

CLIMATE CHANGE EDUCATION AS A PANACEA FOR THE MANAGEMENT OF QUALITY LIFE AND WELL-BEING OF STUDENTS IN FEDERAL UNIVERSITIES IN NIGERIA

Ugbor, Cletus Chibuikwe; Omeke Faith Chinwe; Aba Samuel Ifeanyi & Nweze Ukamaka N.*
Department of Educational Foundations, University of Nigeria, Nsukka

Abstract

This paper examined climate change education as a panacea for the management of quality life and well-being of students of Federal Universities in Nigeria. Two research questions guided the study. The study adopted descriptive survey research design. The population of the study was all the Administrative Staff of all the Federal Universities in Nigeria numbering 900. Simple random sampling technique was adopted using 500 Administrative Staff from 25 Federal Universities in Nigeria for the study. Climate Change Questionnaire was designed by the researchers and used to collect data from the respondents. The instrument was face - validated by experts. The reliability of the instruments yielded an overall value with internal consistency co-efficient of 0.81 using Cronbach Alpha method. The results were analyzed using mean scores and standard deviation. The findings showed that, the rationales for the management of climate change education for quality life and wellbeing of students in Federal Universities in Nigeria include; to keep the students abreast of the adaptive and mitigating measures to curb climate change on human resources within the school environment, to reduce the emission of carbon dioxide and other human activities within the school environment, among others. Finally, the impacts of climate change on the quality of life and wellbeing in Federal Universities include; increase in weather conditions, high death rate, low productivity, high rate of poverty, diseases, damage to public health infrastructure, among others. The study recommended among others that, huge budgetary allocation should be provided to the Federal Universities by the government to provide the adaptive and mitigation measure to curb the ravaging impacts of climate change on the management of quality life and well-being of students of Federal Universities in Nigeria.

Keywords: Education, Climate change, Climate change education, Management

Introduction

The lives and wellbeing of citizens of a state are great treasures to the nation especially as they relate to students in schools. This very essential as the students' academic achievement will be enhanced as they study under a conducive atmosphere devoid of harsh weather conditions or alteration of the climate. Climate change has adversely affected the normal quality healthy life of students in Universities in Nigeria due to harsh weather conditions. Jonas (2023) explains that, increased heat waves, have led to high temperature in schools and the students will find it very difficult to study in their hostels or classrooms for effective teaching and learning to take place. This situation will lead to poor academic achievement of the students. Furthermore, Elvis (2023) observes that, most of the excess mortality from heat waves is related to cardiovascular, cerebrovascular and respiratory causes are rife in schools. Thus, a proportion of these deaths occur in susceptible people who would probably have died in the near future but they are likely to be substantial numbers of potentially preventable deaths. Also, Universities that are situated in urban areas suffer from high intense heat waves. By this, Universities in Nigeria that are situated in the urban centers are often particularly affected due to urban heat effects, which results in the temperatures being somewhat higher than the surrounding sub-urban and rural areas. Ibrahim (2022) remarks that, air pollution, and high concentrations may also ensue during heat waves and may contribute to the increased death rates among the students.

Furthermore, the impacts of extreme summer heat on human health may be exacerbated by increase in humidity. In this case, populations are likely to acclimatize to

warmer climates via a range of behavioural, physiological and technological adaptations. The after effect of all these is that, the mental state of the students will be drastically affected to learn as well as, the rot of infrastructural facilities occasioned by the climate change experienced by the students in Nigeria Universities. Also, floods, droughts and storms are common impacts of climate change in any academic environment especially, in Federal Universities in Nigeria. Natural disasters have a variety of health impacts on students. These range from immediate effects on physical injury, morbidity and mortality through to potentially long lasting effects on the mental health of the students in schools. According to Orji (2023), climate change has undermined many determinants for good health such as livelihoods, equality and access to health care and social support structures. These climate-sensitive health risks are disproportionately felt by the most vulnerable and disadvantaged/poor students, entire minorities, poor, communities within and outside the school environment, among others. All these have long effect on the quality healthy life and well-being of students. The side effect of all these is that the students' academic achievements will reduce as their health systems, facilities and school environment remain unconducive for learning due to climate change effect. For instance, Orji further states that, the high rate of floods, droughts and storms in the Universities, increased diarrheal and respiratory disease are reported that the healthy state of the whole school environment are at risk of extinction.

Another glaring effect of climate change on the students of Federal Universities in Nigeria is the high rate of the spread of infectious disease. The transmissions of many infectious diseases agents are sensitive to weather conditions, particularly those spending part of their lifecycle outside the human body. Jacobs (2023) explains that, pathogens are carried by insects and exposed to harsh weather. Jacobs further states that vector- borne diseases typically exhibit seasonal patterns in which the role of temperature and rainfall are well-documented. Some vector-borne diseases such as malaria, also display considerable year to year variation in Universities in Nigeria that can be explained by climate factor. Thus, change can affect the transmission of vector-borne infectious diseases which include temperature, humidity, altered rainfall, soil moisture, among others. Therefore, it can be observed that, changes in climate in Universities in Nigeria has great health impact on the students inform of high death tolls and diseases caused by high temperatures or greenhouse emission which does not support conducive atmosphere for teaching and learning. Therefore, climate change education should be appropriately managed so as to improve the quality of life and wellbeing of students in Federal Universities in Nigeria.

Management refers to the appropriate use of human, material and financial resources of organizations/government through planning, organization, control among others, in order to enhance the organizational goal. Unachukwu and Okorji (2016) observes that, management coordinates and regulates the activities of various members of the organization which is the crux of all the human activities. The authors further observe that, management is the art of scale of getting work done with the help of people using available resources and with the given time limit. Operationally, management connotes the means of attaining the organizational abilities by the organization of human, financial and material resources of an organization through appropriate planning, controlling, conditioning among others in order to achieve the goals and objectives set by them. Thus the management of climate change education refers to all efforts geared towards enabling the learners in schools to gain the insight and address the impacts of the climate crisis by empowering them with the skills, knowledge, values, attitudes needed to act as agents of change. By this, management of climate change education helps to change the behaviour and attitude to make informed decisions by the students in school on climate change through management principles. The appropriate management of climate change education further ensure the students in schools to climate fears of the unknown as well as, the preservation of the earth for future generations to enhance their quality of life and wellbeing in the society.

Quality of life and wellbeing of students in schools has been of paramount importance to the government, school management and parents alike. Unachukwu and Okorji (2016) observe quality as fitting into purpose. By this, the life and wellbeing of a person have a quality when one is comfortable or satisfied with a situation within the environment. Quality of life and wellbeing as used here refers to the state of one being comfortable, positive or subjective state that is in contrast with illness or the mal-functioning of the body system. World Health Organization (WHO, 2020) explains quality of life and wellbeing as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. WHO further observes that, the indicators of quality of life and wellbeing include wealth, employment, the environment, physical and mental health, education and, health, among others. Thus, the conception of quality of life and wellbeing presupposes that it may be based on wealth or capabilities in terms of emotional and physical wellbeing which is drastically affected by climate change. Climate change has been on global discussions due to its impact on the political, economic and socio-cultural aspects of the peoples' life especially to the health sector or to the quality of life and wellbeing of the citizens of Nigeria. By this, changes in the earth's climate and its effects are common concern of human kind. Victor (2019) observes climate change as, the increasing manifestation of greenhouse gases (GHG) and the warming of the earth (global warming) which have reached at its apex at this movement. Jenny (2020) asserts that, climate change is the average weather in a place for a long period of time or years. Thus, the changes or the fluctuations in the weather conditions result to global warming. This is occasioned by the use of gas, oil and coal by individuals from various homes, factories and the transportation system.

The evolution of climate change has been traced to the long-term increase in temperature overtime. Jones (2021) observes that, climate change is traced to the release of carbon dioxide (CO₂) through many human activities of which burning of fossil fuel and land use change contribute over 95% of global CO₂ emission. Operationally, climate change refers to alteration in the weather conditions for a long period of time caused by the excessive release of CO₂ through human activities hence, the need for the management of climate change education in academic institutions such as, the Federal Universities in Nigeria. Education has a pivotal role in the development of nations including Nigeria. The students of Federal Universities in Nigeria through education should be made aware of the functions or variations in their environment occasioned by the climate change especially how it effects the quality of their lives and wellbeing in schools.

Climate change education refers to the mechanism instituted through education to make the learners aware of the dangers inherent in the variations in weather conditions as it affects their quality of life and wellbeing in schools. Edison (2021) asserts that Climate Change Education (CCE) is the education that aims to address and develop effective responses to climate change. The author further observes that, it helps learners understand the causes and consequences of climate change; prepares them to live with the impacts of climate change and empowers them to make appropriate actions or inactions to adopt to more sustainable life styles. According to the United Nations Economic Soco-Cultural Organization (2022), climate change and climate change education are global challenges that can be based on the curriculum so as to provide local learning and widen the mindset of the students on the mitigation and adaption to its unexpected effects. Moreover, CCE helps policy makes in education to understand the urgency and importance of putting mechanisms into its appropriate place to control climate change on a national and global scales. In view of the importance attached to climate change education the United Nations Organizations (2022) asserts that, communities can learn about how climate change will affect them and proactively prevent its effect and how to reduce the carbon emission from their own standpoint. Therefore, climate change education helps the resilience of already vulnerable communities which are more likely to be already affected by climate change. The individuals can also benefit from the climate change education programme through sanitization programmes inform of workshops, conferences, seminars on

the causes and effects of climate change and the best form of mitigation. Operationally, climate change education refers to the mechanism of making the learners aware of the causes and consequences of climate change in schools so as to improve their quality of life and wellbeing. The causes of climate change are many and varied on the quality of healthy life and wellbeing of students in Federal Universities in Nigeria. Maris (2022) states that one of the glaring causes of climate change is the concentration of greenhouse gases and aerosols in the earth's atmosphere through global warming which enhance the depletion of the ozone layer in earth temperature. In this case, it has made temperatures rise during the past decades in the lowest skin of the atmosphere with overheat. Thus, climate extreme is exacerbated due to global warming which effects the quality of health of mankind and general wellbeing.

There are other factors/causes of climate change that are prevalent in Nigeria Universities at present. Marcel (2022) outlines other causes of climate change in Nigeria Universities that have impacted on the healthy life of students as deforestation, bush burning, use of fuel/wood, water/land pollution and uncontrolled population growth of Universities, among others. All these are visible causes of climate change in Nigeria Universities that have impacted negatively on the general healthy life and wellbeing of the students in school. This elicits important questions as follow; what is quality healthcare? What are the effects of climate change in the quality healthy life and wellbeing of students of Federal Universities in Nigeria? Within the field of Health Care, quality of life is often regarded in terms of how a given or certain ailment affects a patient on individual level. Mark (2021) observes that this may be natural weakness that is not life-threatening illness (not terminal), unlike terminal illness, the predictable natural decline in the health of an elder; an unforeseen metaphysical decline of a loved one, among other aspects. According to the World Happiness Report (2016), the quality of life is categorized into being belonging, and becoming respectively, who one is, how one is connected, one's environment, and whether one achieves, one's personal goals, hopes and aspiration. Operationally, quality of health life of student in Federal Universities in Nigeria refers to the students' ability to enjoy normal life activities since life quality is strongly related to wellbeing where one is not suffering from any sickness and maltreatment. Therefore, certain measures should be put in place to contain its healthy well-being impacts on students in Universities in Nigeria.

Firstly, since climate change is likely to impact human health in many ways, it is imperative that some steps are taken to either reduce the global warming with time or develop measures to deal with the challenges posed through adaptation. Eric (2022) states that, mitigation of greenhouse gases involves less reliance on fossil fuels, developing and using alternate efficient power sources, and reducing encroachment on green emission, among others. Therefore, there is the need to reduce the carbon footprint per person over the few next decades, and to cover inequalities between the rich and poor students in school. Thus, the management or leadership of the Nigeria Universities should counter the challenges associated with climate change by inter sectorial and international collaborations in the implementation of policies and programmes meant to reduce the emission of greenhouse gases in schools (Marris, 2022). The government of the Federal Republic of Nigeria should setup commissions solely meant to formulate policies and programmes meant to mitigated the impact of climate change on the quality of healthy life and wellbeing of Nigeria students in Federal Universities. According to Adeleke (2023), the commissions for climate change education in each University should ensure that the effect of the climate change should be mitigated through the practical implementation of the policies and programmes of climate change education to reduce to the barest minimum its health hazards to students in Nigeria Universities. Furthermore, the government should provide adequate funds that will enable the formulation and implementation of policies and programmes of climate change education in schools possible. Zack (2023) observes that, the fund will enable the University leadership to provide enough grounds for the adoption of the mitigation and adaptation measures to climate change to avoid its effects on the quality of healthy life and well-being of the students in school.

Moreover, the provision of adequate facilities for the treatment of health related issues occasioned by climate change should be intensified by the government and the University leadership. According to Johnson (2023), these facilities are required for natural disaster related problems when the vulnerability to stress is acute. This is a pointer to positive attitude of the Universities leadership to the students' welfare. Promoting positive quality healthy life and well-being among the students is another avenue to mitigated or control the psychological stress associated with the ill-effects of climate change in schools. By this, human resilience and coping can reduce the effect of health-related stress due to extreme weather changes. The students can engage in indigenous game or yoga to deal with the stress associated climate change. This will ease off the tension associated with climate change by students in schools when they engage in close circuit games.

Another method to reduce suicide fatalities to the adverse effect of climate change in Nigeria Universities includes debt-abolition or economic support for students who engage in Agricultural ventures in school. This can be done through the creation of cooperative societies to cushion the effects of crops failures on students who engage in mini agricultural ventures at the departmental levels. This will help to reduce the suicide rate among students due to crop failure caused by variation in climate change in schools. Finally, the government, private sector and the University leadership should collaborate by engaging the students on sensitization programmes like workshops, conferences, and seminars, among others to educate them on climate change, its causes and effects on human (quality) healthy life and wellbeing in schools. All these measures will play a major role in educating the students on the major side effects of climate change on human kind not only in Universities but outside it.

Statement of the Problem

Education plays an important role in the developmental strides of any nation. It is seen as an instrument per excellence for national development of the health sector especially, the quality healthy wellbeing of the students of Federal Universities in Nigeria. But there seems to be a deviation from this with the emergence of climate change globally. The increasing emission of greenhouse gases and the warming of the earth (global warming) associated with it, has been observed to have reached an alarming proportion. The consequences of climate change on exposed biological subjects, as well as on vulnerable societies are concern for the scientific community. Thus, climate change has a number of immediate and long-term impacts on the fundamental determinants of human quality life and wellbeing. Rising temperatures, heat waves, floods, droughts, hurricanes, fires, loss of forests, among others can directly and indirect cause human pathologies that are physical and mental in nature, among others. However, there seems to be clear lack of climate change education and how it affects the quality of healthy life and well-being among students of Federal Universities in Nigeria. This has been a grave concern of governments, past and present, school leadership, students, and other stakeholders in Education sector on the management of the quality of life and wellbeing of the students in Federal Universities in Nigeria. It is based on this background that the researchers embarked on the study titled, climate change education as a recipe for the management of quality healthy life and well-being among students of Federal Universities in Nigeria.

Purpose of the Study

The general aim of this study was to investigate climate change education as a recipe for the management of quality healthy life and well-being among students of Federal Universities in Nigeria. Specifically, the objectives of the study include to ascertain:

1. the rationales for climate change education in the management of students' quality healthy life and well-being among students of Federal Universities in Nigeria.
2. the impacts of climate change in the management of students' quality healthy life and well-being among students of Federal Universities in Nigeria.

Research Questions

1. What are the rationales for climate change education in the management of students' quality healthy life and well-being among students of Federal Universities in Nigeria?
2. What are the impacts of climate change in the management of students' quality healthy life and well-being among students of Federal Universities in Nigeria?

Methods

Descriptive survey design was adopted for the study. According to Nworgu (2015), this design attempts to explain the process of obtaining data on a particular features of a given population in a systematic manner that the findings are generalized to the entire population. The population of the study was the nine hundred (900) administrative staff of all the Federal Universities in 2022. (National Universities commission NUC). Simple random sampling technique was used to draw 500 Administrative Staff from 10 Federal Universities in Nigeria to ensure adequate representation in the study The "Climate Change Questionnaire (CCQ)" was designed by the researchers and used to collect data from the respondents. The items were divided into Sections A and B. Section A was on the demographic information of the respondent whereas, Section B had two Clusters A and B.. Cluster A had 10 item statements and it addressed the rationales for climate change education in the management of the students' quality healthy life and well-being in Federal Universities in Nigeria. Cluster B had 7 item statements and it addressed the impacts of climate change in the management of students' quality healthy life and well-being in Federal Universities in Nigeria. The items in the questionnaire were weighted as follows: Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD) with 4, 3, 2, and 1 points responsively. The criterion mean of acceptance was 2.50. The instrument was validated by two experts in Educational Administration and Planning, and one in Science Education Department, all from the University of Nigeria, Nsukka. The Cronbach Alpha method was used to determine the reliability of the instrument. It yielded a reliability co-efficient of 0.81 which was the internal consistency. A total of 500 copies of the instrument were administered and retrieved. The data was analyzed using mean scores and standard deviation. Any item statement with mean rating of 2.50 and above was accepted, while item statement with a rating below 2.50 was disagreed upon.

Results

Research Question One: What are the rationales for climate change education in the management of students' quality healthy life and well-being among the students of Federal Universities in Nigeria?

Table 1: Mean responses of the administrative staff on the rationales for climate change education in the management of the students' quality healthy life and well-being in Federal Universities in Nigeria.

N = 500 Administrative Staff				
S/N	Rationales for Climate Change Education in the Management of Students' Quality Healthy Life and Well-being in Federal Universities in Nigeria.	Mean	Std.	Decision
1	It helps the learners to be abreast of the causes and consequences of climate change in Universities.	3.00	0.31	Agreed
2	It helps the students to develop positive response to climate change.	2.50	0.34	Agreed
3	It helps the learners to live with the climate change	3.00	0.31	Agreed
4	climate change education empowers the learners to take appropriate actions to adopt a more sustainable life styles	3.00	0.31	Agreed
5	It helps to broaden the mind of the students on the mitigation and adaptive measures to curbing the challenges of climate change in school.	3.00	0.31	Agreed

6.	It helps the policy makers to take informed decisions on how best to curb the negative impact of climate change in universities	3.00	0.31	Agreed
7	Climate change education helps students to acquire skills, knowledge, values that will enable them to adapt to dangers cause by climate change in school.	2.65	0.33	Agreed
8	It enables the learners to know the implication of global warming	3.00	0.31	Agreed
9	It helps to increase the literacy of students on climate change and its implications to them.	3.00	0.31	Agreed
10	It enables the learners to be conversant with such terms as renewable energy global warming greenhouse, gases, carbon fort print, deforestation among others that will increase their interest in sensing and solving emerging problems facing the Universities and the world.	3.00	0.31	Agreed

Grand Mean: 2.9; Std: 0.32

Data from research question 1 identified the rationales for climate change education in the management of students' quality healthy life and well-being in Federal Universities in Nigeria. Table 1 shows that, the mean scores and standard deviation of the Administrative Staff on the rationales for climate change education in the management of students' quality healthy life and well-being in Federal Universities in Nigeria. The respondents agreed on all the 1-10 items in table 1 with grand mean scores of 2.9 and standard deviation of 0.32 respectively. The rationales for climate changes education in management of students' quality healthy life and well-being in Federal Universities in Nigeria include that, it enables the learners to be abstract of the meaning, causes and consequences of climate change in school, enables the students to develop positive response to the issues concerning climate change, empowers the learners to adapt to more sustainable healthy life styles, broaden the minds of the learners to the mitigation and adoptive measure to curb the impacts of climate change in school, among others.

Research Question Two: What are the impacts of climate change in the management of students' quality healthy life and well-being in Federal Universities in Nigeria?

Table 2: Mean responses of the administrative staff on the impact of climate change education in the management of students' quality healthy life and well-being in Federal Universities in Nigeria.

N = 500 Administrative Staff				
S/N	Impact of Climate Change in the Management of Students' Quality Healthy Life and Well-being in Federal Universities in Nigeria.	Mean	Std.	Decision
1	It leads to harsh weather conditions of the students in school.	3.00	0.31	Agreed
2	High rate of deaths among the students prevalent in schools	2.50	0.34	Agreed
3	Climate change leads to intense heat waves, air and water position	3.00	0.31	Agreed
4	Climate change leads to increased humidity in Universities	2.65	0.33	Agreed
5	It leads to floods, developments and storms in the schools	2.50	0.34	Agreed
6.	It leads to the spread of infectious diseases in the schools	3.00	0.33	Agreed
7	Teaching and learning conditions are affected, which tends to have mental effects on the students.	3.00	0.33	Agreed

Grand Mean: 2.80; Std: 0.33

Data from research question 2 identified the impacts of climate change in the management of the students' quality healthy life and well-being in Federal Universities in Nigeria. Table 2 indicates that items 1-7 have grand mean scores and standard deviation of 2.80 and 0.33 respectively, which showed that, they are the major impacts of climate change in the management of the students' quality healthy life and well-being in Federal Universities in Nigeria. This implies that, the impacts of climate change in management of the students' quality healthy life and well-being in Federal Universities in Nigeria include: increase in harsh weather conditions, it leads to high rate of deaths among the students, increased in heat waves, rise in humidity, leads to floods, droughts and storms, spread of infectious disease, among others.

Discussions

Discussions are made in accordance with research questions 1 and 2 posed for the study. The evidence from research question 1 revealed that, the rationale for climate change education in the management of students' quality(healthy) life and well-being in Federal Universities in Nigeria include: it enables the learners to be abreast of the meaning, causes and consequences of climate change, development of positive response to climate change, enable the students to develop sustainable quality healthy life and well-being in schools, adoption of mitigating and adaptive climate change measures, among others. The respondents agreed on all the 10 items in table 1 with grand mean scores of 2.9 and standard deviation of 0.32 respectively. This was attested to by the findings of Narrin (2022), Marcel (2022), Mark (2021) among others who stated in different ways the need for climate change education in Federal Universities in Nigeria. Jacob (2023) observes that, it simply implies that, climate change education enables the learners/students to be aware and abreast of the concept of climate change, its causes and effects, among others to the quality healthy life and well-being among the students in Federal Universities in Nigeria.

The evidence from research question 2, table 2 above, shows the impact of climate change and management of the quality healthy life and well-being of students in Federal Universities in Nigeria. The respondents agreed on all the items which showed that they are the impacts of climate change in the management of quality healthy life and well-being of students in Federal Universities in Nigeria. They include therefore, increase in weather conditions which affect the health and well-being of the students, increase in death rates and heat waves, rise in humidity, increase rate of droughts, flood, storms and infectious diseases, among others. Table 2 indicates that items 1-7 have grand mean scores and standard deviation of 2.80 and 0.33 respectively, which showed that, they are the major impacts of climate change in the management of the students' quality healthy life and well-being in Federal Universities in Nigeria. These findings were attested to by the studies carried out by Jones (2023), Elvis (2023) Mark (2022), Orji (2022), among others who in different occasions stated the impact of climate change in the quality of healthy life and well-being of students. Jacob (2023) also observes that, the high death rates, spread of diseases and poor conditions for learning due to the ill effects of climate change were all rife among the students in school. It therefore implies that, climate change affects the quality of healthy life and well-being of students in Federal Universities in Nigeria.

Conclusion

Federal Universities are setup by the Federal Government of Nigeria to promote economic, political, socio-economic and healthy growth of students and other Nigerians as well. This was specifically stated by the National Policy on Higher Education. However, this goal could not be fully achieved due to the emergence of climate change in Nigerian schools. The study identified the rationales and impact of climate change on the quality of healthy life and well-being of students in Federal Universities in Nigeria which formed the basis for the recommendations on the study.

Recommendations

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

1. The Universities in Nigeria alongside the Nigeria government should undertake sensitization programmes inform of workshop seminars, and conferences to keep the students abreast of the causes and consequences of climate change on health;
2. Adequately funding of education to ensure appropriate climate change education programmes in Universities;
3. Establishment of climate change education centers in each University of Nigeria
4. Inclusion of climate change education in the nation's curriculum
5. Planning and implementation of climate change policies and programmes in all Nigeria schools.

References

- Adeleke, M. C. (2023). *Mitigation and adaptive measures for climate change*. Ibadan: Olumoina Publishers Ltd.
- Edison, M. C. (201). *Climate change and education in developing economics*. Lagos: Exetho Press Ltd.
- Eric, C. C. (2022). *Measures of curbing of climate change*. Cambridge: Cambridge University press.
- Federal Republic of Nigeria (2014). *National Policy on Education*. Abuja: Government Press.
- Ibrahim, Y. A. (2022). *Health implications of climate change*. Kogi: Abran Press Ltd.
- Jacobs, P. O. (2023). *Climate change and environmental changes*. Orill Obanje Press Ltd.
- Jenny, B. N. (2020). *Climate change d dynamics*. Abuja: Omori Press Ltd.
- Johnson, E. N. C. (2023). *Government policy guidelines and climate change in Africa*. Oxford: Oxford University Press.
- Jonah, O. N. (2023). *Mental health care and climate change*. Abuja: Osy Press Ltd.
- Jones, C. T. (2021). *What is climate change and adaption process?* Kano Adlliabi Press.
- Majia, A. C. & Edy, K. N. (2022). *Health effect of climate change*. Lagos: Macmillan Press.
- Marcel, K. C. (2022). *Challenges of climate change and health in Nigeria*. Abuja: Remino Press.
- Mark, M. N. (2021). *Impacts and university of climate change*. Cambridge, New York: Cambridge University Press.
- Marris, C. P. N. (2022). *Impact of climate change and health*. Ogun State: Government Press Ltd.
- Nworgu, B.G. (2015). *Educational research: Basic issues and methodologies (3rd ed)*. Nsukka: University Trust Publishers.
- Umachukwu, G. O. & Okorji, P. N. (2016). *Educational management: A skill building approach*. Anambra State: Fex Charles & Patrick Limited.
- United Nations Economic and Socio-cultural and Organization (UNESCO) (2022). *Education and climate change*. Geneva: Mark Publishing
- United Nations Organizations(UNO,2022). *Climate change education in Africa*. Geneva: USAID publications
- Victor, C. C. (2019). *Climate change and the world*. Lagos: Maris Publishers.
- World Happiness Report (2016). *Happiness initiative*. Lagos: Gardian Press
- World Health Organization (2020). *Perspective of quality of life*. Geneva: WHO Press Ltd.
- Zack, A. M. (2023). *Dynamics of heath and climate change*. New York: Cambridge University Press.