

GLOBAL WARMING AND FAMILY LIVING IN VICTORIA, ISLAND, LAGOS STATE NIGERIA

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ABSTRACT: *The study focused on the influence of global warming on family living in Victoria Island in Eti-OSA Local Government Area of Lagos State. Specifically, the study was designed to find out the influence of global warming on food insecurity, family health and ways of reducing global warming in Victoria Island. The design of the study was descriptive survey. The sample size for the study was three hundred and ninety nine (399) households using random sampling techniques. The instrument used for data collection was questionnaire and was validated. Reliability of the instrument was 0.75 established using Cronbach Alpha Coefficient. The research questions were answered on individual item basis using frequency and mean. The findings of the study revealed that global warming leads to hunger, increases poverty, reduces food supply. It was also found that there is increase in malaria due to increase in spread of mosquitoes, heat rashes among others. Based on the findings of the study it was recommended that educating people especially the younger generation about global warming through media, educational institutions and discouraging cutting of trees and encouraging large-scale tree planting because trees absorb carbon dioxide among others.*

KEYWORDS: Global, Warming, Family, Living, Food, Insecurity

INTRODUCTION

Global warming is about adverse climate change caused by the trapping of green house gases (like carbon dioxide) in the earth's atmosphere that affects biodiversity and poses a serious health problem (<http://www.net>. 2010). Anyakoha (2011) noted that global warming is simply the increase in the temperature of the earth's atmosphere caused when certain gases such as carbon dioxide, trap the sun's heat. Global warming is currently causing havoc and disruption on the earth's weather and climate. Emissions resulting from human activities substantially increase the atmospheric concentrations of some greenhouse gases such as carbon (IV) oxide, water vapour, methane, nitrous oxide, and chlorofluorocarbons. Such human activities include burning of fossil fuel, wood, and deforestation (Anyakoha, 2011). An increase in global temperature causes sea level to rise and changes the amount and pattern of precipitation or rainfall and expansion of subtropical deserts, retreat of glaciers among others. Also, Anyakoha noted that it could cause changes in the frequency and intensity of extreme weather events, and changes in agricultural yields. These events are already being observed around the world including Nigeria he stated.

LITERATURE/THEORETICAL UNDERPINNING

Global warming and human activities has adversely affected the earth's weather and climate. These have given rise to floods, harsh weather conditions and increased concentration of

atmospheric gases Greenhouse effect is the trapping of the sun's radiation and heat in the lower atmosphere of the earth or any planet caused by an increase in carbon dioxide which is more transparent to solar radiation than to the reflected radiation from the earth (Anyakoha, 2011). It is the process by which absorption and emission of infra-red radiation of the sun by such gases as carbon dioxide in the atmosphere, warm the earth's lower atmosphere and surface. Roach and Markham (2006) maintained that greenhouse effect is similar to the heat that gets trapped in a house that is populated. For instance a family that has a large number of children in the house tends to emit too much carbon (IV) oxide in the atmosphere thereby resulting to global warming.

In a hot afternoon a car parked outside will get hotter as it stays out in the parking lots, the rise in temperatures is as a result of heat and light coming from the sun which get into the car and cannot escape from it. The problem of the greenhouse effect has led to increase in the earth's average temperature which in turn leads to increased melting of polar ice caps, this result to increase in sea levels causing catastrophic flooding of the coastal areas like Victoria Island. Flooding affects food production leading to food insecurity there by affecting food production and consumption of the family (Igba, 2009).

Food security therefore involves a protection against food crisis or shortage for the purpose of preserving life. Igba (2008) noted that inadequate food supply is one of the main causes of insecurity that results to poverty. Poverty is a social condition characterized by the inability to attain minimum standard of life. There has been a tremendous increase in the price of food over the years and deterioration in the living condition of many Nigerian families. The consequence is that the income of most families is no longer adequate for basic life sustenance (Igba, 2009). Food security is one of the most serious challenges of the Nigerian family.

Food security means accessibility of people to food at all times. It can also be seen in terms of relationship between the total numbers of people as against food available at a particular period of time. It is states of affairs where all people at all time have access to adequate food supply. Food security can be permanent or transitory (World Bank in Igba 2003). Food security is the availability of food and one's access to it (Wandiga, 2011). Igba (2009) noted that food security exist in any given environment, when all people at all times, have physical and economic access to sufficient, safe and nutritious, food to meet their dietary needs and food preference for an active and healthy life as observed by FAO (1996).

In another vein, food insecurity occurs when majority of people do not have access to food that is adequate in quantity and quality consistent with decent existence at all times. Food insecurity has adverse effects on individuals and the nation as it slows down a nation's developmental plans and affects family security (Molokwu & Kembe, 2012). They stated that in Nigeria, the quantity and quality of food produced is low. They also noted that, traditional diets in Nigeria are based on cereals and root crops, with significant amount of legumes, fruits and vegetables. Often, fish, poultry, meat and dairy products provide only a small proportion of the total energy. Food shortage or insecurity leads to chronic hunger, malnutrition and stunted growth. Malnutrition is common where there is inadequate supply of the right type of food nutrients in the correct proportion, which has been known to be the cause of high morbidity and mortality rates especially among infants and children below the age of 5 years (Academy of Science, 2011). Some of the causes of food insecurity as identified by Wandiga, (2011): include the following;

- The global water crisis with evidence showing that water table in both small and large countries is declining. The heavy dependence on rain-fed agriculture resulted in high fluctuations in annual production. Also the vagaries of weather are another contributory factor to unstable food production and irregular market supplies leading to food insecurity.
- Land degradation through, intensive farming leads to exhaustion of soil fertility and elective of the crop yield-approximately 40% of the world's agricultural land is seriously degraded.
- Climate change-as a result of the melting of glaciers on top of high mountains will reduce the flow of water for agriculture to the low lands, especially during the dry seasons.
- Introduction of new crop diseases that eventually have a huge effect on the yield.
- Land deals whereby rich governments and corporations buy up the rights to millions of hectares of agricultural land in developing countries in an effort to secure their own long producing food for the rich.
- New pests' population pattern resulting from climate change.
- Dictatorship- there is need for a governance system to ensure that the productivity of its populace is realized. A dictatorial system puts the price of grain and other food items at an artificial low price so that the poor cannot be attracted to farming. Therefore high input costs, low output prices dissuade farmers from maximizing the land and producing the needed food.
- Igba (2003) also noted that:
 - Nigeria agriculture depends on unskilled farm labour, the hoe, machetes; low yielding seed varieties and little farm inputs. Heavy post-harvest losses in storage and transportation cost also reduce available and marketable super loses, which result in high prices.
 - Political instability has also played an important role in the problem of food insecurity in the country. The high rate of turnover of ministries and commissioners in the Ministry of Agriculture has resulted in a high rate of turnover in the political leadership in the ministry. Consequently it has not been possible for the country to build a state institution capacity or programme for national food security.
 - The problem of fertilizer procurement and distribution is also a serious problem. It has not been possible to give up the marketing and distribution of fertilizer to farmers. The result is perennial fertilizer marketing distribution inefficiencies, which institute a major drain of Nigeria food security.
 - High population that does not march food production is another reason for food insecurity in Nigeria.

In many families, food insecurity can be very stressful, parents especially; can be anxious about having enough food for their children so that they can grow up strong and healthy. Some families can become preoccupied with food, worrying about whether there is enough food for the next day, this kind of stress can be bad for our health, stress and insecurity can lead to depression, anger, diabetes and high blood pressure. It can also make it hard for people to fight off infection like cold and flu. Poor nutrition in childhood can affect the development of both the body and mind.

During global warming there are diseases that are likely to spread more rapidly (Zell, Krumbholz & Wutzler, 2008). Diseases are carried by certain insects or vectors. They can survive mostly, in warmer climates and are inhibited by very cold weather. They are more likely to flourish in a warmer world. Some of the diseases gotten through global warming especially in Africa are malaria, yellow fever, skin cancer, meningitis, hanta virus, elephantiasis among others. They are all serious health risk of global warming.

Cancer: High ambient temperatures caused by global warming will have an effect on cancer rates, probably pushing them higher. There are potential impacts on cancers both directly from climate change mitigation strategies. Increase exposure to toxic chemicals caused by global warming connection with heavy ranging and by increase volatilization of chemicals under conditions of increase temperatures. Global warming can cause more cancer through increased exposure to ultraviolet (UV)

Malaria is a mosquito-borne parasitic disease that infects humans and other animals caused by microorganisms in the plasmodium family. It begins with a bite from an infected female mosquito, which introduces the parasite through its saliva and into the infected host's circulatory system. It then travels through the bloodstream into the liver where it can mature and reproduce (Greenwood, Bojang, Whitty and Targett, 2005). The disease causes symptoms that typically include fever, headache, shaking chills, anemia, and in severe cases can progress to coma or death. As a result of global warming, the top of the mountains are cooler than its base as the world warms, the warmer temperatures will creep up the sides of the mountains and that would allow mosquitoes and insects that head the warmer weather to crawl up to higher elevations. Mosquitoes breed in warm, wet place with the increase of rain and warmth. During global warming, the population of mosquitoes will increase making the risk of getting this disease to increase also.

Hanta Virus: is a deadly respiratory disease carried by Wild Rodents, with global warming, the population of rodents will soar, because there will be long-periods of droughts followed by warm, rainy season, and rodents thrive in these climate conditions. Epstein, Graham, Thompson and Susskind (1998) opined that if any individual comes in contact with a rodent or if an individual breathes anything that contains their waste, could get the virus. Dogs and cats are not known to carry the hanta virus, people most likely get it, and it is those people that work in the fields or install or fix things in basements where rodents can rest. Some symptoms may be flu like symptoms with fever and chills. One may have dry cough, nausea, vomiting, diarrhea, the person experiences fatigue and have a hard time breathing because the person's lungs is filled with fluid

Meningitis: These occurs as a result of climate change, especially when the weather is so hot, it mostly affect the Northern part of Nigeria. It's a condition in which organisms such as fungi bacteria and virus are inflated. It causes fever intense headache, intolerance to light and with rigidity of muscles.

Mental Health: It is caused by natural disasters, but will be more catastrophic as the earth warms. It causes stress and anxiety which can lead to mental illness. Extreme weather events such as flooding, wildfires and hurricanes can create increased anxiety and emotional stress about the future, as well as create added stress to vulnerable communities already experiencing social; economic and environmental disruption. Individuals already vulnerable to mental health disease and stress related disorders are likely to be at increased risk of exacerbated effects of global warming includes respiratory disease, cardiovascular disease,

heat-related disease, human development effort, neurological diseases, water borne diseases, weather related disease and infectious diseases.

In preventing global warming in our homes (Brown 2011) stated that gases in most homes come from heating, cooling, recycling, driving and use of electrical appliances and lighting. To reduce global warming is by reducing heating and cooling by using less energy to stay warm in the winter and cool in the Summer (rainy and dry seasons). Which means the individuals needs to find the place that leaks air and plug those holes end also find leaks around windows and doors, which can easily be fixed with a little bit of weather stripping making this the, easiest way to help prevent global warming in our various homes. The windows causes a lot of heat loss and cooling loss because windows are less insulated than the walls and these could be remedied with thermal curtains as this helps in keeping temperatures moderate at all times.

By using less electricity: Using less electricity is simple if we are willing to adjust some changes in our daily life, the first thing to understand is that anything that heats up by using electricity requires a lot of energy and it is best to find alternatives. Those appliances to be avoided include toasters, irons, oven dryers, dish washers, hair curlers, among others. Most of these kinds of technologies are easy enough to do without. One can hang his/her clothing's outside immediately after washing thereby eliminating the use of dryer.

Turning off appliances when not in use is also a very simple and basic act that helps prevent global warming. It is better to put up signs around the house to enable people to turn things off when they are not in use. The use of compact fluorescents bulbs: They use a fraction of the electricity of a regular bulb. It eliminates pounds of green house gases and will save money over a long term.

Purpose of the study

The general purpose of the study is to determine the influence of global warming on family living in Victoria Island in Eti-OSA Local Government Area of Lagos State. Specifically, the study was designed to

1. Find out the influence of global warming on food insecurity in families in Victoria Island Eti-Osa Local Government Area in Lagos State
2. To ascertain the influence of global warming on family health in Victoria Island Eti-Osa Local Government Area in Lagos State
3. To identify ways of reducing impact of global warming in families in Victoria Island Eti-Osa LGA

Research Questions

Three research questions guided the study as follows

1. What are the influences of global warming on food insecurity in families in Victoria Island Eti-Osa Local Government Area in Lagos State?
2. What are the influences of global warming on family health in Victoria Island Eti-Osa Local Government Area in Lagos State?

3. What are the possible ways of reducing global warming in various homes in Victoria Island Eti-Osa Local Government Area in Lagos State?

METHODOLOGY

Design and Area of the study

The design of the study was descriptive survey. Abonyi, Okereke, Omebe and Anugwo (2006) viewed descriptive survey as a design that consist of those studies in which data is collected from a small sample of large population to enable the researcher describe in a systematic manner and interpret things that exist. The design was used at investigating the influence of global warming on family living in Victoria Island, Eti Osa local government area Lagos state The study was carried out in Victoria Island, Eti-Osa Local Government Area in Lagos State. This location was chosen because of the effect of global warming such as floods and harsh weather on the island and also the consumption of gasoline in transportation.

Population of the Study

The population of the study consists of all the families in Victoria Island of Lagos state, the population is two hundred and eighty three thousand seven hundred and ninety one (283,791). National Population Commission (NPC), (2006)

Sample and Sampling Techniques

The sample size for this study was three hundred and ninety nine (399) households in Victoria Island which was statistically determined using “Yaro Yamane” formula for a finite population (Uzoagulu (2011). The formula is given as

$$n = \frac{N}{1 + N(e)^2}$$

Where

n > sample population

N = Parent population

I = a consultant

E = level of error margin (5%)

Hence $n = \frac{283791}{1 + 283791(0.05)^2}$

$$n = \frac{148626}{710.4775}$$

$$N = 399.4$$

399 households were drawn from different areas in Victoria Island Lagos of which were Adeola Odeku Saka Tinubu, Adeola Hope Well, Ozumba Mbadiwe, Awolowo Road, Kofo Aboiyomi, Akin Adeola, Falomo Bridge and Sand Field area. Finally, a home maker was randomly selected from the 399 households giving a total of 399 home makers used for the study.

Instrument for Data Collection

The instrument used for data collection was questionnaire developed based on extensive review of literature and research questions. To determine the face and content validity, three copies of the instrument were given to three valutors, two from Home Economics and one from Measurement and Evaluation in the Department of Science Education, Ebonyi State University Abakaliki. Based on their contributions and criticisms, the instrument was modified and finally used for the study. Reliability of the instrument was established at 0.75 using Cronbach's Alpha Coefficient indicating high reliability of the instrument. This indicated that instrument was reliable.

Data Collection and Analysis

The questionnaire was administered to the respondents by hand through the help of six trained research assistants. The research assistants explained the questionnaire items to the respondents and recorded their responses for the illiterate ones. The research questions were answered on individual item basis using mean. A mean of 3.50 and above was regarded as agree; while any item below 3.50 was regarded as disagree at five point Likert Scale

Findings: The following findings were made

1. Influences of global warming on food insecurity in families include:

It leads to hunger, increases poverty, reduces food supplies, and leads to inequality and unemployment, non-availability of certain crops due to its extinction, low production of crops for consumption, reduction in exportation and importation of food items.

2. Influences of global warming on family health include:

Increase in malaria due to increase in spread of mosquitoes, heat rashes, meningitis, skin cancer, flooding, and pollution.

3. Ways of reducing global warming in families include:

Reduction of green house gases and toxic pollution, conservation of energy by using a compact florescent light bulb over an incandescent bulb, use of less electricity, reduction of heating and cooling by using less energy in our homes, encouraging conservation, participation in recycling, planting of trees among others.

Research Question 1; what is the influence of global warming on food insecurity in families?

Table 1: Mean response on the influence of global warming on food insecurity

S/N	The influence of global warming on food insecurity	\bar{X}	DECISION
1	It leads to hunger.	3.6	Agreed
2	Food insecurity increases poverty both in families and in the society.	4.0	Agreed
3	It reduces food supplies.	3.7	Agreed
4	It leads to inequality and unemployment in our communities.	4.6	Agreed
5	Non-availability of certain crops due to its extinction.	3.5	Agreed
6	Low production of crops for consumption.	3.7	Agreed
7	Reduction in exportation and importation of food items.	4.7	Agreed
8	It hinders food selection.	2.4	Disagreed

Table 1 show that items 1-7 are factors that leads to food insecurity in families with mean of 3.6, 4.0, 3.7, 4.6, 3.5, 3.7, and 4.7 respectively. While the respondents disagreed that food insecurity does not hinder food selection with the mean of 2.4.

Research question 2; what is the influence of global warming on family health?

Table 2: Mean response on the influences of global warming on family health

S/N	Influence of global warming on family health	\bar{X}	DECISION
1	High temperature increases allergies and asthma	2.7	Disagreed
2	As temperature rise, higher elevations become more hospitable for mosquitoes, and more risky for local inhabitants	3.3	Agreed
3	Due to harsh weather, family members suffer from heat rashes	3.8	Agreed
4	There is increase in malaria	3.7	Agreed
5	Devastating heat waves increase meningitis on people's health	4.7	Agreed
6	Skin cancer affects people	4.1	Agreed
7	When there is sea level rise it cause flooding and spread of diseases that affect human health	3.6	Agreed
8	Increase of pollution from vehicles and power plants affect human health	3.5	Agreed
9	Elephantiasis is serious health risk of global warming	2.5	Disagreed

Table 2 shows that items 2-8 agreed that global warming affects the family health of people thereby increasing the spread of different diseases. While items 1 and 9, i.e. High temperature increase allergies and asthma and Elephantiasis as serious health risk of global warming do not influence family health.

Research Question 3: What are the possible ways of reducing global warming in various homes?

Table 3: Mean response on ways of reducing global warming in families

S/N	WAYS OF REDUCING GLOBAL WARMING	\bar{x}	DECISION
1	Reducing of green house gases and toxic pollution	3.5	Agreed
2	Conservation of energy by using a compact florescent light bulb over an incandescent bulb	3.5	Agreed
3	Use of less electricity	4.1	Agreed
4	Reduction of heating and cooling by using less energy in our homes	3.8	Agreed
5	Encouraging conservation	4.1	Agreed
6	Participation in recycling	5.0	Agreed
7	Planting of trees	3.7	Agreed
8	Taking progressive action to cut global warming pollution by all and sundry	3.1	Agreed
9	Health care system participation for families and communities protection as temperatures rise	3.5	Agreed
10	Being informed and understanding the areas to be focused on	3.9	Agreed

The Table 3 above revealed that the responds agreed with all the items as ways of reducing the impact of global warming with all the means above 3.0.

DISCUSSION

The result in Table 1 indicated that eight (8) out of ten (10) items used, were agreed by the respondents, while two (2) items were disagreed. The findings of this study revealed that global warming has great influence on food insecurity in families. This is in line with Burke, Bell, & Tebaldi, (2008) who noted that food insecurity affects people’s supply of food, thereby leading to its shortage and also has effect on important areas of our lives. This is because food insecurity leads to malnutrition and extinction of certain crops which could leave a family to starvation; it is independent of the climate so when global warming occurs it presents barriers to effective food production. Burke et al (2008) also emphasized that poor nutrition due to global warming can affect both the body and mind thereby leading to poverty, inequality and unemployment in our communities also in our environment global warming affects the means of growing and gathering food due to climate changes and this affects the environment in so many ways, there is loss of natural vegetation, some plants are being wiped out and the quality and amount of land available for growing food is declining. With all these, global warming will affect basically every one’s way of living, disease contamination can easily spread and it devise the means of exportation.

The result in Table 2 indicated that eight (8) out of ten (10) items were agreed by the respondents while (2) out of the ten items were disagreed. The result revealed that global warming has influences on family health. Global warming guarantees easy access to disease.

Diseases are likely to increase and spread more rapidly. Such diseases are malaria, fever, skin cancers, meningitis and so on, this is because as the temperature rises, higher elevations becomes more hospitable for mosquitoes and more risky for local inhabitants and due to harsh weather, family members suffer from heat rashes and devastating heat waves increases meningitis on people's health.(Epstein & Ferber, 2011). But the respondents disagreed that high temperature increases allergies and asthma and that elephantiasis is serious health risk of global warming. The disagreement may be because it is not a common disease in the area of study.

Zell, Krumbholz and Wutzler (2008) noted that diseases are carried by certain insects or vectors, they flourish more in a warmer world, and this increases the spread of diseases like malaria, which have been killing millions of people. Malaria won't be abolished easily because global warming increases its reproduction and thereby making disease more devastating according to Epstein (2011). There are other public health effects of global warming, they include respiratory diseases, and weather related diseases, cardiovascular diseases and so on. When there is overpopulation in a community it leads to scarcity of resources therefore increasing the rate of hunger and different atrocities.

Table 3 indicated that the ten items were agreed by the respondents. The finding of the study showed that participation in recycling, encouraging conservation and use of less electricity by families can assist in reducing global warming threat .Also there are other ways of preventing global warming in the home, such as cutting down pollution and also health care system participation of families and community protection as the temperature rises, use of less electricity is very vital for all family members, this will help in the reduction of heating and cooling. Brown (2011) maintained that gases in most homes come from heating, cooling, driving among others, therefore preventing global warming in homes requires using less energy to stay warm, less electricity, use of compact fluorescent bulb which saves money over long term and can last longer, this will lead to elimination of pounds of green house gases. Planting of trees is very vital in natural atmospheric exchange cycle here on earth (<http://www.medindia.net...>).

IMPLICATIONS OF THE STUDY

This implies that the study is useful to the community in respect to food supply and also the government is taking steps to prepare public health system and to promote solutions that will offer added health benefits by reducing both green house gases and toxic pollution. The health care system is active and the communities are protected as temperature rises. The findings of the study will also be useful to families because it prepares them to give up things that would affect them, like places to reside in, due to climate change. Finally, it will help our species like plants and animals not to migrate far and also carbon dioxide absorption rate for plants and bountiful food for animal life which will be safer for man.

CONCLUSION

Based on the findings of the study, it was concluded that food insecurity is caused by many factors, some of which are at the control of individuals, international markets and lately at the whim of the weather, Governance structure and policies on farming and food distribution are

essential for food security. Counter measures to facilitate living in hotter temperatures like air-conditioning and refrigeration will unfortunately consume more electricity from power plants that burn coal, releasing carbon dioxide. This will further spike global warming and have a seriously damaging influence on human health.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

1. Educating people especially the younger generation about global warming through media, educational institutions, churches and community groups.
2. Discourage cutting of trees and encourage large-scale tree planting because trees absorb carbon dioxide.
3. Families should avoid wastage of foods and water. Improving water availability through rainwater harvesting should be encouraged.
4. Using less fossil fuels and electricity by switching off lights, fans, air-conditioners, computers etc when not required should be practice by all and sundry.
5. Using solar heaters to heat water instead of boilers
6. Recycling paper, plastics, glasses and whatever we can
7. Buying energy-efficient products such as compact fluorescent light (CFL) bulbs
8. Harnessing alternate sources of “clean” energy such as solar and wind energy-that do not emit carbon dioxide.
9. Spreading the message of energy conservation and recycling among families and friends are some sure ways to reduce global warming.

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