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Original Research

Impact of Climate Change on Teachers' Occupational Stress and Attitude to Teaching Among Teachers in Owerri, Imo State

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ABSTRACT

Generally, in Nigeria, the incidence of climate change is increasing loss of biodiversity, poor agricultural food production, food and water insecurity, impaired human health, poor standard of living, and quality of life. Nigeria is in the top 25 highest greenhouse gas emitters, contributing 0.8% of the global total emissions. Despite these devastating challenges, there is a dearth of literature in Nigeria projecting scientific discussions that would enable classroom learners, the public, and significant stakeholders to have a good understanding of the effect of climate change and global warming on environmental sustainability and its impact on the wellbeing and behavioral dispositions of teachers towards teaching in Owerri. Based on this context, this study empirically investigated the impact of climate change on teachers' occupational stress and attitude to teaching within Owerri Metropolis, Imo State, Nigeria. The study used an ex-post facto research design of descriptive nature to determine if relationships exist among the variables under study without manipulating them. The study population consists of 3000 secondary school teachers engaged in public schools within Owerri, Imo state. In order to give teachers an equal chance to participate in the study, a simple random sampling technique using the hat picking method was employed to select 300 teachers. One research question was asked, and two hypotheses were tested at a 0.05 alpha level of significance. Data was collected using three standardized instruments. The collected data were analyzed using Multiple Regression and Pearson Product-Moment Correlation. The results revealed that climate change had a significant relative impact on occupational stress ($\beta = 0.311$) and attitude to teaching ($\beta = 0.236$). Impact of climate change on teachers' make them to express high occupational stress, $r(298) = 0.486$, $p < .05$ also, the experience with climate change makes teachers to express negative attitude to teaching, $r(298) = 0.358$, $p < .05$. The outcome of this study implies that adverse harsh climatic conditions, due to incidence of climate change has negative impact on the general wellbeing and behavioural dispositions of teachers towards teaching. Therefore, the Nigerian government needs to initiate policies that would make the teaching and learning environment conducive, enterprising, and attractive. The remuneration of teachers and their working conditions should be of a global standard. This is necessary to motivate and reinforce the positive commitment of teachers to their job even in adverse global climatic change conditions.

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1. INTRODUCTION

The challenges of climate change are quite frustrating for the developmental wellbeing of humans and the environment, being an ecological phenomenon that has the globe in seeking solutions, and of late, climate change has made the Earth's atmosphere experience increased heat retention (Benjamin, Por, & Budescu, 2017). It is of note that changes in global climatic conditions have an enormous negative effect on aquatic life, agricultural produce, livestock, human existence, and environmental sustainability (Umeuduji, 2012). However, Dike and Amadi (2016) stated that climate change serves as an imminent threat to human survival and ecological sustainability. The consciousness of the negativity of climate change on the human planet made the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in 2010 awaken global awareness of the need for an educational curriculum to project an eco-friendly sensitivity mindset as a measure to promote collective responsibility to safeguard environmental sustainability through pedagogy (UNESCO, 2010). Teachings of teachers concerning the adversity of climate change to human and environmental survival can easily make learners have good insight and resilience in putting measures to attain a productive and sustainable environment for all.

Research documents that the global human environment in the 21st century has witnessed significant threats to its productivity and resourcefulness due to climate change (Dal et al., 2015). Climate change has a tremendous negative effect on food security, educational service delivery, infrastructural and socio-economic development, and public health (Dal et al., 2015). Most of the research on climate change focuses on the public understanding of climate change for the purpose of identifying human perception of the topic. Many scholars have analyzed the issue of climate change in recognition of public perception (Dal et al., 2015). For example, in Nigeria, the study of Igu et al. (2023) investigated how teachers' climate change beliefs influence classroom management practices for students' climate change awareness. Their study was conducted in nine senior secondary schools in Ebonyi State, Nigeria. The adopted descriptive survey research design is of a quantitative nature, using structured questionnaires to collect data. The result of the study shows that teachers' perception of climate change is a significant predictor of students' perception of climate change. Based on the findings of the study, one of the recommendations is that Government and school administrators should encourage regular training and re-training of teachers on issues of climate change in order to deepen their understanding of the phenomenon and thus, increase their awareness levels, which will seamlessly transcend to students.

Ede et al. (2023) studied the extent of climate change awareness among secondary school teachers in Ebonyi State, Nigeria. They adopted a descriptive survey research design for the study. Three research questions and three null hypotheses guided the study, and a 24-item questionnaire titled the Climate Change Awareness Questionnaire (CCAQ) was used for data collection from 300 teachers randomly selected from eight purposively selected secondary schools from communities with visible impacts of climate change in Ebonyi State, Nigeria. The result of the study indicates that the extent of awareness on the causes, impacts, and adaptation/mitigation strategies of climate change among the secondary school teachers in Ebonyi State, Nigeria, is very little. Based on the findings, the researchers recommended mainstreaming climate change throughout the secondary education system in Ebonyi State, Nigeria.

Eze et al. (2022) assessed Nigerian teachers' level of climate science literacy and need for training on concepts of climate change. They employed a descriptive survey design and randomly selected 410 teachers from among 8338 teachers teaching in public secondary schools in Enugu State, southeastern Nigeria. The result of the study revealed that teachers reported low to moderate climate science literacy and expressed high training needs on climate change concepts. Lower climate science literacy was related to higher expressed training needs. Sadly, teachers who possess little or no climate science literacy and expressed less or no training needs in climate change causes, impacts, and solutions constitute over half of the respondents of this study (53.90%). These are mostly science teachers. This situation, if unreversed, may lead to the transfer of misconceptions and inaccurate information on climate change to students.

Ortsa and Akwam (2021) adopted a survey research design in conducting their study on climate change and Teachers' performance in secondary schools in Benue State, Nigeria. 5,225 teachers from 512 secondary schools constitute the population of the study. They used a stratified sampling technique to select 528 (10%) teachers from 51 (10%) secondary schools: Two research questions and two hypotheses guided the study. A 10-item self-structured questionnaire titled "climate change and teachers' performance questionnaire (CCTPQ) was used for data collection. The outcome of the study revealed that rainfall has a significant impact on teachers' performance in secondary schools in Benue State, Nigeria. The study also found that excessive heat has a significant impact on teachers' performance in secondary schools. It was concluded that climate change significantly impacts teachers' performances in secondary schools in Benue State, Nigeria. Based on the findings, it was recommended among others that secondary principals should provide raincoats to teachers during the rainy season to enable them to perform effectively, and the government should provide air-conditioning or ceiling fans during excessive heat in the classrooms for efficient teacher performance.

As observed from documented literature on issues of climate change in Nigeria, and to the best of my knowledge, most studies projects content of awareness (Ede et al., 2023), knowledge, belief, causes and influences on classroom management practice (Igu et al., 2023), teachers' literacy of climate change and the need for training (Eze et al., 2022) and impact of climate change on teachers' teaching performance (Ortsa & Akwam, 2021). However, research on the implications of climate change on the physio-emotional and psycho-behavioral disposition of teachers in Nigeria, and mostly in Owerri, Imo State, Nigeria, has not received the attention it deserves. Imo is one of the five South-Eastern States in Nigeria, greatly impacted negatively by climate change.

Incidence of climate change in Owerri, Imo State has caused severe economic, environmental, and health crises, primarily driven by intense rainfall variability, rising temperatures, and widespread ecological disruption. Major impacts include devastating gully erosion, widespread flooding, reduced agricultural productivity, and community displacement. Most significantly, climate change has caused an increasing rise in temperatures, drought, erosion, floods, land degradation, thunderstorms, bush fires, landslides, and extreme weather conditions (Olaniyi et al., 2019). Generally, in Nigeria, the incidence of climate change is increasing loss of biodiversity, poor agricultural food production, food and water insecurity, impaired human health, poor standard of living, and quality of life (Butu et al., 2022). Nigeria is in the top 25 highest greenhouse gas emitters, contributing 0.8% of the global total emissions (Jones et al., 2024). Nigeria has committed to cut greenhouse gas emissions by 20% on its own, and by 47% if it receives international support, by 2030 (Climate Action Tracker, 2023). Despite these devastating challenges, there is a dearth of literature in Nigeria projecting scientific discussions that would enable classroom learners, the public, and significant stakeholders to have a good understanding of the effect of climate change and global warming on environmental sustainability and its impact on the wellbeing and behavioral dispositions of teachers towards teaching in Owerri. Based on this context, this study empirically investigated the impact of climate change on teachers' occupational stress and attitude to teaching within Owerri Metropolis, Imo State, Nigeria.

Globally, the incidence of climate change is a phenomenal issue of critical concern due to its devastating implications on the human environment, sustainability, quality of life, and general wellbeing (Pörtner et al., 2021). This development has enhanced the increasing societal awareness of the need for comprehensive education on the adversity of climate change and measures to cope with it (Crandon et al., 2022). Global education on the challenges of climate change is said to be paramount in enhancing climate change enlightenment and literacy (Simpson et al., 2021); teachers and students are pertinent to enlightening and sensitizing society on the challenges of climate change.

Teachers are vital in helping society connect with the reality of climate change, climate, and climate literacy in Nigeria because societal impressions of climate change are mainly associated with the incidence of extreme heat and flooding. Therefore, early education on climate change and related environmental issues via efforts of teachers is quite essential (Jibola-Kadir, 2020). Facilitating the education of climate change, creating awareness of its implications on human existence, is critical not only for evaluating its effects and risks but also for motivating individuals at all levels of society to take action against it (Mustapha et al., 2022).

This implies that teachers play a vital role in supporting learners' intellectual development, character formation, capacity building, empowerment, and societal development. These expectations are high within the contemporary competitive world because education is regarded as an excellent instrument in the realization of productive human capital development and national growth. However, as important as education is in the context of human and national development, teachers can only make a significant impact in human and societal development when they are satisfied with their profession and committed to it. This is based on the fact that teachers are vital to a successful classroom learning experience, based on their multifaceted roles. Thus, Olorundare (2003) reported a strong and positive relationship between what teachers do and how they coordinate effective learning activities and their student learning outcomes. This implies that the strategic function of teaching in the entire education process cannot be overemphasized, especially when it is known that it is teaching and learning that make it possible for an individual's acquisition of relevant knowledge and skills, which in turn make him an educated and useful member of society.

Teachers teach most of the time under extreme heat and harsh conditions in classes that lack appropriate ventilation. This more often than not makes teachers sweat excessively, get irritated, and exhausted due to the impact of climate change on the human environment. Thus, Arikewuyo (2006) stated that the environment in which teachers teach in Nigeria is quite disheartening, frustrating, and eco-humiliating. This often makes Nigerian teachers express dissatisfaction and a poor attitude toward work. Teachers often see themselves as object of humiliation, and this ignites an expression of a dissatisfying attitude to work. In congruence, Gbore (2013) posited that teachers' attitude to work can be regarded as the entirety of their disposition to their job, school environment, and the act of teaching. A teacher's attitude to teaching can be self-cultivated or influenced by another teacher. Teacher's negative attitudinal disposition to act of teaching can negatively be an element of distress on the academic attainment of students. The conduct of teachers can make or mar the future of learners (Gbore, 2013).

Attitude characterizes a person's relational dispositions towards his or her environment and taking unreserved responsibility in ensuring their conduct aligns with societal norms and expectations. The inclination of an individual's attitude can be driven by negative or positive intent when expressed in the discharge of their routine duty or in response to a designated task. For example, it is established that teachers' absenteeism from classroom teaching and learning interactive engagement has a negative impact on students' cognitive attainment and interest in learning activities (Finlayson, 2009). This implies that teachers' positive dispositions during teaching and learning interactive experiences have a grave impact on learners' acquisition of knowledge. Research report indicates that teachers' dedication to teaching has a predictive impact on students' academic performance (Oroujlou & Vahedi, 2011); it determines students' approach to classroom task engagement (Sprinthall, 2007).

Venables and Allender's (2006) study on teachers in universities noted that 50% experience psychologically related stress and 69% job stress due to harsh environmental conditions. The inability of some teachers to develop coping mechanisms in overcoming environmental constraints is associated with occupational stress, job dissatisfaction, and students' academic failure (Nwadiani, 2006). Role vagueness and multitasking responsibilities of teachers make their work stressful and impair their work-related performance (Bridger et al., 2007). Increased academic load and mounting environmental pressure ignite teachers' occupational stress and lower productivity (Stress, 2008).

Stress experienced by teachers while dispensing their teaching responsibilities is termed occupational. This pattern of stress might not be associated with only teaching responsibilities but also environmental conditions. Occupational stress can impair the psycho-emotional and intellectual wellbeing of teachers (Brown & Uehara, 2008). Unmanaged occupational stress negatively affects teachers' productivity and teaching efficacy (Brown & Uehara, 2008). Occupational stress reduces teachers' passion for teaching and increases exit from teaching (Brown & Uehara, 2008). An unconducive work environment and culture make the occurrence of occupational stress among teachers in Nigeria appear inevitable (Adeyemo & Ogunyemi, 2010). The mental distress and physical disequilibrium associated with occupational stress can be overwhelming and energy-sapping (Brown & Uehara, 2008). Victims can experience work anxiety, depression, and untold physiological and physical strain (Brown & Uehara, 2008). Hostility within operations in the work environment induces occupational stress (Cooper-Hakim & Viswesvaran, 2005).

The theoretical framework of this research work is anchored on the postulations of Deci and Ryan (1985), Self-Determination Theory (SDT). The concept of this theory projects that the environment has a significant impact on human behavioral dispositions. Human motivational drive and personality consciousness and make-up are intrinsically and extrinsically influenced and showcase why individual differences among people exist (Deci & Ryan, 1985). This theory gives a good insight into how the human socio-cultural environment enhances cognitive development, the capacity to make appropriate choices, and attain a good quality of life. This is based on the fact that human attitudinal dispositions are determined by the desire to attain autonomy, projecting their life concerns. For example, teachers being individuals of intellectual knowledge and competence would always cherish to express their teaching capability in a passionate way and manner devoid of stress, environmental, or climatic barriers. This is one of the major challenges that negatively frustrate the passion of teachers in Nigeria towards their zeal to teach, impart knowledge, and modify behavior. The poor school infrastructure, dilapidated and poorly ventilated classrooms, noisy school and classroom environment, and extreme heat from harsh sunlight are often distressing on the mental and general wellbeing of teachers and students alike. Also, teachers expressing competence via showcasing their capability in handling their intellectual affairs and sense of relatedness to project their sensitivity and connectivity to the needs of their students and the expectations of their environment are often deterred because they are happy with their job as teachers. This is because the societal perception of teachers in Nigeria is quite degrading. Teachers are seen as poorly paid and work in a very poor environment and conditions. However, teachers' desire in Nigeria to attain these psychological needs (autonomy, competence, relatedness, and connectivity) drives them to be creatively engaged in environmental productivity because it has a positive impact on human wellness and improved quality of life (Deci & Ryan, 1985). Hypothetically, the contextual application of Self Determination Theory postulations in classroom interactive engagement, and specifically teachers' attitudinal dispositions to teaching in the Nigerian context, is quite appealing. This theory makes us understand that teachers, as active beings, equally have the desire to achieve success, attain competence in teaching, and develop the capacity to overcome challenging barriers. These developmental aspirations require environmental support, attitudinal change, motivational drive, and resilience (Ryan & Deci, 2000). Teachers in Nigeria are often in conflict with personal interest, the environment, and the reality of their job. Gaining autonomy has been a herculean task, and expressing competence has been frustrating because of environmental hostility, a poor teaching environment, and heated and poorly ventilated classrooms. Also, most teachers in Nigeria do not have a sense of relatedness. This is because they are not appreciated and connected to the environment. This development has made teachers less productive and functionally impaired. When an individual is not motivated to act positively, the spirited effort to contribute positively to self and societal growth will be thwarted (Deci & Ryan, 2000).

1.1. Statement of the problem

The overwhelming heat and rise in sunlight in Nigeria due to climate change can be devastating to the classroom teaching and learning environment. Within the Nigerian educational sector, teachers are daily exposed to an uncomfortable classroom and office environment. This unpalatable challenge can make teaching experience disheartening to teachers who are pivotal to the nation attaining sustainable national development. Thus, an unconducive teaching environment has a compounding negative rippling effect on Nigerian teachers' personality, identity, sense of self-worth, commitment to responsibility, and satisfaction with their job. The neglect of teachers' concerns in Nigeria has led to a high rate of dislike for teaching as a profession and a mass exodus of trained teachers to other professions and human endeavors. The stress associated with teaching is confounding. Given this poor state of Nigerian teachers, low morale, poor attitude to work, and poor commitment to work, it is often the order of the day. Therefore, research on the impact of climate change on occupational stress and teaching attitudes among teachers in Owerri, Imo State, is very necessary.

1.2. The purpose of the study

The intent is to empirically investigate the impact of climate change on teachers' occupational stress and attitude to teaching among teachers in Owerri, Imo state.

1.3. The need for the present study

The utmost importance of this study cannot be overestimated due to its benefit of reawakening the consciousness of teachers, schools, school administrators, and the government. For example, a counseling psychologist would find the results of the study useful in remediating the challenges of occupational stress and poor attitudinal disposition to work among teachers. Also, it is anticipated that the outcome will add value to global knowledge on the implications of climate change on teachers' occupational stress and dispositions to teaching in Nigeria. Furthermore, it would assist teachers and their employers in knowing how best to work towards ensuring that the teaching and learning environment is conducive for teachers and students.

1.4. Research Question

Does climate change have a relative impact on teachers' occupational stress and attitude to work?

1.5. Hypotheses raised for the study

1. The relationship between teachers' occupational stress and climate change will not be significant
2. The relationship between teachers' attitudes to work and climate change will not be significant

2. METHODS

The study used an ex-post facto research design of descriptive nature to determine if relationships exist among the variables under study without manipulating them. The study population consists of 3000 secondary school teachers engaged in public schools within Owerri, Imo state. In order to give teachers an equal chance to participate in the study, a simple random sampling technique using the lottery method was employed to select 300 teachers.

2.1. Instruments

A standardized instrument termed Climate Stewardship Survey (CSS) by Walker & McNeal (2013) was used to determine the impact of global climate change on attitudinal dispositions of teachers who participated in the study. It has 84 items that solely addressed an individual's understanding of what climate change means, what causes climate change, the impact of climate change on wellbeing, and formulated issues and policies on the ground to address climate change. It items elicits information on concerns such as: Global warming can disrupt agricultural activities; damage quality and reduce quantity of produce, impair movement patterns of animal; cause sea level to rise; negative changes in environment, harmful heat, erupt dust in the air, increased scorching sunlight, causes deforestation, increase burning of agricultural farm lands; the earth is not warming but cooling; warming of the earth is quite advantageous and not harmful; As an individual are you concern about climate change? Do you have an idea of the causes of climate change? Etc. The instrument has an internal reliability coefficient of 0.93.

The teachers' Occupational Stress Inventory (Osipow, 1998) was used to determine the level of occupational stress expressed by teachers. It is a 5-point Likert scale with 10 items and response patterns ranging from never (1) to most of the time (5). It has items that reflect on issues such as: My workload is exhausting; My work environment is conflict-prone; Challenges I experience are positive; etc. The instrument has an internal reliability coefficient of .88 to .93.

Attitude to teaching scale by Hussain (2004): This was used to determine teachers' attitude to teaching. It has twenty response items on a 5-point Likert format of strongly disagree (1) to strongly agree (5). Its response items reflect context such as: "Am a proud teacher and feel proud to express it", "Teaching is as good as any job". This instrument has been used across diverse cultural settings and has an internal reliability coefficient of 0.79.

2.2. Procedure for administration

First, I attained the permission of the schools' principals for the study. Also, the teachers' consent was sought. The essence of the study was explained to the principals and teachers. After the enlightenment and guidance on how to fill out the instruments, I personally administered the research instruments to the teachers. I made it clear to the teachers that their responses are for research purposes only and would be treated with utmost confidentiality. The process of administering the instrument took 3weeks. Instruments were collected immediately after the response to facilitate the analysis of data.

2.3. Analysis of data

The empirical data collected for this study through quantitative measures were analyzed using Pearson Product-Moment Correlation (PPMC) and the Multiple Regression statistical tool at a 0.05 alpha significance level. The study used Multiple Regression to answer the research question because the study sought to determine the relative impact climate change has on teachers' occupational stress and their attitude to work. And PPMC was used to test the hypotheses raised for the study to determine the level of relationship between climate change, teachers' occupational stress, and their attitude to work, whether it is significant or not, to determine acceptance or rejection.

3. RESULTS

3.1. Correlation analysis of climate change, occupational stress, and teachers' attitudes to teaching

Table 1 shows the mean, standard deviation, and zero-order correlation among the variables as indicated in the Multiple Regression Model. It was observed that there was a significant relationship between the independent variables and the dependent variable (climate change) in the following order of magnitude: occupational stress (R = 0.486, $p < 0.05$) and attitude to teaching (R = 0.358, $p < 0.05$). This shows that the independent variables correlate significantly with the dependent variable (climate change). Thus, it implies that when environmental climatic conditions are not favorable for human habitation, such as excessive heat due to increased sunlight, heavy rainfall, flooding, etc., it naturally induces occupational stress and frustrates teachers' desire to put in their best commitment to work. Teachers' readiness to come to work when the environment is flooded during heavy rainfall can be very frustrating and stressful. Also, when the environment is hot, and there is no fan or air conditioner to cool the office space, it can be very agonizing. This impairs productivity, resourcefulness, commitment to work, and job satisfaction of teachers in Nigeria.

Table 1. Multiple regression model correlation matrix of the relationship between the variables

Variables	N	Mean	Std Dev	1	2	3
Climate Change	300	14.33	3.434	1.000		
Occupational Stress	300	13.55	22.839	.486	1.000	
Attitude to Teaching	300	10.45	2.842	.358	.410	1.000

3.2. Relative impact of climate change on occupational stress and work attitudes among teachers

The information in Table 2 shows that climate change had a significant relative impact on occupational stress (β = 0.311) and attitude to teaching (β = 0.236). This indicates that climate change has a significant effect on the occupational stress of teachers. The uncontrollable heat due to increased sunlight, poor ventilation, and infrastructure induces stress and makes teachers uncomfortable. Also, it reduces teachers' passion to teach and makes them have a poor attitude toward work.

Table 2. Multiple regression showing the relative impact of climate change on teachers' occupational stress and attitude to work

Variable	Unstandardised Coefficient		Standardised Coefficient	Rank	t	p	Remark
	B	Std. Error	Beta				
Constant	14.691	5.317	-		11.161	.000	Sig
Occupational Stress	.712	.283	.311	1st	4.113	.000	Sig
Attitude to Teaching	.561	.195	.236	2th	2.739	.000	Sig

3.3. Hypothesis testing results

Research Hypotheses 1: There will be no significant relationship between teachers' occupational stress and climate change

Table 3. PPMC summary table indicating if a significant relationship exists between the occupational stress of teachers and climate change

Variables	N	Mean	SD	R	df	P
Climate Change	300	14.33	3.434	.486	298	Sig
Occupational Stress	300	13.55	2.839			

Highlights of Table 3 indicate that the impact of climate change on teachers makes them express high occupational stress, r (298) = 0.486, $p < .05$. The mean and standard deviation for teachers' occupational stress were 13.55 and 2.839, respectively. This indicates that the severity of harsh hot weather due to increased sunlight and poorly planned subject times tables induces occupational stress. For example, in Nigeria, subjects such as mathematics, physics, chemistry, and other related science subjects are taught in the afternoon instead of early in the morning. This development can be very stressful for maths, physics, chemistry, etc. to be teaching in the hot afternoon. These subjects involve calculations that are best attended to when the weather is cold and the atmosphere is conducive to enhancing concentration and focus. But when the reverse is the case, teachers and students can easily become stressed, frustrated, and less focused.

Research Hypotheses 2: There will be no significant relationship between teachers' attitude to work and climate change

Table 4. PPMC summary table showing a significant relationship between teachers' attitudes to teaching and climate change

Variables	N	Mean	SD	R	df	P
Climate Change	300	14.33	3.434	.358	298	Sig
Attitude to Teaching	300	10.45	2.842			

Findings in Table 4 reveal that the experience with climate change makes teachers express a negative attitude to teaching, r (298) = 0.358, $p < .05$. The mean and standard deviation for teachers' attitude to teaching were 10.45 and 2.842, respectively. This implies that poor and unfavorable working conditions aggravated by harsh climatic change conditions can make teachers express a negative attitude toward work. For example, in Nigeria, it is common to see teachers sit under trees when the environment is hot because there is no light or fan in their common office, where you have about twenty or thirty sitting in an open space room with poor ventilation. Also, when it rains, most teachers do not report in school because some schools become flooded, and the classroom and staff office roofs drop rainwater. This development is often stressful and discouraging, and as such, most teachers develop a poor attitude towards teaching in Nigeria

4. DISCUSSION

The answer to the research question revealed that climate change had a significant relative impact on occupational stress (β = 0.311) and attitude to teaching (β = 0.236). This indicates that climate change has a significant effect on the occupational stress of teachers. The uncontrollable heat due to increased sunlight, poor ventilation, and infrastructure induces stress and makes teachers uncomfortable. Also, it reduces teachers' passion to teach and makes them have a poor attitude toward work. Also, it shows that the adverse effect of global warming can make teachers experience occupational stress and express a negative disposition to teaching. This development further highlights the fact that the incidence of climate change is a phenomenal issue of critical concern due to its devastating implications on the human environment, sustainability, quality of life, and general wellbeing (Pörtner et al., 2021). This development has enhanced the increasing societal awareness of the need for comprehensive education on the adversity of climate change and measures to cope with it (Crandon et al., 2022). Global education on the challenges of climate change is said to be paramount in enhancing climate change enlightenment and literacy (Simpson et al., 2021); teachers and students are pertinent to enlightening and sensitizing society on the challenges of climate change. It is established that changes in global climatic conditions have an enormous negative effect on aquatic life, agricultural produce, livestock, human existence, and environmental sustainability (Umeuduji, 2012). However, Dike and Amadi (2016) stated that climate change serves as an imminent threat to human survival and ecological sustainability. Research documents that the global human environment in the 21st century has witnessed significant threats to its productivity and resourcefulness due to climate change (Dal et al., 2015). Climate change has a tremendous negative effect on food security, educational service delivery, infrastructural and socio-economic development, and public health (Dal et al., 2015).

Outcome of the first hypothesis indicates that the impact of climate change on teachers makes them express high occupational stress, r (298) = 0.486, $p < .05$. This indicates that the severity of harsh hot weather due to increased sunlight and poorly planned subject time tables induces occupational stress. For example, in Nigeria, subjects such as mathematics, physics, chemistry, and other related science subjects are taught in the afternoon instead of early in the morning. This development can be very stressful for maths, physics, chemistry, etc. to be teaching in the hot afternoon. These subjects involve calculations that are best attended to when the weather is cold and the atmosphere is conducive to enhancing concentration and focus. But when the reverse is the case, teachers and students can easily become stressed, frustrated, and less focused. This development shows that the challenges of climate change are quite frustrating for the developmental wellbeing of humans and the environment, being an ecological phenomenon that has got the globe in seeking solutions, and of late, climate change has made the Earth's atmosphere experience increased heat retention (Benjamin, Por, & Budescu, 2017). Venables and Allender's (2006) study on teachers in universities noted that 50% experience psychologically related stress and 69% job stress due to harsh environmental conditions. The inability of some teachers to develop coping mechanisms in overcoming environmental constraints is associated with occupational stress, job dissatisfaction, and students' academic failure (Nwadiani, 2006). Role vagueness and multitasking responsibilities of teachers make their work stressful and impair their work-related performance (Bridger et al., 2007). Increased academic load and mounting environmental pressure ignite teachers' occupational stress and lower productivity (Stress, 2008). Occupational stress can impair the psycho-emotional and intellectual wellbeing of teachers (Brown & Uehara, 2008). Unmanaged occupational stress negatively affects teachers' productivity and teaching efficacy (Brown & Uehara, 2008). Occupational stress reduces teachers' passion for teaching and increases exit from teaching (Brown & Uehara, 2008). An unconducive work environment and culture make the occurrence of occupational stress among teachers in Nigeria appear inevitable (Adeyemo & Ogunyemi, 2010). The mental distress and physical disequilibrium associated with occupational stress can be overwhelming and energy-sapping (Brown & Uehara, 2008). Victims can experience work anxiety, depression, and untold physiological and physical strain (Brown & Uehara, 2008). Hostility within operations in the work environment induces occupational stress (Cooper-Hakim & Viswesvaran, 2005).

The outcome of the second hypothesis shows that the experience with climate change makes teachers express a negative attitude to teaching, r (298) = 0.358, $p < .05$. This implies that poor and unfavorable working conditions aggravated by harsh climatic change conditions can make teachers express a negative attitude to work. For example, in Nigeria, it is common to see teachers sit under trees when the environment is hot because there is no light or fan in their common office, where you have about twenty or thirty sitting in an open space room with poor ventilation. Also, when it rains, most teachers do not report in school because some schools become flooded, and the classroom and staff office roofs drop rainwater. This development is often stressful and discouraging, and as such, most teachers develop a poor attitude towards teaching in Nigeria. This gives credence to the fact that teachers teach most of the time under extreme heat and harsh conditions in classes that lack appropriate ventilation. This more often than not makes teachers sweat excessively, get irritated, and exhausted due to the impact of climate change on the human environment. Thus, Arikewuyo (2006) stated that the environment in which teachers teach in Nigeria is quite disheartening, frustrating, and eco-humiliating. This often makes Nigerian teachers express dissatisfaction and a poor attitude toward work. Teachers often see themselves as object of humiliation, and this ignites an expression of a dissatisfying attitude to work. In congruence, Gbore (2013) posited that teachers' attitude to work can be regarded as the entirety of their disposition to their job, school environment, and the act of teaching. A teacher's attitude to teaching can be self-cultivated or influenced by another teacher. Teacher's negative attitudinal disposition to act of teaching can negatively be an element of distress on the academic attainment of students. The conduct of teachers can make or mar the future of learners (Gbore, 2013). The inclination of an individual's attitude can be driven by negative or positive intent when expressed in the discharge of their routine duty or in response to a designated task. For example, it is established that teachers' absenteeism from classroom teaching and learning interactive engagement has a negative impact on students' cognitive attainment and interest in learning activities (Finlayson, 2009). This implies that teachers' positive dispositions during teaching and learning interactive experiences have a grave impact on learners' acquisition of knowledge. Research report indicates that teachers' dedication to teaching has a predictive impact on students' academic performance (Oroujlou & Vahedi, 2011); it determines students' approach to classroom task engagement (Sprinthall, 2007).

5. CONCLUSION AND RECOMMENDATIONS

Research outcome of this study indicates that global warming has critical implications on teachers' wellbeing, functionality, and attitudinal dispositions to work. Environmental warming has a relative impact on teachers' occupational stress and approach to work. This development heightens the call for the government to put in place measures that will help address climate change, environmental safety, improve the welfare of teachers, make the learning environment conducive, and ensure the sustainability of the environment and human existence.

Recommendations are made in line with the outcome of the study, as follows:

1. The Nigerian government policy on teaching as a profession should be such that it would make teaching rewarding and attractive. The remuneration of teachers and their working conditions should be of a global standard. This is necessary to motivate and reinforce the positive commitment of teachers to their job, even in adverse global climatic change conditions.
2. Teachers need to ensure they develop positive attitudinal dispositions to teaching by reappraising their sense of commitment and readiness to impact positively on the developmental wellbeing of learners despite situational constraints by developing the necessary coping mechanisms that would enable them to adjust to unfavorable situations.
3. Government agencies, authorities of schools, and significant stakeholders should make the teaching and learning environment conducive in order to inspire teachers to be committed to teaching and be role models.
4. Authorities of schools make sure teachers are not overloaded with unnecessary multi-tasking responsibilities that would be stressful and frustrating, as it could impair their readiness to work and professional resilience.

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DECLARATION OF INTEREST

I declare that there is no conflict of interest associated with this research work

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ETHICAL STATEMENT

Not applicable

AI USE STATEMENT

I declare that no generative artificial intelligence (AI) tools were used in the preparation, analysis, or writing of this manuscript.

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