen (19) important environmental education concepts needed by home-makers were identified.
4. Nineteen (19) delivery systems through which environmental education can be extended to home-makers were revealed.

Based on the findings of the study, seven (7) recommendations for enhancing the environmental awareness of home-makers were made.

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# CHAPTER ONE

## INTRODUCTION

### **Background of the Study**

Environment in its simplistic definition is the surrounding, including external conditions influencing growth and development of people, animals and plants (Charles-Davis, 1992). It is thus obvious that the environment is a vital factor in the survival of man.

Tolba (1991) pointed out that the physical environment is where all human beings live, and that it provides the resources and ecological processes which make all life possible. The subject of environmental awareness has become a major concern and challenge globally. This is because all human activities: economic and socio-cultural, take place in the environment. Connert (1990) ranked a clean and beautiful environment first out of the following ten basic human needs: a clean and adequate supply of water, simple clothing, food, health care, communication, simple housing, energy requirement, total education, spiritual and cultural needs. It can even be seen that all other basic human needs have direct or indirect bearing to the environment. According to Rodda (1993), the environment and human health are inevitably inter-related, and a healthy environment is essential to the health and well-being of the planet and its inhabitants who depend on it for the air they breathe, the water they drink and the food they eat. Thus, there is a close relationship between man and the environment. Consequently, a healthy and beautiful environment, is not only a luxury but a basic human need both materially and non-materially (Connert, 1990). The

physical environment influenced both individual and community development. This is because development evolves from people's increasing ability to utilise the environment and its resources, in the production of needed goods and services.

There is need therefore, for the efficient management of the environment and its resources for sustainable development and complete protection, or "Restoration" of nature. According to Rodda (1993):

If the environment is abused, both health and development suffer; people become ill from environmental diseases, and development which depends on the (wise) use of environmental resources fails, similarly, if nations do not develop, poverty condemns their people to continued disease, debility and early death, drive them to destroy their environment in their despair to attempt to survive .... (Rodda 1993, p. 36)

There is therefore need for effective management of the environment. Women are known to be responsible for improving the lot of their families (Anyakoha, 1990 and 1993; Chlebowska, 1990). Rodda (1993) pointed out that in the developing countries, many women's relationship with the environment is vital to their daily lives, for instance, in their provision of water, fuel, food and other basic needs. These women, not only bear the brunt of environmental degradation, but they also play a crucial part in environmental management. Thus enhancing the women's environmental awareness is particularly important because of the extensive range of women's environmental resource management. They interact extensively with their environment. Based on this interaction, Wahren (1991) referred to them as "the custodians of the micro-environment and the United Nations Fund (UNFPA) (1991) also saw them as "environmental manager". Rodda also noted that they are solely

responsible for waste management and sanitation training, home, and family hygiene. In addition to their own direct influence, the women also possess the capacity of influencing others (husbands, children, house-helpers), who in turn influence the environment. It thus becomes very necessary to ensure that women are conscious of their environment. Women involvement in environmental management is very crucial because they can pass these ideas of environmental management to their children, husbands and house-helpers. Thus it has multiplier effect on natural resource management in the home. These facts above have a serious implication for home economics education for sustainable development. Therefore, the study of strategies for enhancing the environmental awareness of home-makers become very necessary.

### **Statement of Problem**

All Nigerians need to be sensitised to environmental issues and problems by fostering their awareness of these matters. Without public awareness at all levels of society, no strategy for the environment can succeed.

Currently, attention has been drawn to the sense in which Nigerians in the traditional settings are aware of their environment (NEST, 1991). They identified women as the group of people that needed this environmental awareness most, because of their crucial link with the environment. Women play an important role in the utilisation and conservation or destruction of the natural resources base. As wives and mothers, they play crucial roles in population resources (Purdom, 1980). Women in Nigeria are involved in environmental issues not because they have consciously

decided to work on improving or maintaining the environment. It is believed that their close link with the environment is largely unconscious which is taken for granted and considered natural. Therefore, women are closely linked with environment, thus they are regarded as environmental managers.

Be that as it may, Aina and Salau (1992), have observed that there are low environmental awareness among Nigerian women. These environmentalists also identified pollution of air, water, land through bush burning, open defecation, improper disposal of human wastes, poor sanitation as how the environment are misused. Moss, Worth and Richard (1964), observed that the general level of health of the community can be raised only when the adults are informed of the implication of the need of environmental awareness for environmental degradation.

Having said these, improvement of health condition in any community depends greatly on the state of environment. For more important that these is that the environment can only be improved and sustained if the environmental managers – women – are educated on their environment and their immediate surroundings. Graham (1993) pointed out that women are in a position to be more concerned with health of family members than men. He added that women recognise that physical environment of the home affects how they feel about themselves and their lives. In view of hazard that accompany environmental degradation, children must be constantly restrained and mothers must be constantly vigilant about their environment. Therefore, women need to be made aware of the importance of the

environment to the extent that they will appreciate the need to manage the environment properly and their responsibility as environmental managers.

It is therefore necessary to seek ways of enhancing the environmental awareness of the women. In order to <sup>do</sup> this, it is necessary to determine the extent to which the women are really aware of the environment, and also those practices of the women that affect their environment and their environmental education needs. All these and more, are what this study will address.

### **Purpose of the Study**

The major purpose of this study is to devise ways and means of enhancing the environmental awareness and environmental education needs of Home-makers in Enugu State.

Specifically, the study will determine:-

- i) The extent to which home-makers in Enugu State are aware of their environment;
- ii) The environmental education needs of the home-makers'
- iii) Strategies for extending environmental education to the women.

### **Research Questions**

The study will seek answers to the following questions:

- i) To what extent are home-makers in Enugu State aware of their environment?
- ii) What are the environmental education needs of home-makers in Enugu State?



- iii) What delivery systems could be employed to extend environmental education to the home-makers in Enugu State?

## Research Hypotheses

The environmental awareness of home-makers in Enugu State are independent of their –

- (a) family size
- (b) educational status
- (c) type of houses they occupy

## Significance of the Study

Environment is a vital factor in survival of man. This is because all activities of man are carried out in an environment. Nigerian women and their environment are crucially linked (NEST, 1991). This is because women play an important role in the utilisation/conservation and destruction of the natural resource base. Moreover, they play significant role in maintaining the quality of the environment through various ways such as food handling, and the total cleanliness of the immediate environment. More than any other member, they are the pacesetter. Their standard of cleanliness and interpersonal relationships are often the standards of the home. It is therefore, believed that the better understanding of the environment by environmental managers – women, the more effectively it can be used to support development. In view of the above, the result of this study will help the policy makers design an appropriate conservation education strategy for women on environmental management.

It is hoped that the result of this study will be beneficial to home-makers. This is because the result of this study is expected to teach them the appropriate ways of managing the home and the immediate environment – which is very crucial for the well being of individuals.

Environmental research has recently been gaining ground in the world of research. However, women, the focus of this research has least research attention on environment. This study of women and environmental awareness is most welcome because women are crucially linked with the environment. Therefore, any programme channelled towards enhancing environmental awareness among women will benefit the society.

Finally, the work will be useful to the students and researchers and other people working in related field as a reference materials as well as a useful guide for effective policy planning and implementation.

### **Scope of the study**

The scope of this study covers two urban towns in Enugu State. These towns are Enugu town, capital of the state and Nsukka town, which is less urban than Enugu town.

This study, will neither compare the environmental awareness between towns nor gender, but will focus only on the following aspects in measuring environmental awareness:

- i) Strategies employed by women against environmental hazards in their immediate environment.

- ii) Level of awareness of women on their immediate environmental management. This will also consider the channel of education used to make women conscious of their environment. These include, radio, television, workshops, oral transmission.

This study will also be limited to environmental education on cleanliness of individual homes and their immediate surroundings and water hygiene.

### **Definition of Terms**

**Air pollution** - Contamination of the air with undesirable gases, smoke, and minute particles.

**Biodegradable** - Organic substances that are broken down, usually rather quickly by normal biological processes such as bacterial or fungal action occurring in the environment.

**Conservation** - Management of environment in a way as to ensure adequate supplies of natural resources for future generations.

**Environment** - the surrounding, including external conditions influencing growth and development of people, animals and plants.

**Environmental education** - an expansion of the study of ecology, a branch of biology dealing with the inter-relationships of living organisms with one another and with their surroundings.

**Environmental awareness** – Being cautious of, having deep knowledge or realisation of man's surrounding circumstances, influences as it affects man's health.

**Sewage** - Water that contains waste matter produced by human beings (waste water).

**Soil Depletion** – the gradual decrease in fertility and usefulness of soil for agricultural production due to poor farming practices.

**Solid Waste**- garbage and other solid refuse, including paper, glass, and junked cars.

**Water Pollution** – The contamination of water by substances that lessen its usefulness for drinking, agriculture, industry or recreation.

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## CHAPTER TWO

### *LITERATURE REVIEW*

This chapter deals with review of related literature. The literature was reviewed and organised under the following headings:

1. The Environmental Issues
2. Environmental awareness
3. Environmental Education
4. Women and Environment
5. Women and Environmental awareness and Education

#### **The Environmental Issues:**

Environmental International (1979) stated that the rising concern of environmental issues has been mainly attributed to an increasing capacity of the environment and man in his activities to satisfy his needs. Also it came as a result of man's aspirations for further development and achieving better living conditions has created an increasing number of environmental problems. Therefore, the wise management of the environment depends upon an understanding of its components. It further involves positive and realistic planning that balances human needs against the potential environmental degradation.

However, the most important environmental issues are the one that concerns the over-exploitation of the forest resources, pollution, over-crowding and noise. But,

women, the focus of this research are concern about the population, and pollution more than any other environmental issues.

### **Population Growth**

According to Aina and Salau (1992), Nigerian women have a central role to maintain the delicate balance between population and natural resources in order to sustain the environment and as wives and mothers play a crucial role in population controls. Also Cynthia in World Health (1993) is of the view that women are seen as agents of change in virtually every aspect of population, development and policy, be it adopting family planning, providing health care or acquiring independent livelihood. However, women cannot bring about this demographic transition alone but their extent of autonomy will likely dictate the pace at which economic and social change and population policy can affect demographic behaviour. The over-population of Nigeria has resulted to the country's environmental degradation, NEST (1993) observed that there was very little public and private concern with population and population related problems. This is because, many Nigerians regard their large population size as a symbol of greatness, power and prestige and tend to resist attempts to reduce it. Aina and Salau pointed out that the doubling time of any population is important in any consideration of its implication for the well being of the citizens. Over-population creates a myriad of problems, which has sent much people to their graves, those who cannot afford or find housing. Thus Chiras (1991) pointed out that  $\frac{1}{3}$  of the population lives in a housing without sewage disposal facilities, while half of the homes in the city have no indoor toilet. He lamented that the streets

are littered with trash and faeces, crime runs rampant and cities badly polluted as well. These observations are much the same in Nigeria where over-population in urban centres leads to in-sanitary living conditions, water shortage, food shortages and diseases.

In view of this, Nigeria can no longer refuse to pay adequate attention to population as a development and environmental issue. Obviously, populations are increasing and so many people are moving from the countryside to towns to earn a means of daily livelihood. This migration to cities has implicated not only to increased population but increased livestock, waste matters and insufficient water supply. In view of this, Winbad and Kilama (1985) advised that when people move from one area to the other, they need to develop new practices that are more suitable for those areas. For instance, they maintained that practices like defecating in the bush, in fields or in open pits may be alright in sparsely populated areas, while such practices are dangerous in urban areas where people do live close together like compact villages. Subsequent to this, Chiras (1991) also agreed that to avoid overshooting the carrying capacity and to prevent the likely population crash, measures should be taken to control population growth. This, he opted should be reduced through attrition – keeping birth rates below death rates and making good arrangement for adequate environment for the entire population. Chiras (1991) suggested that women's choice to have fewer children and adoption of family planning would help to accentuate government measures already at work, which will tend to bring down the birth rate, in the long run. This is because, women bear a disproportionate share of survival

burden and also bear and take care of the further generation. Thus, Aina and Salau (1992) pointed out that in Nigeria in particular, women are involved in environmental issues not because they have consciously decided to work on improving or maintaining the environment but unconsciously have close link with the environment, which is considered natural. However, the challenge now is in the mobilisation and conscientisation of their roles over sustainable development and should be made aware of their potentials as regards environmental degradation.

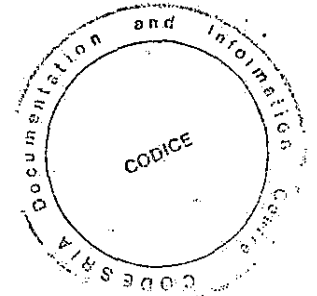
### Pollution

Pollution has done more damage than good, especially for women who are closely linked with the environment. Many types of pollution exist but the researcher will concentrate on the following:

1. Water pollution
2. Atmospheric/air pollution
3. Pollution of land/living environment caused by domestic wastes.

### Water Pollution:

Water is said to be polluted when a body of water is loaded with waste materials or heat such that its natural ability for self-purification can no longer cope with the situation. Also another water pollutants are domestic sewage and human and animal wastes by a way of introducing into it viruses, bacteria, protozoa and other harmful micro-organisms. Therefore, consumption of polluted water without proper treatment leads to water-borne diseases, such as cholera, dysentery, typhoid, and infectious





hepatitis, among others. Nevertheless, lack of water often means relatively low levels of personal hygiene and environmental sanitation (NEST, 1991).

To this effect, Salvato (1992) affirms that environmental contamination of water and other resource base has become a threat to the continued existence of the ecosystem and the very survival of the human race. Anderson (1978) also noticed that in some Nigerian cities, drinking water was hard to come by, let alone water for disposal of waste matters. He further observed that water was the most important commodity man consumes, and the consumption of water usually goes up steadily. Therefore, each community needed a safe and adequate supply of water for individual domestic purposes such as drinking and cooking, personal hygiene, gardening, for washing utensils and for disposal of waste matters. In view of this, WBDP (1993) opined that inadequate access to safe drinking water, use of contaminated water for irrigation and inadequate collection, treatment and disposal of human sewage; are the primary factors which encourage the spread of diseases such as enteric and diarrhoea. Also, non-repair of systems can lead to the possibility of cross-contamination. This is why Arnold (1978) pointed out that septic tanks and pits are widely used, even where ground conditions are unsuitable and inevitable, pollution of groundwater and surface water results. He also stated that when these systems are connected into surface drainage, foul conditions will be created in streets, subject to flooding and generally contributing to surface water pollution, whereby people depend for their portable water supply. Thus Pojasek (1977), on this issue, pointed out that contamination or degradation of the quality of water used for

drinking has damaging effects on the health, welfare and economy of the consumers, as well as on the general environment. Pojasek further observed that urban streams and rivers in Nigeria are invariably heavily polluted. Yet people used them for laundry, bathing, swimming, washing food, irrigation and sometimes, even for drinking. Moreover, Aina and Salau (1992), in their research carried out on "Basic Services", indicated that average per capita water consumption in Nigeria for urban water supply is estimated at 81 litres per day; as against average consumption rate of 114 litres considered appropriate for urban dwellers in Nigeria. This is about 30% short of the required average. Even then, they noticed that the average masks critical shortages in some rapidly growing cities like Enugu and Onitsha, where the average supply was only about 11.55 litres per day in 1977 and 126 litres in 1976. The decline in average daily supply between 1976 and 1977 as they indicated, was due to the rapid rate of urbanisation of the cities. This results mainly from rural-urban migration, which was not matched by the rate of development of urban infrastructures. This has led most of the city dwellers, especially the slum residents, to still rely on unhygienic sources of water supply such as well and rivers.

Women, the focus of this study and by the virtue of their roles, are nearer to nature. Their domestic activity of preparing food, caring for the kids, etc., require water for its accomplishment. On the other hand, insufficiency/shortage of water would result in diseases, and so forth making human beings environmental refugees and for women, the resulting effect is harsher considering that they are physically

weaker, and having an assiduous relationship with the environment are amongst the worst victims of natural hazards.

#### Atmospheric/air Pollution:

Another concern is the problem associated with air pollution. This poses a number of health hazards, and thus requires concerted efforts on the part of government and the citizenry to fight, because man encounters this on a day to day basis. This obviously has a direct influence on man's life. Phillip (1986) stated that air pollution is an undesirable change in the physical, chemical or biological characteristics of air, which harmfully affects human life and that of desirable species. WEDP (1993) also identifies that air pollution contributes to respiratory and pulmonary diseases, shortens the life spans of urban residents. Subsequent to this, Phillip noticed that the major contributors to air pollution are industrial emissions, which release, among others, gases like sulphur dioxide, hydrogen sulphide, flourides and carbon monoxide into the atmosphere. In view of this, Aina and Salau (1992) further explained that carbon monoxide when absorbed by the lungs, reduces the oxygen-carrying capacity of the blood and tolerance for exercises, impairs mental function and aggravate cardio-vascular (heart) disease. They also stated that prolonged low level of exposure to carbon monoxide diminishes visual perception and ability to perform intellectual tasks. Hence fumes from generator and vehicle exhausts that are rampant in various buildings and roads in urban areas as well as fumes from industrial power stations are health hazard. Nevertheless, they added that acute exposure to hydro-carbon causes eye, nasal and throat irritation, while chronic

exposure causes cancer. These gases as observed by Phillip (1986), have poisonous effects on both plant and animals and would result to low fertility of soil and a consequent poor yield of crops. This problem as it manifests itself in Nigeria is better solved via primary source by ensuring that citizens and industrial concerns do not engage indiscriminate release of acidic gas into the atmosphere.

However, quite apart from industrial concern is the indiscriminate burning of tyres, bushes, refuse and other items that release valance of soot into the atmosphere. Subsequent to this Aina and Salau (1992) opted that fuel is another issue of air pollution, fuel energy is used for different tasks, including cooking. Salau and Aina indicated that wood accounts for 80% of energy consumption in Nigeria and has several side effects. The emission from firewood or smoke pollutes home and especially where women cook everyday all year round. Women are affected from the smoke more than smokers (Aina and Salau, 1992). According to these authors, smoke inhaled by women is estimated to be more than 20 packets of cigarette per day. This is because fuelwood produces carbon monoxide poison, which causes respiratory and eye diseases, as well as cancer.

#### Pollution of Land/living Environment:

Usually, the more the understanding of the environment is, the more effectively it can be best utilised for human existence. Land is an important natural resource because it supports both plant and animal both directly and indirectly. Charles-Davis (1992) stated that land provides physical support and food for plants, which in turn grow to be grazed by animal for nourishment. He also pointed out that land provides

sites, which may or may not be favourable for various human activities such as crop production and the establishment of settlement. However, this depends on its characteristics of relief and the way it is owned and used. NEST (1992) opined that human activities like crop agriculture, pastoralism, mining, infrastructural development and urbanisation have been putting increasing pressure on the land. He continued that the environment has deteriorated over large part of the country. He also reported that this has resulted from a variety of interrelated factors. One of such critical factors has been identified as unprecedented population growth, which has meant increased demand for food, forest products, minerals and even wildlife (Rodda, 1993). In ensuring man-environment interaction, different forms of environmental degradation have taken place. Connect (1991) pointed out poor agricultural practices (over-cropping, over-grazing, bush burning, etc), as one of the causes which renders the soil incapable of giving high agricultural yield as well as accelerates sheet erosion and in some areas, gully erosion.

Nevertheless, bush burning is another facet of environmental degradation. Salvato (1992) affirms that bush burning not only destroys some plant species but destroys soil nutrients as well as some organisms, which play a vital role in soil health and nutrient status. Apart from the above source of land degradation, is the tremendous quantity of organic and inorganic waste generated by Nigerians industries in both urban and rural areas. Compton (1972) emphasised that the amount of waste produced in other land use is equally enormous. He stated that wastes are produced in residential zones, commercial areas – such as markets and eating houses,

transportation routes and centres' – like motor parks, offices, educational establishments and numerous other locations. He added that solid waste clog up drains, deface the land surface and constitute a major health hazard, as they harbour all sorts of pathogenic micro-organisms and vermin like rats and cockroaches.

Arnold (1978) observed that these wastes are the by-products of house keeping activities and consumption which include fuel residues, wrapping papers, leaves and empty cans or containers. He further stated that some of these wastes may be toxic, flammable, or non-biodegradable while others are more of nuisance than a danger to man. Subsequent to this, NEST (1992) observed that the arrangement for the disposal of these wastes have been ineffective or insufficient in many of the urban centres. Hence, these wastes are often indiscriminately disposed along and on streets. When this happens, some of the affected streets may be rendered impassable for several weeks or months as a consequence. Thus, Aina and Salau (1992), indicated that bad sanitary conditions in which the solid wastes are collected, processed, and disposed of contribute greatly to urban environmental degradation. They added that although few cities have regulations or by-laws, which specify the type of containers to be used as dustbins, yet people dump their refuse in any available open space. This calls for serious attention for the need of central depots or dumps where each household can deposit its wastes for collection later by garbage trucks. This is important because Aina and Salau pointed out that some urban rubbish do not receive adequate disposal. Some go into water sources, while some are dumped causing environmental degradation and proliferation of disease vectors.

In view of this, Lucas and Gills (1979) stated that these harmful agents need to be recognised because they often lead to the spread of infection and it has always been a perennial problem for a community to handle in satisfactory manner.

It is now obvious that any unhealthy status on man's environment poses a problem to human health, because of the close relationship between man and environment. Therefore, any environmental fitness, which is free from identifiable stresses leading to unhealthy conditions, should be properly developed. UNED (1979) suggested that man can avoid undesirable environmental problems and satisfy his needs and aspirations on a suitable basis through appropriate development, planning and environmental management. This is necessary because Nigeria along side with other countries of the world is aspiring for "health for all by the year 2,000 AD". Effort should therefore be made to strengthen the country's capacity for environmental management.

### **Environmental Awareness**

A true environmental appreciation means an awareness of nature's life giving and aesthetic significance. Nigerians have always been aware of their environment. Aina and Salau (1992) stated that the clearest evidence of this is to be found in traditional land use and human settlement practices, in crop production,, livestock rearing, hunting and fishing through which human beings relate to their environment. Most of these relationships, though before the colonial period were in the direction of conservation, respect, good husbandry and efficient use of environmental resources. However, WHO (1992) indicated that the major change in environmental awareness

and relationship with the environment emerged during the colonial period. They attributed this to the fact that colonisation introduced the notion of development in some cities, which led to the migration from the rural areas to the urban areas in search of means of livelihood. Also, with the technological advances, the population of urban areas has grown, causing more wastes of every kind. Also, Smith (1992) stated that majority of people in urban centres face some degree of personal risk from our immediate surroundings – water and other types of pollution. These personal risks from the environment are regarded as environmental hazards that are unavoids circumstances present in every day life.

To this effect, Basta (1992) pointed out that drinking and using contaminated water or living in proximity to sewage and municipal waste were health threat. It is therefore very necessary that man should have a changing view of the city. WHO (1992) affirms that this changing view is closely connected to people's changing view of health, which is not merely the absence of disease or infirmity but a state of their complete physical, mental and social well-being. They said that success of this aim should only be obtained through an acceptable quality of life if health in any meaningful sense is to achieved.

On the importance of environmental awareness, Rodda (1993) noted that most current environmental problems are essentially a result of people's activities and their attitude towards the socio-cultural and natural environment. Rodda noted that historically, individual and societal values have not always been in the best interests of preserving a high quality environment. He also pointed to the fact that the present



day environmental crisis demands a change in attitude in order that initiative can be taken to rescue the environment from destruction. Connect (1991) advised that intelligent and effective citizen's participation in environmental care requires public awareness that is deepened by knowledge from the sciences and humanities.

Further, it requires the development of attitude and practical skills, which aid people to live in a manner, which enhances environmental quality and reduces environmental degradation. Aina and Salau (1992) also observed that the better understanding of the environment, the more effectively it can be used to control pollution. It is imperative that intelligent persons be informed that the health of our people depends fully on environmental quality. Aina and Salau finally emphasised on the importance of environmental awareness. Thus, they agreed that environmental awareness among people will help in creating the attitude, motivation, and commitment needed to adopt environmentally sound approaches in seeking their individual livelihood. These positions they contended, underline the fact that environmental problems are essentially people-centered. The ideas, attitudes and behaviours of different sections of the population are critical variables in efforts to resolve or prevent environmental problems.

Nevertheless, Aina and Salau also stated that the political powerlessness and marginalization of women has made women uninformed of basic economic and political matters affecting the state of the environment. Therefore, women in Nigeria must be empowered through better education and political participation. This would help them in promoting awareness not only on sanitation system, but also about

afforestation, water supply, and improvement of livestock management. Also according to Arene (1996), women should be recognized by environmental protection and population policies because of their role as managers of individual's homes and are also seen as entry points to improvement of the living environment. In view of this, Aina and Salau advised that programmes on environmental awareness should be carried out and that linkages should be developed between women and environment education, it effective conscientization of environmental awareness is to be ensured. This would help to call attention of women to environmental lapses and urged greater awareness and concern about the environment and help to alter people's attitudes towards the environment and help them to commit themselves towards working individually and collectively for a better environment and life styles.

However, over the past few years, a clearer perception of the need for and the form of environmental education for the country has been emerging, largely due to the pioneering efforts of both government and non-governmental organisation. This can be seen in series of events of great importance to the attainment of sustainable development in Nigeria. Obi (1986) indicated that in a rapid succession, General Buhari in his regime as the Head of State, launched series of "Wars against Indiscipline", which include a war against dirty environment. He also noted that the regime tried to instil some decency in Nigerians as far as a clean environment is concerned. This programme on environmental cleanliness continued in the time of Babangida and even until now in General Abacha's regime, the programme "War Against Indiscipline" continued. This made a great impact in arousing the

environmental awareness of the entire populace. Nevertheless, the Nigerian Conservation Foundation (NCF) had pressed government for the inclusion of environmental education in schools curricula as a most important step towards developing the public awareness on environmental issues.

Also Abiola (1987) discovered a low level of environmental awareness on a study carried out on environmental sanitation. This was identified on the needs of Abeokuta in their order of priority, where "environmental sanitation and protection" was ranked ninth out of ten factors. This was due to high level of illiteracy in the area. However, illiteracy cannot explain the low level of environmental awareness among many highly educated Nigerians. Therefore, Nigerians in all groups need to be sensitised to the environmental issues and problems, by fostering their awareness of these matters. Without public awareness at all levels of society, no national strategy for the environment can succeed.

### **Environmental Education**

UNICEF (1980) contended that education is only a component of a larger complex and the lack of education is usually linked with lack of other social amenities. Kepchella and Hyland (1993) defined environmental education as the education process dealing with human kind's relationship with the natural and human-made surroundings, and include the relation of population, pollution, resource allocation and depletion, conservation, technology, economic impact and urban and rural planning to the total human environment. Subsequent to this, UNEP (1993) opted that education is the key to changing long established patterns of social behaviour. It will indeed

combat the unsustainable patterns that are responsible for environmental degradation, population growth beyond the capacity of systems, and unplanned urbanization. This notwithstanding, UNICEF (1980) further said that education cannot be a standardised process. It has to satisfy a variety of needs. These need to be applied to the context of under-development in which so many Nigerians live. This need for change virtually presents a special challenge for education.

It follows therefore that the call for environmental education "is a call for global action in response to the problem of the abused environment, physical and social of the whole world". It should be aimed at producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems and aware of how to help solve these problems and motivate to work toward their solution (UNESCO, 1986). Furthermore, Harold and Willard (1964) observed that education is required to extend the benefits of modern sanitation to all the people as to why improvements are desirable and how they can be obtained. Moreso, they continued that environmental cleanliness is a way of life, the quality of living that is expressed in the clean home, clean business and industry, clean neighbourhood, clean community, which must come from within the people; that is nourished by knowledge and grows as an obligation and an ideal in human relation. Nwana (1981) stated that environmental concept and education efforts has the potential to bring about an enlightened citizenry that will become individually involved in the recognition of environmentally induced illness, disease prevention, and rational self-care. Harold and Willard also added that it is only through environmental education that an

individual really can come to grips with environmental problems in a noble self-fulfilling manner.

## **Women and Environment**

Women, especially those of the developing countries, are known to have assiduous relationship with their environment. This relationship is necessitated by the fact that women are usually in charge of food production, processing and storage as well as the provision of their utilities in the home (Anyakoha, 1990). According to Connect (1992), women are the caretakers of the future world environment, not only because women do so much of the farming, the wood collecting, and the water hauling in the developing world, but also because they are the bearers of the children, the tangible product of their labour and providing for them, is part of women. Graham (1993) also expressed the same view that physical environment provides the physical context in which relationships are built, and a place in which women experience what it is to be a mother and have responsibilities for the health of children. Furthermore, he recognised too that poor and poorly designed housing spell danger to an and brings with it hazards, which means that man must be constantly restrained and mothers must be constantly vigilant. Moreover, Reichart (1964), observed that in any community, the improvement of health condition is partly dependent upon and usually reflect the interest and efforts of its home-makers. He also stated that the health educated home-makers keep the health knowledge up to date and make appropriate application of it in their personal, family and community living.

Therefore, the women's relationship with the environment is virtually vital to their daily lives. These women not only bear the brunt of environmental degradation, but also play a crucial part in environmental management. Also UNICEF (1980) indicated that in the context of family care, women utilise a range of remedies which not only constitute vital home nursing techniques, but are more effective in providing for a persons complete well-being. This is why Environmental International (1979), stated that man explore, women harbour and maintain. Nevertheless, the women's roles in shaping the environment are reflected in their participation in agricultural and pastoral production, provision of food and water, meeting of energy needs and environmental sanitation. UNICEF added that women are invariable regarded as important members of their communities and are easily accessible and are generally respected and trusted by those they serve. However, the extent of the relationship between each woman and the environment is subject to certain factors. This is so because, according to Aina and Salau (1992), the Nigerian women are not homogeneous because of the enormous variety of socio-economic and cultural situations in which individual women may find herself. Aina and Salau declared "the women have a close link with the protection or destruction of environment in circumstances which are dictated by their position within the Nigerian culture". UNICEF (1980) also stated that women are the beauty of nature and that they inspire uncontrollable passions and could have the world at their feet if they so wished.

Moreover, NEST (1991) also examined the relationship between women and the environment at three levels namely: personal hygiene; the structure and maintenance

of the house in terms of its design, capacity, and general cleanliness; and the external habitat or the environment surrounding the house. To this effect, Amsyari (1980), identified that the amount and types of pollutants present in homes depend on the number of persons occupying the premises, kinds and duration of operation of appliances, methods of cooking and heating, types of chemicals present, ventilation, filtration devices used, penetrability of the structure, amount of outdoor air pollution and air movement, temperature, and humidity inside and outside the home and activities within the structure. Subsequent to these, NEST (1991) observed that at the personal and residential levels, women in Nigeria play significant roles in maintaining the quality of the environment. Also as the custodians of good house keeping, they see to the basic hygiene of the family, keeping the immediate surroundings clean. This involves among other things, bathing the children, clothing them, sweeping and cleaning the surroundings, seeing to the efficient disposal of wastes and cooking in hygienic surroundings. These notwithstanding, personal cleanliness represent another means of blocking some varieties of excreta related diseases to man. When some of these diseases tend to concentrate in particular families, it tends to emphasize the importance of domestic hygiene, especially with regard to cooking and eating utensils, and the kitchen area. Also Tolba (1985), pointed to the fact that the burden of environmental degradation had always fallen on women, particularly in the third world and called on women to press for "national and international action" that will bring about change for the better. Similarly, Sime (1988) stated that if women are carefully enforced, they will provide the order and beauty in their respective

environment and using them as target, will be a devise to apply the rules of good housekeeping to community development. He finally said that this would enable the entire community to "place each where it belongs and keep any from going where it would be unsuitable".

Based on the important relationship existing between home-makers and environment, and the need for the environment to be effectively managed for sustainable development, it becomes necessary that meaningful efforts should be made at enhancing home-makers awareness of their environment.

### **Women and Environmental Awareness and Education**

Awareness by individual women and all types of women organizations of environmental issues and the capacity of women to manage their environment and sustain productive resources should be enhanced. Connect (1989) emphasized this by saying that the environmental awareness for women is a basic functional education, which provides them with the elementary knowledge, skills and motives to cope with environmental needs and contribute to sustainable development. This however, affirms that women should be involved in stimulating environmental awareness and understanding through a variety of practical and academic projects of local, national and international levels, which aim at contributing to the awareness of sustainable development among the world's women, and to encourage them to take informed and constructive action in relevant areas. One of the sayings indicated that when you educate a woman, you educate a whole nation. UNICEF (1980) confirmed this, by claiming justifiably, that healthy women make healthy nations. They added



that education of women is very important due to the fact that nearly two out of every three illiterate people in the world are women. Illiteracy and lack of education among women are two of the major hindrances to socio-economic development (World Bank, 1993).

Moreso, Aina and Salau (1992) advised that environmental education for women with its associated problems is required among policy makers for better integration of environmental concerns into development planning and policy. Also UNEP (1993), observed that this sustainable development will not be achieved without women and that respect for the environment should be part of the basic attitudes of society, and particularly of all women. They also maintained that women are one of the first that must help move society on an environmentally sustainable path and do it quickly. UNEP goes on to state that moving society towards an environmentally sustainable path will not be easy because it means a paradigm shift in thinking values, and action of all individuals and institutions world-wide. This shift in our beliefs and patterns of thinking are essential to make the leap forward. UNEP therefore, affirms that one of the ways of promoting our environment among women should be through information dissemination, education, training on air pollution, water pollution, solid waste collection and disposal. To this effect, Leitman (1992) stressed on the importance of this. He stated that people die in the developing world of diarrhoea diseases largely as a result of poor sanitation, contaminated drinking water, and associated problems of food hygiene. He advised that, to effectively restore the environment from these

problems, women must understand the causes of these problems and help to improve environmental management.

Nevertheless, UNICEF/UNEP (1990) emphasised that sensitivity to the environment is not achieved solely through book learning, rather it also requires real life experiences. They further contended that effective environmental management will depend ultimately upon the widespread adoption of an environmental ethic code of conduct reflecting environmental education. Also, Connect (1980) suggested that in order to arrive at an environmentally informed, intelligent and effective citizenry, development of non-formal (out of school) environmental education is necessary along with formal environmental education. Connect indicated that non-formal environmental education are broadly classified as participatory or non-participatory. The latter are of such media messages as television or radio programmes, newspapers and other press articles, talks, etc. As for the mass media, Connect advised that women's environmental role should not be to alarm the public, but rather to alert and educate it with scientifically sound messages on air/water pollution, disposal of solid waste, food hygiene and sanitation.

Moreover, UNEP (1990) pointed out that effort to restore the environment is not a task that faces women alone, but it is a matter of concern for all people and all societies. UNEP believed that by providing information and support to external agencies and the general public, the drive to achieve environmental improvement is strengthened.

In summary therefore, it could be found that Nigerian women are naturally linked with the environment. In view of this, they have a central role to maintain the delicate balance between man and his natural resource base (land, water and air) in order to sustain the environment, especially the living environment. However, this aim is not achieved because individual and societal values have not always been in the best interest of preserving a high quality environment. Therefore, a change in the attitude of people is demanded so that initiative can be taken to rescue the environment from destruction. This can only be achieved by devising means of enhancing the environmental awareness of women. This is because, when a woman is put in the picture, they will not embrace an environmental perspective on tomorrow and next day, they will make the change now.

## CHAPTER THREE

### *METHODOLOGY*

This chapter described the procedures used in this study. It focused on the area of study, population, sample, instrument for data collection, instrument validation, reliability of instrument, administration of the instrument and data analysis.

#### **Area of the Study**

The study covered Enugu State of Nigeria. Enugu State is made up of twelve local government areas (LGAs). Three of the local government areas are urban, namely: Nsukka, Enugu North, and Enugu South. The remaining nine local government areas are in rural areas.

#### **Population of the Study**

The population for this study was made up of home-makers in Enugu State. It was assumed that a home-maker is any person who is responsible for the general upkeep and welfare of the home. Such home-makers influence the management of their immediate environment.

#### **Sample of the Study**

The two urban towns in the state were selected. They are Enugu and Nsukka. Five major streets were purposively selected from Enugu and three from Nsukka. This gave a total of eight streets. Twenty households were randomly selected from

each street. From each household, one home-maker was selected, giving a total of 160 home-makers and these constituted the sample for the study.

### **Development of Instrument for the Study**

The design of the study was a survey research, and the instrument for data collection was the questionnaire. The questionnaire also served as interview schedule for illiterate subjects. The questionnaire was divided into 'four parts'. Part I solicited information on the personal data of the respondents. It contained such variables as age, marital status, family size, educational status and type of house. Respondents were instructed to tick right (✓) where applicable.

Part II was designed to collect information on environmental awareness indicators. Part III collected information on elements of environmental education, while part IV sought information on the ways and means of extending the environmental awareness to home-makers. All the items in part II required the respondents to indicate their opinions on a 'three-point scale of Yes, No and Don't Know'. Part III and IV expected the respondents to indicate their opinions on a four point scale of levels of importance, having as their options: Very important, important, little important and not important.

### **Validation of the Instrument**

Two Home Economists and two environmental educators validated the instrument. They were requested to critically review the instrument. The instrument was reviewed based on their recommendation.

## **Reliability of the Instrument**

Reliability of the instrument was established by a test-retest reliability method. This procedure measured the degree of consistency, the instrument was over time. Copies of the questionnaire were administered on twenty home-makers drawn from a street in Nsukka bot being used for the study. After three weeks, the questionnaire were re-administered on the same respondents as a retest. Their responses were subjected to reliability analysis using the Pearson Product Moment Correlation Coefficient to determine the reliability Coefficient of the instrument.

## **Administration of the Instrument**

The questionnaire for the data collection was administered by the researcher by hand to among a hundred and sixty (160) home-makers in the area of study and collected after completion. This was to ensure high percentage of return. The items were verbally explained to the illiterate subjects and their responses were recorded. Out of the total number of questionnaire (160) distributed, one hundred and fifty-five (155), that is 96.9% were returned. The analysed data were based on 155 returned questionnaire.

## **Data Analysis**

The data for this study was analysed using percentages and means to answer the research questions. The hypothesis was tested using the Chi-square test of significance. In calculating means for the various items, the response categories in the questionnaire were scaled points as follows:-

Yes	=	3 points
No	=	2 points
Don't Know	=	1 point and

Very Important	=	4 points
Important	=	3 points
Little important	=	2 points
Not important	=	1 point

For the 3-point scale, any item with a mean response of 2.00 and above indicates awareness, while any item with a mean point below 2.00 will be regarded as not aware. Subsequently, in 4-point scale, any item with a mean response of 2.5 and above will be accepted as important, while any item with a mean point below 2.5 will be regarded not important.

With regard to the testing of hypothesis using Chi-square ( $X^2$ ), the null hypothesis  $H_0$  will be rejected if the  $X^2$  value obtained exceeds the critical value. Otherwise it will not be rejected.

## CHAPTER FOUR

### *DATA PRESENTATION AND ANALYSIS*

This chapter presents the analysis of the data collected it is organised according to the research questions of the study and the hypothesis.

**Research Question I:** To what extent are home-makers in Enugu State aware of their environment?

This question was answered by requesting the home-makers to indicate their awareness of :-

- (i) five components of their environment
- (ii) eleven items relating to environmental degradation
- (iii) five consequences of environmental degradation

Their responses are summarised in tables 1 to 3

**Table 1: Mean responses of the women on the Knowledge of the Components of environment**

S/N	Components of the physical environment	X	R
1.	The air we breathe	1.90	UA
2.	Water	1.86	UA
3.	Land and plants	2.05	A
4.	Houses/compound	2.12	A
5.	Bushes and open spaces around your houses/neighbourhood	2.10	A

X = Mean responses; R = remarks; A = Aware; UA = unaware.

Table 1 reveals that the respondents are aware that items number 3, 4, and 5; are components of the environment. Each of these obtained mean scores of 2.00 and above. The table also indicates that items number 1 and 2 have mean scores below 2.00 showing that the respondents were unaware that air and water are also



components of their environment. Based on these responses, the women are aware of 60% of the components of the environment.

**Table 2: Mean responses of the women on their awareness of causes of environmental degradation**

S/N	Causes of environmental degradation	X	R
1.	Scattering refuse	2.10	A
2.	Littering cans, papers, packages, etc.	2.17	A
3.	Polluting air with smoke from bush burning and fuelwood	1.6	UA
4.	Defecating around	1.71	UA
5.	Littering with animal dungs	1.65	UA
6.	Pouring dirty/used water indiscriminately	2.02	A
7.	Too many people living in a house (overcrowding)	2.12	A
8.	No refuse depot where people can dispose of their refuse	2.12	A
9.	Refuse depot too far	1.52	UA
10.	ESESA do not take any interest in keeping the area clean	1.8	UA
11.	Inadequate provision of sanitary facilities such as waste, and refuse disposal material by government	2.34	A

X = Mean responses; R = remarks; A = Aware; UA = unaware.

Table 2 shows that six out of eleven causes of environmental degradation obtained mean scores of 2.00 and above. Therefore, the respondents are aware that 6 out of the listed factors are the causes of environmental degradation.

Nevertheless, the respondents are unaware that the remaining 5 items are the causes of environmental degradation, all having the mean scores below 2.00. Therefore, they are aware of 54.5% of the items relating to the causes of environmental degradation, while unaware of 45.5% of the items.

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**Table 3: Mean responses of home-makers on their awareness of the consequences of unhealthy environment.**

S/N	Item	X	R
1.	Air when polluted causes illness, which may result in death	1.38	UA
2.	When drinking water is dirty and impure, it causes diseases	2.60	A
3.	Unkept environment breeds pests and parasite such as mosquitoes, bed-bugs, cockroaches.	2.16	A
4.	Ignorance of the need for a clean environment is a major cause of the dirtiness of the area where you reside	1.89	UA
5.	Bad methods of waste disposal can affect the health of individuals very much	1.74	UA

X = Mean responses; R = remarks; A = Aware; UA = unaware.

Table 3 shows that only items numbers 2 and 3 had mean scores above 2.00, while the other 3 items had mean scores of below 2.00. This shows that the home-makers are aware of only 40% of the items relating to consequences of unhealthy environment.

**The Five responses of home-makers on the reasons why it is very important to maintain a clean environment.**

The women were also requested to indicate (free responses), the reasons why it is very important for them to maintain a clean environment. Their responses are summarised as follows:

Clean environment is necessary in order to:

- i) maintain good health
- ii) avoid contact of diseases
- iii) maintain a pleasant odour
- iv) prevent home accident
- v) prevent growing of bushes around the house
- vi) be socially acceptable
- vii) show examples to children

viii) avoid dangerous animals in the house such as snakes.

The findings on the free responses are consistent with those in Tables 1 – 3. These findings show that home-makers are aware of the importance of maintaining clean environment.

### Hypothesis

The environmental awareness of home-makers are independent of their:-

- i) family size
- ii) educational status
- iii) type of house

In order to test this hypothesis, Chi-square ( $X^2$ ) test was employed with the aid of computer. Below are the results as computerised.

#### (i) Family Size

**Table 4: Cross-tabulation of Environmental awareness by family size.**

	Value	Less 4	Between 5 & 7	Above 8	Total
	No	23 37.03	34 53.13	5 8.27	62 40.45
Don't Know	6 68.05	6 46.4	1 1.81	13 7.63	
Yes	29 36.11	44 56.22	6 6.75	80 51.90	
Column Total	58 37.2	84 54.5	12 7.8	155 100	

Df = 4; P = 0.05; table  $X^2 = 9.488$ ; Cal  $X^2 = 4.851$ .

Table 4 indicates that the calculated chi-square value of 4.851 is less than the critical chi-square value of 9.488 at 4 degrees of freedom and at 0.05 significant level. Therefore, the null hypothesis relating to family size is accepted at this level of significance. This implies that the environmental awareness of home-makers is

Enugu State is significantly independent of their family size as measured by number of people in each household.

(ii) Educational Status

**Table 5: Cross-tabulation of Environmental awareness by Educational Status**

Environmental Awareness	Educational Status							
	Value	No formal Educ.	Pri. School	Sec. School	Diploma or NCE	HND or Degree	Higher Degree	Total
No	1 1.4	6 10.28	15 23.6	23 35.8	12 18.32	6 9.7	62 40.5	
Don't Know	0 0.0	2 13.47	5 39.10	4 30.5	2 11.2	1 4.8	13 8.2	
Yes	1 1.0	7 8.2	20 23.4	28 36.1	13 16.4	10 14.0	80 51.8	
<b>Column Total</b>	<b>2</b> <b>1.3</b>	<b>15</b> <b>9.7</b>	<b>39</b> <b>25.2</b>	<b>55</b> <b>35.5</b>	<b>27</b> <b>17.4</b>	<b>17</b> <b>11.0</b>	<b>155</b> <b>100</b>	

Df = 10; P = 0.05; Table  $X^2 = 18.307$ ; Cal  $X^2 = 10.934$ .

Table 5 shows that the calculated Chi-square value of 10.934 is less than the critical chi-square value of 18.307 at 10 degrees of freedom and at 0.05 significant level. Therefore, the null hypothesis relating educational status is accepted at this level of significance. This shows that the environmental awareness of home-makers in Enugu State is significantly independent of their educational status.

(iii) Type of House

**Table 6: Cross-tabulation of Environmental awareness by type of House**

	TYPE OF HOUSES					Row Total
	Values	Bungalow	Compound with Many tenants	Flat	Duplex	
Environmental Awareness	No	8 12.7	33 53.6	19 30.1	1 2.7	61 40.3
	Don't Know	1 12.7	9 68.4	2 15.5	1 3.2	13 8.2
	Yes	13 16.5	39 46.8	26 32.6	3 3.9	81 51.8
	Column Total	22 14.2	81 52.3	47 30.3	5 3.2	155 100

Df = 6; P = 0.05; table  $X^2 = 12.592$ ; Cal  $X^2 = 7.774$

Table 6 also indicates that the calculated chi-square ( $X^2$ ) value of 7.774 is less than the critical chi-square value of 12.592 at 6 degrees of freedom and at 0.05 significant level. Therefore, the null hypothesis relating to type of house is accepted.

This also implies that the environmental awareness of home-makers in Enugu State is significantly independent of their type of house.

**Research Question 2:** What are the environment education needs of home-makers in Enugu State?

In order to determine the environmental education (EE) needs of the women, they were requested to respond to 19 (EE) items, showing their perceived importance level of each item. Their responses are summarised in Table 7.

**Table 7: Mean responses of the women on the Environmental Education needs of home-makers in Enugu State**

S/N	Environmental Education needs of Home-makers	X	R
1.	Type of refuse	2.41	I
2.	Different method of disposing refuse	3.07	VI
3.	Guidelines for sorting refuse	2.36	I
4.	Types of dust bin	2.41	I
5.	Qualities of good refuse bin	2.45	I
6.	Proper utilisation of refuse dumps	2.97	VI
7.	Management of dust bin	2.98	VI
8.	Safety practices in the home	3.29	VI
9.	Good sanitary habits	3.34	VI
10.	Effective cleaning practices and operation of the living environment	3.28	VI
11.	Environmental pollutants and effects	3.06	VI
12.	Care and beautification of home surrounding	2.62	VI
13.	Care of baths and toilets	3.33	VI
14.	Household pest control	2.05	I
15.	Flower arrangement	2.2	I
16.	Water management	2.12	I
17.	Fuelwood management	2.12	I
18.	Safety in Agro-chemical utilisation	2.38	I
19.	Consumer Education	2.37	I

I = important; VI = Very important; X = mean responses

Table 7 shows the environmental education needs of the home-makers as perceived by the respondents. In order to determine the importance level of each EE item, the following scale was adopted for decision making:-

- (a) below 2.00 = not important;
- (b) 2.00 – 2.49 = important;
- (c) 2.50 and above = very important

Table 7 shows that ten out of the nineteen (EE) items were perceived as important by the respondents. The breakdown of the analysis shows that items numbers 2, 6, 7, 8, 9, 10, 11, 12, and 13; with mean ratings of 3.07, 2.97, 2.98, 3.29, 3.34, 3.28, 3.06, 2.62, and 3.33, respectively were perceived as very important environmental education needs by the respondents. The table further shows that item

number 9 (3.34) was perceived by the respondents as being the most important. This is closely followed item number 13 (care of baths and toilets) with mean score of 3.33.

**Research Question 3:** What delivery systems could be employed to extend environmental education to home-makers in Enugu State?

**Table 8: Mean responses of delivery systems of environmental education by home-makers in Enugu State**

S/N Delivery Systems	X	R
1. TV/Radio	3.45	VI
2. Visits of health officials	2.80	VI
3. Magazines and newspapers	2.37	I
4. Health centres/anti-natal clinics	3.04	VI
5. Christian literature	2.35	I
6. Church organisation	2.66	VI
7. Adult literacy classes	2.67	VI
8. Seminar and open talks	2.79	VI
9. Co-operative societies	2.36	I
10. Illustrated posters, pamphlets	2.34	I
11. Village heads meeting	2.51	I
12. Use of home economics extension workers	2.47	I
13. Household demonstration magazine	2.33	I
14. Market place announcement	2.61	VI
15. Video/film shows	2.19	I
16. Women's workshops	2.67	VI
17. School children	3.00	VI
18. Women's meeting/self help group	2.88	VI
19. Public enlightenment	2.79	VI

I = important; VI = Very important; R = remarks; X = mean responses

Table 8 shows the data on the delivery systems that could be employed to extend environmental education to home-makers in Enugu State. The table reveals that eleven (11) out of 19 delivery systems are very important while 8 are perceived as important delivery systems by the respondents.

The Table also shows that the most important delivery system to enhance environmental awareness of home-makers is TV/Radio, with a mean of 3.45.



However, this particular delivery system may not be available to most of the home-makers in the rural area because of infrastructure and financial constraints. Item number 4 is followed by information dissemination through health centres and/or antenatal clinics. The third most important delivery system for environmental education is women's meeting or self-help groups (2.88). This should be so because women often belong to these groups, and any information channelled through the groups will get to many women.

The table also shows that video/film shows more perceived as not being very important. This is closely followed by household demonstration magazines and illustrated posters, pamphlets; with mean scores of 2.19 and 2.33, respectively. These findings might be an indication that the respondents are not familiar with these delivery systems.

## DISCUSSION OF FINDINGS

### Findings

The following findings were made:

1. Home-makers in Enugu State are aware of 51.5% of the 21 items of environmental awareness. The items relate to:-
  - (a) 60% of the components of environment;
  - (b) 54.5% of the items relating to causes of environmental degradation;
  - (c) 40% of consequences of environmental degradation
2. The environmental awareness of home-makers in Enugu State are significantly independent of their educational status as well as their family size and type of house.

3. Nineteen important environmental education concepts needed by home-makers in Enugu State. These include:-

- i. good sanitary habits
- ii. care of baths and toilets
- iii. safety practices in the home
- iv. effective cleaning practices and operation of living environment
- v. different methods of disposing refuse
- vi. environmental pollutants and effect
- vii. management of dust bin
- viii. proper utilisation of refuse dumps
- ix. care and beautification of home surroundings
- x. qualities of good refuse bin
- xi. types of dust bin
- xii. types of refuse
- xiii. safety in Agro-chemical utilisation
- xiv. guidelines for sorting refuse
- xv. flower arrangement
- xvi. water management
- xvii. fuelwood management
- xviii. household pest control

4. Also nineteen important delivery systems through which environmental education can be extended to home-makers in Enugu State include:-

- i. TV/Radio
- ii. Health centres/antenatal clinics
- iii. School children
- iv. Visits of health officials
- v. Women's meeting/self-help groups
- vi. Women's workshops
- vii. Adult literacy classes

- viii. Public enlightenment
- ix. Market place announcement
- x. Seminar and open talks
- xi. Church organisation
- xii. Use of home economics extension workers
- xiii. Village heads meeting
- xiv. Illustrated posters/pamphlets
- xv. Co-operative societies
- xvi. Christian literature
- xvii. Magazines and newspaper
- xviii. Household demonstration magazines
- xix. Video/film shows

## Discussion

The findings of this study have been organised and discussed in line with the three research questions and one hypothesis.

Research question 1 deals with the extent the home-makers in Enugu State are aware of their environment. The findings of this study, in respect of this research question, revealed that home-makers in Enugu State were aware of 60% of the components of the environment. 54.5% of the items relating to the causes of environmental degradation and 40% of the items, relating to the consequences of environmental degradation, as indicated in tables 1 to 3. These findings on the awareness of components of the environment, as indicated in table 1, agree with the view of Aina and Salau (1992), cited in the literature reviewed, who posited that women in Nigeria in particular are involved in environmental issues because they unconsciously have close link with the environment. This is considered natural. In the

same vein, Campton (1972) and Arnold (1978) attributed the causes of environmental degradation to by-product of house-keeping activities and consumption that include smoke, leaves and empty cans or containers, paper and stated that some of these waste may be toxic, inflammable or non-biodegradable, while others are more of a nuisance than a danger to man. Also NEST (1992) observed that arrangements for the disposal of these wastes are ineffective. All these views go to validate the findings of this study as indicated in table 2. In view of this, NEST (1991) emphasised that the more sound the understanding of the environment is, especially among women, the more effective it can be put into practice. This is because of close relationship between the environment and human activities. Human activities affect the environment in either negative or positive way, depending on the knowledge of the environment. Therefore, there is need for a proper understanding of the components of the environment and how they inter-relate so as to restore the overall balance of nature.

Environmental education must be extended to the grassroots especially among women. It should be understood that women are responsible for transmitting knowledge from one generation to another as well as from one family to another. Therefore, there is every need to enhance the strategies adopted by women towards environmental improvement. This is because, women according to Fourth World Conference in Women, Beijing (1995) provide sustenance to their families and communities and being the caretaker of their families and educator, they also play an important role in promoting sustainability of life for present and future generations.

Moreover, Journal of Home Economics (1975) has the same regards to women, which says that they are home managers, the culture carrier, the social conscience and the custodian of value. Therefore, the effort to make these women have full awareness of their environment is a basic part of the struggle for a better and more just world order.

On the issue of awareness of the consequences of environmental degradation, the findings on this, as indicated in table 3 are confirmed by Salvato (1992), Pojasek (1977), WBDP (1993) and Leitman (1992), who pointed out that people die in developing world from diseases as a result of poor sanitation, contaminated drinking water, associated problems of food hygiene. Finally, Amysari (1980), Sime (1988), and NEST (1991) observed that at the personal and residential levels, home-makers should maintain the quality of environment. They should also see to the basic hygiene of the family and keeping the immediate surroundings clean. Their observations are in unison with the findings of this study as shown in the free responses of home-makers. In as much as this may be so, there is yet inadequate behavioural focus or special emphasis on environmental behaviour among women. It could also be that the respondents lack behavioural understanding that would help to protect and improve their dwelling environment. This is in consonance with the report of UNEP (1978), who pointed out that the environmental agency is still without the basic tools to cope with the enormous variety of perceptions, attitude and mindsets that are barriers to sound environmental health practices. In order to achieve this, there should be a search for new ways of improving the balance between man and his

environment. We cannot therefore, talk of improving the environment without reference to environmental sanitation and the behavioural patterns of the dwellers. Reichart (1964) affirms that in any community, the improvement of health condition is partly dependent upon environment and usually reflects the interest and efforts of its home-makers. Home-makers when enlightened on environmental education will make appropriate use of such education in their personal, family and community living to enhance environmental well-being. Though home-makers are aware of their environment, the lack the knowledge of using appropriate strategies to enhance and sustain the environment so that they aim towards a healthy environment will be achieved. Nevertheless, the solution of Nigerian environmental problems must not and cannot be left to the government alone. In effect, home-makers must be achieved because, they are one of the first that must help move society on an environmentally, sustainable paths and do it quickly because of their role in the families (UNEP, 1993). They need to be acquainted with the knowledge and facts of what makes up the environment, its content and environmental activities so that they would be able to take proper care of the environment. This is necessary because they are those who are very close to the environment. They care for their children, for food, water and in fact for the entire sanitary aspects of the living environment. There is no doubt therefore, that understanding of environment would make them adopt proper management strategies that would help them to curtail those activities that result in environmental degradation and health hazard. Moreso, the knowledge of environment will spur them to actively participate in environmental issues (ARFH, 1997).

Subsequent to this, is the findings of data analysed in tables 4 to 6 which indicated that the environmental awareness of home-makers in Enugu State were significantly independent of their educational status as well as their family size and types of house. This reveals that the awareness of the environment does not really depend on one's educational status, family size and the type of house in which one lives rather on the extent of acquaintance with the environment. This is why it is necessary to find out core environmental needs and devise some strategies of delivery those environmental messages that will enhance the management of the environment.

In view of the above, research questions II came up with the environmental education needs of home-makers in Enugu State. The findings in respect to this research question revealed nineteen (19) important environmental education concepts needed by home-makers. These include:

- good sanitary habits;
- different method of disposing refuse;
- safety practices in the home;
- environmental pollutants and effects;
- care of baths and toilets;
- care and beautification of home surroundings;
- management of dust bin and some others.

These findings as also shown in table 7, agree with the view of UNEP (1993) and Harold and Willard (1964) who posited that education is required to extend the benefits of modern sanitation to all the people as to why improvement are desirable and how they can be obtained. In addition to this, they observed that it is only through environmental education that an individual can really come to grips with

environmental problems in a noble self-fulfilling manner. In the same vein, Blumenthal, D.S. and Ruttenber, A.J. (1994) pointed out that proper hygiene, including hand-washing, proper design of waste disposal, etc., are examples of effective protective measures to environmental degradation, which would help bring man and nature into harmony. Specifically, it is pertinent to note that some of the findings as indicated in table 7, received the least mean responses though important. These include:- management of fuelwood; household pest control; flower arrangement; safety in Agro-chemical utilisation. This does not mean that educating home-makers on these topics would not make much impact in their relationship with the environment, neither would they be ignored. It is just that home-makers are not much aware that some of these concepts have the potentials to cause environmental degradation if not properly handled. This view goes to validate the opinion of Breecher, M.M. and Linde, S. (1992) who opined that air pollutants, pesticides, fuels, solvent, fumes, have been a boom to humanity and that some of these have carried diseases that have led to deadly epidemics. This also goes to confirm the fact that recurrent environmental problems in Nigeria such as air pollution, illegal and indiscriminate dumping of waste, deteriorating urban sanitation, etc., have grave repercussions on family well being. In view of this, protection and conservation of the environment must be given a top priority. This can only be achieved if knowledge about the environment, about how to save it is understood. On this issue, Lawal and Mohammed (1991) declared that it is through proper education, that one can learn about the environment and its problems, and develop proper attitudes and



responsible behaviour towards the natural environment. It is proper to expose home-makers to the various stages involved in the identification and solution of environmental problems. This will help them to consider the environment in their everyday activities. Lawal and Mohammed further said that environmental education helps the individual, and the community to gain better awareness of their environment and thereby acquire the knowledge, values, skills and experiences that will spur them to act individually and collectively to solve the present and future environmental problems. This is because, the causes of environmental crisis rest in the behavioural patterns and value systems of man. Therefore, the only way to influence this is through education. Smith (1996) supported this by emphasising that good educational programme is a key element in ensuring that wide-spread public support is available for hazard mitigation as well as facilitating the transfer of disaster experiences from one community to another. It is thus clear that we must go beyond mere awareness to the institution of instruments and educational programmes that would ensure that environmental deterioration can be arrested and the stability of the environment ensured.

Thus, it becomes necessary to devise means of extending environmental education to home-makers. The findings of this study in respect to research question '3' which dealt with the delivery system that could be employed to extend environmental education to home-makers revealed nineteen (19) delivery systems such as:

TV/Radio;  
through health centres/antenatal clinics;

through school children;  
visits of health officials;  
church organisation;  
adult literacy classes;  
seminar and open talks;  
market place announcement;  
women's workshops;  
women's meeting/self help group;  
public enlightenment;  
use of home economics extension workers;  
village heads meeting, and so forth.

All those and others not mentioned were perceived as being important delivery systems by home-makers as shown in table 8. This indicates that any information channelled through such delivery systems will effectively get to them. In view of this, Smith (1996) confirmed the findings of this study by pointing out that environmental education could be delivered through the use of brochures, videos and more formal seminars, workshops and training exercises aimed at improving disaster responses. He also recommends preparedness programmes aimed at changing human behaviour through the installation of forecasting and warning schemes and through longer term planning to encourage more appropriate use of environment. Though environmental education is going on at all times in many settings, its content, method and emphasis are not equal to the challenges it faces. Novick (1976) suggested that since effective environmental management will depend upon a well informed public, environmental education becomes the lynch-pin of orderly and sound development. Therefore, in view of the need to enhance the environmental awareness of home-

makers, as the custodians of values and as agent of change, it becomes highly important for them to ensure that they seize any available opportunity to drive home as many environmental education core messages as possible. This will reduce the multiplicity of the environmental problems. To achieve this, Novick pointed out that home-makers should be involved at various levels, through organising and or co-sponsoring seminars, workshops, lectures, short course and other appropriate means of information dissemination. This, therefore, is in consonance with some of the delivery systems responded positively to by home-makers.

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## CHAPTER FIVE

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

This chapter deals with the re-statement of the problem, summary of the study, the implications of the findings, conclusion, recommendations and suggestions for further study.

#### **Re-Statement of the Problem**

All Nigerians need to be sensitised to environmental issues and problems by fostering their awareness on this regard. This is because of the crucial relationship between environment and human activities. Women have been identified as the group of people that need this environmental awareness most, because of their crucial link with the environment. Low environmental awareness has been observed among Nigerian women. Since the women have close link with their environment, it is necessary to seek ways of enhancing their environmental awareness. Hence this study focussed on the strategies necessary to enhance the environmental awareness of women.

#### **Procedures used for the Study**

The population for the study was made up of all female home-makers in Enugu State, who are responsible for carrying out domestic tasks in the home. Simple random sampling was employed in selection of the sample. The sample comprised of 160 home-makers drawn from the two urban towns in the state, Nsukka and Enugu. Five major streets were randomly selected from Enugu and three from Nsukka.

Twenty household were also randomly selected from each street. From each household, one home-maker was selected.

The instrument used for data collection was questionnaire, which was validated by four experts – two Home Economists and two Environmental educators. Reliability of the instrument was determined through test-retest method. A hundred and sixty (160) copies of questionnaire were distributed and one hundred and fifty-five were correctly filled and returned, this represents 96.9% return. The data collected were analysed using mean scores, while Chi-square ( $X^2$ ) was used to test the null hypothesis.

### Principal Findings

1. Home-makers in Enugu State are aware of :-
  - (a) 60% of the items relating to the components of the environment,
  - (b) 54.5% of the items relating to causes of environmental degradation,
  - (c) 40% of items relating to consequences of environmental degradation.
2. The environmental awareness of home-makers in Enugu State are significantly independent of their educational status, as well as their family size and type of house.
3. Nineteen important environmental education concepts needed by home-makers in Enugu State. These include:-
  - i good sanitary habits
  - ii care of baths and toilets
  - iii safety practices in the home
  - iv effective cleaning practices and operation of living environment
  - v different methods of disposing refuse

- vi environmental pollutants and effect
- vii management of dust bin
- viii proper utilisation of refuse dumps
- ix care and beautification of home surroundings
- x qualities of good refuse bin
- xi types of dust bin
- xii types of refuse
- xiii safety in Agro-chemical utilisation
- xiv guidelines for sorting refuse
- xv flower arrangement
- xvi water management
- xvii fuelwood management
- xviii household pest control
- xix consumer education

4 Also nineteen important delivery systems through which environmental education can be extended to home-makers in Enugu State include:-

- i TV/Radio
- ii Health centres/antenatal clinics
- iii School children
- iv Visits of health officials
- v Women's meeting/self-help groups
- vi Women's workshops
- vii Adult literacy classes
- viii Public enlightenment
- ix Market place announcement
- x Seminar and open talks
- xi Church organisation
- xii Use of home economics extension workers
- xiii Village heads meeting

- xiv Illustrated posters/pamphlets
- xv Co-operative societies
- xvi Christian literature
- xvii Magazines and newspaper
- xviii Household demonstration magazines
- xix Video/film shows

## **Implications of the Findings**

The findings of this study have far reaching implications for the environmental educators, health officials, Home Economists and extension workers. These groups will no doubt benefit from this study in planing of environmental education for women towards maintaining a healthy environment.

Another implication is to the Home Economists teachers at various levels of education, who should make use of the findings of this study to expose their students to all the environmental education identified in the study. This will help enhance their awareness on environmental management. By so doing, each family will enjoy good health, safety and comfort.

The findings of this study also have implication for various bodies and agencies that are concerned with the environment, such as, Federal Environmental Protection Agency and other environmental agencies at both Federal and state levels. The study will enable them bring home the message of the need for a healthy environment to all the women because of their assiduous relationship with the environment. This could be done in collaboration with the mass media so that meaningful messages be

delivered. The Environmental Sanitation Agency should also do more of supervisory work to instil into women good sanitary habits.

In fact, it is only the complementarity of rôles among all the organs concerned that would provide co-ordinated effort that is the hallmark of effectively organised endeavour. Therefore, the Environmental Agencies, Educational Agencies, the Media, Home Economists, their extension workers, resources procuring units, policy makers, programme supervisors and the entire populace will perform their work properly in their effort towards maintaining a healthy and sustainable environment if the findings of this study is adopted.

## CONCLUSION

From the findings of the study, it was concluded that home-makers in Enugu State are aware of their environment to some extent, as identified in tables 1 to 3. They are aware of 60% of environment as it relates to the components of the environment; 54.5% relating to the causes of environmental degradation; and 40% of the items relating to the consequences of environmental degradation. This indicated that there is still need to provide environmental education for the home-makers to help them combat the misuse of the environment. In view of this, nineteen (19) important environmental concepts needed by home-makers were identified and to enhance their environmental awareness, nineteen (19) delivery systems were also found to be necessary in extending these environmental education concepts to home-makers. This is necessary because lack of proper understanding of the environment has adversely affected the environment thus causing environmental mismanagement.



Women, because of their link with the environment needed to be given adequate attention and focus so as to make sure they understand the plight of environmental degradation. If acceptable quality of life is inculcated in the minds of women and the populace in general, life expectancy will be increased.

## RECOMMENDATIONS

A close study of the findings of this study revealed that 60% of the home-makers were aware of the items of the components of environment, 54.5% the causes of the environmental degradation, and 40%, the items relating to the consequences of the environmental degradation. It then follows that about 40% were unaware of these items that make up their environment, 45.5% not aware of the causes of the environmental degradation, and this is significantly independent of their educational status, family size and the types of their houses. Therefore, the first recommendation goes to the house makers, because they are closely linked with the environment and their adequate or lack of environmental awareness will have either positive or negative effects on their respective families in particular, the society and the entire nation generally. Based on these findings, the local government, state and federal Environmental Agencies should make joint efforts to ensure that proper strategies are adopted to enhance the environmental awareness of home-makers through well tailored workshops, seminars, house to house visits, television and other electronic media.

The findings of this study are also recommended to the Family Support programme (FSP), whose cardinal objective is to uplift the welfare of the family. It is

pertinent to know that a healthy environment is the chief cornerstone to wealth. Since the Family Support programme focuses its attention on women who are invariably the home-keepers, it should incorporate the findings of this study in its programme of activities. They should also educate the women on the items that make up environment, the causes and consequences of environmental degradation as well as the strategies for maintaining and sustaining clean and healthy environment.

The Local Government Health Care Delivery Units, the state and Federal Ministry of Health should also make use of the findings of this study, especially during their immunisation programme. Since immunisation of pregnant women and children revolve around women who are linked with the environment, the health officials in charge of immunisation should be made to know the findings of this study, so that during the immunisation days, the women should be made to be aware of all the items that make up the environment, the causes and consequences of environmental degradation to their respective families.

This study is also recommended to the government particularly the local government, to restore the posts of sanitary inspectors, who should use and apply the findings of this study effectively. It should be recalled that one of the tasks of former sanitary inspector was weekly inspection of residential houses and their surroundings. They should therefore, be restored and pay their weekly inspection visits to various homes. They will use the findings of this study to educate home-makers and thus enhance their environmental awareness.

The curriculum planners and Home Economists are also recommended to make use of these findings in ensuring that they include in the educational curriculum, Environmental Study, which will enhance the awareness of environment to their clients. This is very vital since most of their clients are either home-keepers or will be future home-makers.

The policy makers, beside emphasising on monthly clean-up every last Saturday in the month, should also set aside a day in the month to educate the people, particularly the home-makers on the findings of this study, and thus enhance their environmental awareness. This will subsequently ginger them to take the monthly clean-up exercise very serious since they are now aware of the causes and consequences of environmental degradation.

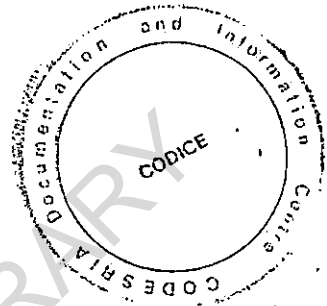
The findings are also, particularly recommended to Enugu State Environmental Agencies and all other Environmental Agencies at State and Federal levels, on the need for the identification of suitable sites and construction of landfills and educating the home-maker on the need to provide dust-bins in their respective homes and to dispose them to designated evacuation centres as well as making sure that trucks are provided to evacuate these heaps of refuse.

### **Suggestions for Further Research**

The following suggestions are made for further research:

1. An appraisal of the implementation of the activities of different agencies that deal with environmental issues in Anambra State.

2. Factors that affect effective delivery of environmental education to various groups of Nigerians.
3. Determination of environmental awareness of home-makers in other states of Nigeria.



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APPENDIX A  
**QUESTIONNAIRE**

UNIVERSITY OF NIGERIA, NSUKKA

DEPARTMENT OF VOCATIONAL TEACHER EDUCATION HOME  
ECONOMICS

Questionnaire on Strategies for Enhancing the environmental awareness of  
Home-Makers in Enugu State

The questionnaire aims at finding out means of enhancing the environmental awareness of home-makers in Enugu State.

**INSTRUCTION**

You requested to please study the items carefully and respond appropriately by placing a tick (✓) at the appropriate space or by filling in the answers.

Any information you offer shall be treated in strict confidence.

(Signed)  
Project Supervisor

Esiobu, O.M.  
Researcher

Part I

**Personal Data:**

Instruction:

Please tick (✓) the appropriate answer.

1. Age:

- |     |                |                          |
|-----|----------------|--------------------------|
| (a) | 20 – 30 years  | <input type="checkbox"/> |
| (b) | 31 – 40 years  | <input type="checkbox"/> |
| (c) | above 41 years | <input type="checkbox"/> |

2. Marital Status:
- (a) Married
  - (b) Single
3. Family Size:
- (a) Less than four
  - (b) Between 5 and 7
  - (c) Above 8
4. Highest Education Status:
- (a) No formal education
  - (b) Primary school
  - (c) Secondary school
  - (d) Diploma/NCE
  - (e) HND/Degree
  - (f) Higher Degree
5. Occupation:
- (a) Civil Servant
  - (b) Business/ trading
  - (c) Student
  - (d) Unemployed
  - (e) Farming
6. Type of House:
- (a) Bungalow without other tenants
  - (b) Compound with many tenants
  - (c) Flat
  - (d) Duplex
  - (e) Batcha/thatched house
7. Income per Month:
- (a) =N=1,000 – 3,000
  - (b) =N=4,000 – 6,000
  - (c) Above =N=6,000
8. Type of Kitchen
- (a) General Kitchen
  - (b) Private Kitchen
  - (c) Open Yard

## Part II

**Instruction:** Please respond item by ticking (✓) on the appropriate places.

**Extent of Awareness:**

	Yes	No	Don't Know
<p><b>1. Yours environment is made up of:-</b></p> <p>(a) Air you breathe in</p> <p>(b) Water</p> <p>(c) Land and Plant</p> <p>(d) Your house(s), compound</p> <p>(e) Bushes and open spaces around your house</p>			
<p><b>2. People degrade their environment by:</b></p> <p>(a) Scattering refuse</p> <p>(b) Littering cans, packages, papers, peels of fruits around their compound</p> <p>(c) Polluting the air with smoke from bush burning and fuelwood</p> <p>(d) Defecating around</p> <p>(e) Littering with animal dung</p> <p>(f) Pouring dirty/used water indiscriminately</p> <p>(g) Too many people living in a house (overcrowding)</p> <p>(h) Having no refuse depot where people can dispose of their refuse</p> <p>(i) Refuse depot too far</p> <p>(j) ESESA do not take any interest in keeping the area clean</p> <p>(k) Inadequate provision of sanitary facilities such as waste, and refuse disposal material by government</p>			
<p><b>3. Awareness of the consequences of unhealthy Environment</b></p> <p>(a) Air when polluted causes illness which result to death</p> <p>(b) When drinking water is dirty and impure, it causes diseases</p> <p>(c) Unkept environment breeds pests and parasites such as mosquitoes, bed-bugs, cockroaches, etc.</p> <p>(d) Ignorance of the need for a clean environment is a major cause of the dirtiness of the area where your reside</p> <p>(e) Bad methods of waste disposal can affect the health of individuals very much</p>			

4. **Free Responses: -**

Give Five (5) reasons why it is very important to maintain a clean environment.

- i. ....
- ii. ....
- iii. ....
- iv. ....
- v. ....

Part III

Environmental education Needs:

Which of the following environmental education topics do you consider important for the home-makers?

	Very Important	Important	Little Important	Not Important
1. Type of refuse				
2. Different method of disposing refuse				
3. Guidelines for sorting refuse				
4. Types of dust bin				
5. Qualities of good refuse bin				
6. Proper utilisation of refuse dumps				
7. Management of dust bin				
8. Safety practices in the home				
9. Good sanitary habits				
10. Effective cleaning practices and operation of the living environment				
11. Environmental pollutants and effects				
12. Care and beautification of home surroundings				
13. Care of baths and toilets				
14. Household pest control				
15. Flower arrangement				
16. Water management				
17. Fuelwood management				
18. Safety in Agro-chemical utilisation				
19. Consumer Education				

Part IV

**Delivery Systems:**

Which of the following media do you consider important means of extending environmental education/awareness to all the home-makers in Enugu State?

		Very Important	Important	Little Important	Not Important
1	TV/Radio				
2	Visits of health officials				
3	Magazines and newspapers				
4	Health centres/antenatal clinics				
5	Christian literature				
6	Church Organisation				
7	Adult Literacy Classes				
8	Seminar and open talks				
9	Co-operative societies				
10	Illustrated posters, pamphlet				
11	Village heads meeting				
12	Use of Home Economics extension workers				
13	Household demonstration magazines				
14	Market place announcement				
15	Video/film shows				
16	Women's workshops				
17	School children				
18	Women's meeting/self help group				
19	Public enlightenment				