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Influence of Global Climate Change on Lifestyles of Family Members in Ilorin South LGA of Kwara State

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Abstract

Climate change refers to an increase in average global temperatures caused by natural events and human activities, which are believed to be contributing to an increase in average global temperatures affecting food production, drinking water, spread of infectious disease, occupation, income groups, classes, which may have significant influence on lifestyle of family members. This study examines the influence of global climate change on lifestyles of family members in Ilorin South LGA Kwara State. Four research questions were raised, and two hypotheses formulated and tested at 0.05 level of significance. Descriptive survey research design was adopted for the study. The population of the study comprised people from Ilorin South L.G.A, numbering 2,820. A total of 220 residents constituted the study sample. The instrument used was a questionnaire tagged Global Climate Change Questionnaire (GCCQ), developed by the researchers based on the objectives and research questions formulated. The instrument has reliability index of 0.74. Data collected were analyzed with descriptive statistics, percentages, frequencies, mean and standard deviation. The null hypotheses were analyzed using Pearson Product Moment Correlation (PPMC). The results revealed that family members in Ilorin South LGA are aware of Global Climate Change and agreed human activities causes global climate change. ($\bar{x}$>2.50). The results further revealed that climate change significantly influence health and adaptive Behavior of family members (p<0.05). The study concludes that the respondents have awareness of global climate change and the contribution of human activities as a cause to global climate change. The respondents believed climate change influences health of family members agreeing to possible infectious diseases as a consequence. Based on the findings, it is recommended that the health sector should identify major regional health hazards caused by climate change and develop risk-lessening adaptations. Workshops, seminars and forums on climate change adaptation and mitigation should also be organized by Educationists, Home Economists, health officials, religious leaders, media forums, newspapers editors NGOs or Government establishments, to raise awareness and promote climate change adaptation.

Keywords: Climate Change, Life- Style, desertification, Adaptive Behavior, anthropogenic global warming

Introduction

Climate is the average weather condition of a place over a long period of time, usually about or even over 30 years. Climate change refers to a long change in the average weather pattern over a specific region and a significant period of time, (Nwankwoala,2015). Nigeria's climate has been changing, evident in increases in temperature; variable rainfall; rise in sea level and flooding; drought and desertification; and land degradation. More frequent extreme weather events affected freshwater resources and loss of biodiversity (Nwankwoala (2015). Medugu (2009)

submitted that climate change refers to an increase in average global temperatures caused by natural events and human activities, which are believed to be contributing to an increase in average global temperatures. Unpredictable rainfall variation, heat stress and drought can adversely affect food production and result in food shortages (Haider, 2019 and Abdulkadir et al., 2017). Drought conditions in parts of Northern Nigeria has also resulted in less drinking water (Sayne, 2011). Indirect effects of climate change can cause malnutrition due to food shortages; the spread of infectious disease and food and water-borne illness such as typhoid fever or cholera increased air pollution; and higher temperatures is associated with increased cases of meningitis (Haider,2019; Abdulkadir et al., 2017; Building Nigeria's Response to Climate Change (BNRCC), 2011). Extreme environmental temperatures affect the metabolic energy needs. In hot climate (temperature greater than 86^0F), the metabolic rate increase to about 50% due to increased activity of sweat glands (Sumati, and Rajagopal, 2012).

According to Nwankwoala, (2015) in the context of environmental policy, the term climate change has become synonymous with anthropogenic global warming. Enete,(2014) opine that global warming refers to surface temperature increases while climate change includes global warming and everything else that increases greenhouse gas levels. Nigeria experiences dry and rainy seasons, extreme weather events have become a yearly occurrence, for which people have not learned to prepare probably due to ignorance of the climate variations.

People's health can be affected by climate change, (Hathaway and Maibach, 2018), therefore, vulnerable populations such as young children, pregnant women, older adults, individuals with chronic sickness and disabilities; and individuals with fewer resources have been identified to be at increased risk (Ilevbare and Idemudia, 2017). Furthermore, Hathaway & Maibach (2018) have found that among vulnerable people in Asia and Africa, awareness of increasing health harms due to specific changing climatic conditions is high. Omoruyi & Onafalujo (2011) explained that one of the direct consequences of climate change in Nigeria includes cerebra-spinal meningitis, cardiovascular respiratory disorder of the elderly people, skin cancer, high blood pressure, malaria, cholera and child and maternal health issues.

According to Building Nigeria's Response to Climate Change (BNRCC) (2011) the level of public awareness on issues related to climate change in Nigeria is considered to be low. Studies indicate that the Nigerian media has not given sufficient attention to climate change issues (Ajaero and Anorue, 2018). The degree of information available influences the level of awareness on climate change issues (Duru and Emetumah, 2016). According to Ochieng & Koske (2013) increasing people's awareness on climate change through education is an important measure to persuade people at all levels in the community to play an active role in mitigating and adapting to climate change.

The various potential health effects of global climate change upon human health can be divided into direct and indirect effects (Nwoke et al. 2009). If extreme weather event such as heat waves, droughts, flood, storms, temperature, rise in sea level, variable rainfall, humidity, wind, desertification and land degradation were to occur more frequently, increases in rates of deaths, injury, infectious diseases and psychological disorder would result. Indirectly, increase in non-vector-borne infectious diseases such as cholera, salmonellosis, and other food-and water related infectious diseases could occur, particularly in tropical and sub-tropical regions, due to climate impact on water distribution, temperature and proliferation of micro-organism. Incidences of meningitis have been on the increase in Nigeria as a result of excessive heat (Akingbade, 2010). In 2011, it was unbearably hot in Nigeria and countries in sub-Saharan Africa. There was an outbreak of meningitis with 25,000 suspected cases and 1,500 deaths in the first quarter of 2009 (Akingbade, 2010) It is generally known that the disease attacks

more people during the dry season because of dust, wind and cold nights. (Ilevbare and Idemudia, 2017)

Nkom (2010) opine that the dusty and hazy weather would trigger certain ailments amongst the populace who were not ready for the unusual weather and that the dust in the atmosphere would trigger droplet infection because the dust will become the medium of propagating the various viruses and bacteria that are airborne such as Tuberculosis (TB), flu, cough and measles. The World Health Organization (WHO) (2015) has identified air pollution as the single largest environmental health risk. Campbell-Lendrum & Pruss-Ustun (2019) reiterated that the major causes of air pollution, and thus of a large proportion of the non-communicable disease burden, are the energy sources that currently drive transport, electricity generation, industry and food production systems. Flooding has both direct and indirect effects on health, ranging from loss of life resulting from extreme weather events, to disruptions to food production, water contamination, and increased risk of vector- and/or waterborne diseases (United State Agency for International Development (USAID), 2018). In 2017 a cholera outbreak in Lagos was linked to floodwaters contaminated by septic overflows entering water supplies. In 2010, the National Emergency Management Agency (NEMA) reported that over 250,000 Nigerians were displaced by flood disasters that ravaged many communities across the country. Other parts of the world are also experiencing increasingly severe weather-related disasters. For example, the 2010 floods in Pakistan were described as the worst in that country's history, affecting 20 million people. Drought-induced famine and locusts, and an increase in the number of extreme heat days, have also affected Niger and northern Nigeria. In the same vain, over 15 communities and farm plantations worth millions of naira have been submerged by flood in Shonga district, Edu local government area of Kwara State. (Building Nigeria's Response to Climate Change (BNRCC), 2011)

According to Nwankwoala (2015), human activities through the burning of organic compounds results in the releasing of carbon dioxide into the air which is the most important gas that cause Greenhouse effects. This occurs when the sun rays hit the earth surface, but when they are reflected back into space, they are trapped in the atmosphere. The sun rays cannot escape from the earth's atmosphere, and the earth heats up, the result of this may be global warming. The possible effect is that the world temperature may rise; Icebergs may melt, leading to an increase in quantity of water in the oceans. Changes in climate may be as a result of natural and human effects. Human factors include, air, water and land pollutions, production of greenhouse gases, deforestation, desertification, emission of carbon dioxide, carbon monoxide and other harmful gases. Natural factors include, volcanic eruption, ocean variations, solar variations, Plate Tectonics and Thermohaline circulations, (Nwankwoala,2015; Brade, 2009). Mixture of smoke and fog can cause respiratory problems. The occurrence of this smog in London in 1952 led to the death of about 400 hundred people (Kwan et al, 2011). Chlorofluorocarbon released into the atmosphere from aerosols also increases the risk of skin cancer (Kwan, Lam, Ofoefuna, 2011). Exhaust of motor vehicles, generators, air crafts, motorcycles and other forms of engines that emit such gases are sources of carbon monoxide. When carbon monoxide is breathed in, it combines with hemoglobin in the red blood cells to form ''carboxyhaemoglobin'' which reduces the capacity of the blood to transport oxygen round the body. This may be very harmful when it occurs in high concentration and could be attributed to most deaths that occur when people confine themselves to areas where carbon monoxide is emitted without cross ventilation .Dipo,(2020) reported that seven people including two housewives suffocated to death at a hairdresser's salon in Rijau town in the Rijau local government area of Niger Nigeria.

So much dust is released into the atmosphere due to human activities like, construction, sweeping, mining, cement

industrial sites and other sites. Industrial processes produce a lot of toxic materials. For instance, asbestos dust is believed to be the major cause of lung cancer in industrial worker who inhale them for long period of time. Natural phenomenon such as volcanic eruption, burning of garbage, chimney fumes, also causes the release of dust into the atmosphere. Fumes are gaseous products generated by incineration plants and industrial plants and can cause severe irritation of the respiratory system in human beings. (Kwan, Lam, and Ofoefuna, 2011). Rivers, streams and lakes are polluted by waste materials dumped into them by humans through untreated sewage causing diseases like cholera and typhoid which sometimes get into wells, bore-wholes and sources of drinking water, which may result to epidemics. Use of chemical fertilizers by farmers to increase yields of crops may cause water pollution in the sense that fertilizers that are not absorbed by crops may be washed away by rainwater into nearby rivers and lakes which may be harmful to water organisms (Nwankwoala, 2015).

Inorganic wastes include industrial wastes such as poisonous metals like, mercury, arsenic and cadmium can be disposed into rivers, streams and lakes. Nriagu et al. (1997) investigated blood lead levels in 87 children aged 1-6 years from Kaduna state. An average of 10.6 µg/dl was found, with some children having up to 30 µg/dl. Sridhar et al. (2011) reported high degree of lead contamination in different samples from Ibadan and Lagos Nigeria. The ore in some areas of Nigeria's Zamfara state is heavily contaminated with lead, and the crude processing technique inadvertently frees lead particles, resulting in the contamination of air, soil and communal water resources, wells, streams and ponds culminating in the deaths of over 500 children in within seven months in 2010. (Galadima and Garba, 2012) An estimated 18,000 children and adults have been affected by the widespread lead contamination in Zamfara state, Nigeria resulting from the informal extraction of gold from lead-bearing ore. (Getso,et.al, 2013). About 40 People who eat contaminated fish and shellfish died of mercury poisoning in Japan. About 70 people were crippled; blinded or paralyzed. (Kwan, Lam and Ofoefuna,2011). Prolonged exposure to noise from radios, megaphones, televisions can result in severe loss of hearing, emotional stress, irritability, lack of sleep or insomnia, high blood pressure psychological disturbances and low work productivity. Deforestation could lead to soil erosion, flooding, and desertification. (Saylan, 2011; Nwankwoala, 2015). Heavy metals can generally be introduced into the environment and consequently living organisms through air, water, food or soil (Ibeto and Okoye, 2010) A good number of food items such as kolanuts, eba, moi-moi and agidi are wrapped in thick layers of leaves, which are good heavy metals sources usually disposed of on the streets. In most cases the leaves on the streets find their way to gutters when there is a heavy down pour, lakes, dams, streams and other water bodies used by local communities for drinking and other household activities (Galadima and Garba, 2012) Learning disability, stunted growth, poor brain sensation, behavioral problems, kidney damage and impaired hearing are associated with low level of lead exposure. High concentrations of lead in the body can result to mental retardation, coma and eventual death. Women who have been exposed to mercury in pregnancy have sometimes given birth to children with serious birth defects (Galadima and Garba, 2011).

Adaptive Capacity is the ability of a human or natural system to adjust to climate change. This includes adjusting to climate variability and climate extremes, the ability to avoid moderate potential damages, to take advantage of opportunities, or to cope with the consequences (IPCC, 2001). This study therefore assesses influence of global climate change on lifestyles of family members in Ilorin South LGA of Kwara State.

Research Question

The following questions were raised to guide the study:

1. What is the level of family members awareness of global climate

change?
2. What are the human causes of global climate change in Ilorin South LGA of Kwara State?
3. What are the climate change effect on health of the family in Ilorin South LGA?
4. What is the mitigation influence of climate change on adaptive behavior of the family in Ilorin South LGA?

Research Hypotheses: The following hypothesis were formulated for the study:

$H0_1$: Climate Change will not significantly influence health of family members.

$H0_2$: Climate Change will not significantly influence adaptive behavior. of family members

Methodology

Research Design

The study adopted a descriptive survey research design. According to Nworgu, (2015) Descriptive Survey research permits the collection of data on the characteristics, features or facts about a given population. The design is devoted to the gathering of information about prevailing conditions or situations. It reveals and measures the strength of an opinion, attitude or behavior with regards to a given subject and it tends to capture demographic traits. (Neeru, 2012). Survey research design was use by the researcher to gather information about variables from a representative sample of the population and to generalize the result. Descriptive Survey research design revealed information from the respondents on their perception on influence of global climate change on lifestyles of family members.

Population of the Study

The total population for this study comprises of people from Ilorin South L.G.A, Kwara State. Numbering 2,820 population size. Kwara is a state in Western Nigeria, its capital is Ilorin. Its located within the North central geopolitical zone. The primary ethnic group is Yoruba with significant Nupe, Bariba, and Fulani minorities. The state is made up of sixteen (16) Local Governments Areas. Ilorin South has 8 wards with its headquarters in Fufu town. It has an area of 174km^2 University of Ilorin Kwara State is situated in this area. (National Population Commission, 2019).

Sample and Sampling Technique

A total of 220 residents made up the sample for the study. Multistage sampling technique was used to select 220 respondents for the study as follows: The stage involves using homogeneous purposive sampling technique in selecting two (2) wards in Ilorin South LGA. In the next stage a non-proportionate stratified random sampling technique was adopted to select 220 samples from population of 2,820 comprising approximately 8% of the population. Researchers adopted 5 - 30% of the total population making up the sample as reasonably adequate and representative of the population (Ali, 2006)

Global Climate Change Questionnaire (GCCQ) developed by the researcher was used for data collection. The questionnaire was divided into sections A B, C and D. Responses of each item was rated on a "4-point "scale ranging from (1=Strongly disagree; 2=Disagree; 3=Agree; 4= Strongly agree) scaled 4 to 1, respectively. The questionnaire was face validated by three experts in Home Economics and Natural Sciences.

Data Analysis

Data collected was analyzed with descriptive statistics such as frequencies, mean and standard deviation. Hypotheses formulated were tested with Pearson Product Moment Correlation (PPMC). All null hypothesis was tested at 0.05 level of significance. The decision rule mean score was based on the four- point rating scale of 2.50 by which a mean rating of an item by the respondents equal to or above 2.50 was taken as agreed while less than 2.50 was taken as disagreed.

Results and Discussions

The Biodata information of respondents revealed that 66 (30%) were males while 154(70%) were females, making a total of 220 (100%).

Analysis of the Research Questions

Table 1 shows that on level of family members awareness of Global Climate Change respondents agreed with three items (items 1,7,8)and disagree with seven items (items 2,3,4,5,6,9,10).This is because they have a mean score that are higher than the mid-mean score of 2.50, This implied that respondents agreed that family members are aware of Global Climate Change .

Table 1: Mean Rating of Respondents on the Level of Family Members Awareness of Climate Change

S/N	Statements	SA	A	D	SD	Mean Score ($\bar{x}$)	Remarks
1	The pattern of weather is generally changing	108 (49.1)	112 (50.9)	-	-	3.49	Agree
2	Uncertainty about whether climate change is really happening	6 (2.7)	24 (10.9)	107 (48.6)	83 (37.7)	1.79	Disagree
3	Claims that human activities are changing the climate are exaggerated	18 (8.2)	47 (21.4)	131 (59.5)	24 (10.9)	2.27	Disagree
4	There is too much conflicting evidence about climate change to know whether it is actually happening	-	69 (26.8)	138 (62.7)	23 (10.5)	2.16	Disagree
5	Information about climate change is irrelevant	12 (5.5)	36 (16.4)	131 (59.5)	41 (18.6)	2.09	Disagree
6	Climate change is a real problem	6 (2.7)	66 (30.0)	89 (40.5)	59 (26.8)	2.09	Disagree
7	I feel a moral duty to do something about climate change	30 (13.6)	148 (67.7)	36 (16.4)	6(2.7)	2.91	Agree
8	Climate change is the same everywhere	30 (13.6)	148 (67.7)	30 (13.6)	12 (5.5)	3.63	Agree
9	Human activities through the burning of organic compounds results in climate change	6 (2.7)	17 (7.7)	96 (43.6)	101 (45.9)	1.67	Disagree
10	Nothing humans do makes any difference to climate change one way or another	-	47 (21.4)	72 (32.7)	101 (45.9)	1.75	Disagree

Figures in parentheses are in percentages

Table 2 shows that on human causes of global climate change respondents agreed with all the items except items 2 and 8. This implied that respondents agreed human activities causes global climate change.

Table 2: Mean Rating of Respondents on the Human Causes of Global Climate Change

S/N	Statements	SA	A	D	SD	Mean Score ($\bar{x}$)	Remarks
1	Air, water and land pollutions causes climate change	119 (54.1)	83 (37.7)	18 (8.2)	-	3.46	Agree
2	Leaving the lights on in homes adds to climate change	12 (5.5)	42 (19.1)	136 (61.8)	30 (13.6)	2.16	Disagree
3	Climate change is a consequence of modern life	36 (16.4)	125 (56.8)	41 (18.6)	18 (8.2)	2.81	Agree
4	Food production contribute to human greenhouse gas emissions	54 (24.5)	137 (62.3)	29 (13.2)	-	3.11	Agree
5	Human activities like, construction, sweeping, mining, burning fusil fuels, cause global climatic change.	107 (48.6)	101 (45.9)	12 (5.5)	-	3.43	Agree
6	Destruction of tropical forests intensify global warming.	12 (5.5)	6 (2.7)	101 (45.9)	101 (45.9)	3.32	Agree
7	Carbon dioxide (CO2) in the atmosphere contributed the most to global warming	77 (35.0)	95 (43.2)	36 (16.4)	12 (5.5)	3.08	Agree
8	Human activities have no significant impact on global climate change	30 (13.6)	18 (8.2)	89 (40.5)	83 (37.7)	1.98	Disagree

Figures in parentheses are in percentages

Table 3 shows that on climate change effect on health of the family, respondents agreed with all the items. This implied that global climate change has effect on health of family members.

Table 3: Mean Rating of Respondents on Climate Change Effect on Health of the Family.

S/N	Statements	SA	A	D	SD	Mean Score ($\bar{x}$)	Remarks
1	Increased temperature could lead to:						
	Heat stress, which can result in illness and deaths.	47 (21.4)	167 (75.9)	-	6 (2.7)	3.03	Agree
	Crop failure and malnutrition.	47 (21.4)	161 (73.2)	6 (2.7)	6 (2.7)	2.56	Agree
	Expansion of diseases such as cerebrospinal meningitis and malaria.	65 (29.5)	119 (54.1)	36 (16.4)	-	2.98	Agree
	Decline in urban air quality and respiratory problems.	65 (29.5)	155 (70.5)	-		2.94	Agree
	Incidence of wildfires, injury and death.	71 (32.3)	143 (65.0)	6 (2.7)	-	3.13	Agree
2.	Rising sea level could lead to:						
	Higher ground water, contaminated water from sewage and cholera.	48 (21.8)	148 (67.3)	18 (8.2)	6 (2.7)	3.08	Agree
	Industrial and chemical waste.	59 (26.8)	143 (65.0)	6 (2.7)	12 (5.5)	3.13	Agree
	Salty drinking water due to salt water	50 (22.7)	164 (74.6)	-	6 (2.7)	3.34	Agree
	Storm surge resulting in death and injury.	53 (24.1)	167(75.9)	-	-	3.24	Agree
3	Increased rainfall and flooding may result in:						
	Outbreaks of waterborne diseases (cholera, typhoid, hepatitis A).	59 (26.8)	155 (70.5)	-	6 (2.7)	3.21	Agree
	Increased breeding sites for mosquitoes, malaria and yellow fever.	71 (32.3)	137 (62.3)	12 (5.5)	-	3.27	Agree

Figures in parentheses are in percentages

Table 4 shows that on mitigation influence of climate change on adaptive behavior of the family respondents agree to all the items. This implied that climate change mitigation influences adaptive Behavior of family members in Ilorin South LGA Kwara State.

Table 4: Mean Rating of Respondents on Mitigation of Climate Change on AdaptiveBehavior of the Family.

S/N	Statements	SA	A	D	SD	Mean Score ($\bar{x}$)	Remarks
1	Engage in water-saving practices, including rainwater harvesting and use of self- made wells	48 (21.8)	136 (61.8)	30 (13.6)	6 (2.7)	3.03	Agree
2	Purchasing clean water from water-vendors	11 (5.0)	114 (37.7)	83 (37.7)	12 (5.5)	2.56	Agree
3	Adaptation of diets to healthy eating	36 (16.4)	143 (65.0)	41 (18.6)	-	2.98	Agree
4	Strengthen disease prevention and treatment Strategies	41 (18.6)	137 (62.3)	30 (13.6)	12 (5.5)	2.94	Agree
5	Build and maintain wastewater and solid waste management facilities.	53 (24.1)	149 (67.7)	12 (5.5)	6 (2.7)	3.13	Agree
6	Intensify immunization of children and youth.	101 (45.9)	101 (45.9)	12 (5.5)	6 (2.7)	3.35	Agree
7	Share information with other stakeholders on their experiences in climate change impacts and adaptation	65 (29.5)	137 (62.3)	12 (5.5)	6 (2.7)	3.18	Agree
8	Choose smaller, best-in-class mode of distance travelled.	36 (16.4)	142 (64.5)	-	42 (19.1)	2.97	Agree
9	Eat less meat to reduce the carbon emissions that contribute to climate change	24 (10.9)	125 (56.8)	47 (21.4)	24 (10.9)	2.68	Agree
10	Reducing, re-using and recycling household waste helps to reduce carbon emissions.	6r (29.5)	143 (.65.0)	12 (5.5)	-	3.24	Agree

Figures in parentheses are in percentages

Test of Hypotheses

Table 5 shows an r value of .173 and a P value of .010 at an alpha level of 0.05,the p value is less than the alpha level($p<0.05$) therefore, the null hypothesis which states that climate change will not significantly influence health of family members.in the study area is rejected. This implies that, climate change significantly influences health of family members.in Ilorin South LGA Kwara State

Table 5: Pearson Product Moment Correlation Statistics on Climate Change Effect on Health of the Family

Variables	N	X	SD	R	Sig.p(2tailed)	Remark
Climate Change		83.91	6.89			
	220			.173	.010	Sig.
Health		35.42	4.80			

α=0.05

Table 6 shows an r value of .564** and a P value of .000 at an alpha level of 0.05, the p value is less than the alpha level (p<0.05) therefore, the null hypothesis which states that climate change will not significantly influence adaptive behavior of family members in the study area is rejected. This implies that, climate change significantly influence adaptive behavior of family members.in Ilorin South LGA Kwara State.

Table 6: Pearson Product Moment Correlation Statistics Mitigation Influence of Climate Change on Adaptive Behavior of the Family.

Variables	N	X	SD	R	Sig.p(2tailed)	Remark
Climate Change		83.9091	6.89457			
	220			.564**	.000	Sig.
Adaptive Behavior		30.0682	3.81536			

α=0.05

Discussion

Findings of research question 1 shows that family members in Ilorin South LGA of Kwara State are aware of global climate change. This finding is in agreement with Hathaway & Maibach (2018) who found that among vulnerable people in Asia and Africa, awareness of increasing health challenges due to specific changing climatic conditions is high. This contradicts the findings of Building Nigeria's Response to Climate Change (BNRCC) (2011) that the level of public awareness on issues related to climate change in Nigeria is considered to be low.

Findings of research question 2 shows that human activities that causes global climate change in Ilorin South LGA of Kwara State include waste materials dumped by humans, air, water and land pollutions, construction, mining, burning fusil fuels, destruction of tropical forests and carbon dioxide (CO_2) in the atmosphere. This is in line with Medugu (2009), Brade (2009) & Nwankwoala (2015) who all discovered that human beings contributed to a number of disastrous climate change.

Findings of research question 3 revealed that Global Climate Change Influence Health of Family Members. This is supported by Hathaway & Maibach, (2018) who discovered that evidence has established that people's health can be affected by climate change. Omoruyi & Onafalujo (2011) explained that one of the direct consequences of climate change in Nigeria includes cerebra-spinalmeningitis, cardiovascular respiratory disorder, skin cancer, high blood pressure, malaria and cholera.

Findings of research question 4 revealed that climate change mitigation influence adaptive behavior of family members in Ilorin South LGA Kwara State. These findings agreed with Dioha & Emodi, (2018) and Nkechi et al (2016) who said there is a need to encourage sustainable lifestyle choices such as effective waste reduction, less meat consumption, and use of public transportation.

The result of hypothesis one revealed that climate change significantly influences health of family members in Ilorin South LGA Kwara State. This finding support Akingbade (2010) who reported that incidences of meningitis have been on the increase in Nigeria as a result of excessive

heat. The result of hypothesis two revealed that, climate change significantly influences adaptive behaviour of family members in Ilorin South LGA Kwara State. Building Nigeria's Response to Climate Change (BNRCC) (2011) explained that to integrate climate change adaptation into every aspect of national lifestyle, Nigerians must have awareness and knowledge of what climate change is, how it is impacting them and how they can adapt.

Conclusion and Recommendations

It can be concluded from the findings that the respondents from Ilorin South L.G.A, Kwara State have common awareness of global climate change and the contribution of human activities as a cause to global climate change. The respondents believed climate change influences health of family members agreeing to possible infectious diseases as a consequence with resultant influence of climate change. on adaptive Behavior of family members. If extreme weather event such as droughts, flood, storms, temperature, rise in sea level, variable rainfall, humidity, wind, desertification and land degradation. were to occur more frequently, increases in rates of deaths, injury, infectious diseases and psychological disorder would result therefore, individuals must be prepared to imbibe attitudinal change in order to build capacity for adaptation towards climate change, for example build and maintain wastewater and solid waste management facilities.

Based on the finding, the following recommendations are made.

1. The health sector from primary, secondary and tertiary health institutions should identify the major regional health hazards caused by climate change and ensure that the development of risk-lessening adaptations is employed.
2. To mitigate the threats of climate change in Nigeria, reducing polluting vehicles and public transportation to reduce greenhouse gases is important and there is need to encouraging use of efficient cook stoves and fuels, and cleaner energy sources, in households for heating and cooking to reduce exposure and health impacts from extreme heat.
3. To raise awareness and promote climate change adaptation, there should be workshops, seminars and forums on climate change adaptation and mitigation organized regularly in schools, universities, communities, religious houses, motor parks and public places.by Educationists, Home Economists, health officials, religious leaders media forums, newspapers editors, NGOs or Government establishments for people to be aware of a climate smart lifestyle, environmentally friendly behavior and protection.

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