American Journal of Environment and Climate (AJEC)

ISSN: 2832-403X (ONLINE)

VOLUME 3 ISSUE 2 (2024)

PUBLISHED BY

E-PALLI PUBLISHERS, DELAWARE, USA

American Journal of Environment and Climate (AJEC)

Volume 3 Issue 2, Year 2024
ISSN: 2832-403X (Online)
DOI: https://doi.org/10.54536/ajec.v3i2.3035
https://journals.e-palli.com/home/index.php/ajec

Public Conceptions of Climate Change Impact as a Human Health Risk. A Case Study in Cameroon

Marcel Ndasack Ndifon[1*], Engin Baysen[1]

Article Information

Received: June 22, 2024

Accepted: July 26, 2024

Published: July 30, 2024

Keywords

Climate Change, Public Concepts, Impact, Human Health, Risk

ABSTRACT

This research looks at the public's perception of climate change's impact as a human health risk in Cameroon. With the use of an extensive survey, the research investigates Cameroonian demographic data, levels of education, and views about the perception of climate change as a human health risk. The descriptive data reveal that master's students are significantly represented among the participants, and men predominate. According to the findings, most students are aware of climate change and its serious future effects, which include rising poverty, disease outbreaks, and extreme temperatures. According to the study's findings, tackling the complex issues raised by climate change requires an entire population that is both engaged and aware. Institutions of higher learning are essential to this effort since they emphasize how curriculum should incorporate climate education in order to empower many more generations to come. In order to improve public awareness and encourage significant steps toward sustainability as well as health protection in the context of climate change, the research emphasizes cooperation between legislators, learners, and the general public. These parties may build a society that is both ecologically conscientious and even more adaptable by cooperating. People can make decisions that help lessen the consequences of climate change by increasing their knowledge and consciousness. By adopting a comprehensive strategy, we can guarantee an environmentally friendly future for future generations in addition to the present one.

INTRODUCTION

The underlying cause of worldwide change in the environment has now been conclusively linked to humanity, according to the available literature, the effects on humanity and ecological frameworks are anticipated to be catastrophic and significant, especially among those who are the most economically and physically at-risk people on the face of the earth (Hayes *et al.*, 2018). Through science and technology, human beings have developed a lot of machines that have indeed helped improve the average quality of life across the world. These technologies have helped provide opportunities and services that were once thought impossible to be achieved. However, these same technologies have also made unhealthy demands on our environment, which has led to the release of more greenhouse gases into the atmosphere. Greenhouse gases cause greenhouse effects, and these effects manifest by making the climate hotter and increasing the level of solar radiation (Winkler *et al.*, 2015). The greenhouse gases have been

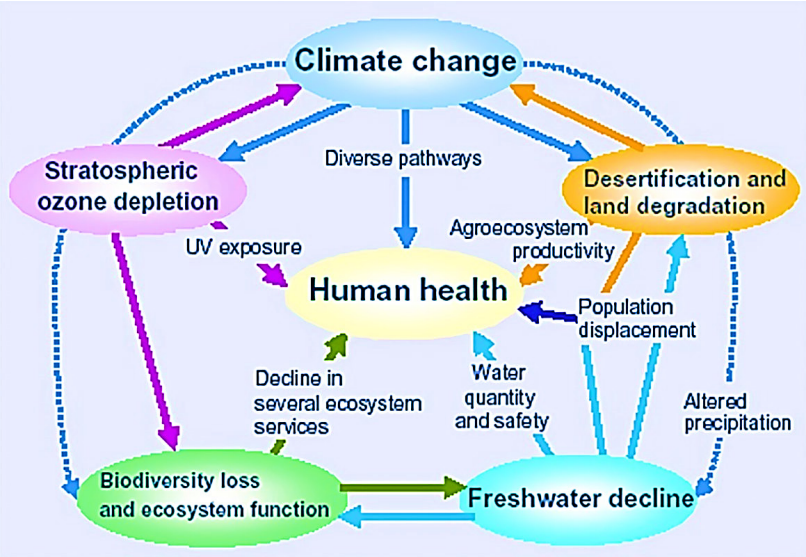

Figure 1: Concept of Climate Change and Human Health Implications (Willox *et al.*, 2013)

[1] Department of Environmental Education and Management, Faculty of Education, Near East University, Nicosia via Mersin 10, Turkey
[*] Corresponding author's e-mail: 20225295@std.neu.edu.tr

consistently released into the atmosphere through human's use of fossil fuels that particularly emit carbon dioxide and methane, among other things (Demuzere *et al.*, 2014). Meanwhile, the increase in the emission of these greenhouse gases has led to global warming and, consequently, climate change (Meinshausen *et al.* 2009). Previous studies indicate that if nothing is done to lower the current rate of greenhouse gas emissions, the global temperature will become dangerous in the next few decades (McMichael *et al.*, 2012; Meinshausen *et al.*, 2009; Lal, 2008). To counter such a dismissal phase, medical professionals are currently taking action to mitigate the negative effects of climate change on health around the globe. There has been an elevation of the world's temperature, as reported by the Intergovernmental Panel on Climate Change (IPCC) (Saito *et al.*, 2009).

However, such an increase was recommended to be kept around 1.5 °C so as to prevent dire health risks that will be initiated by global warming (Willox *et al.*, 2013). According to the World Health Organization (2021), an increase in global temperature is inescapable due to previous emissions of greenhouse gases. Therefore, healthcare practitioners are focused on measures to adapt to fluctuating climates while protecting public health (Abubakar *et al.*, 2022). Those steps include creating thermal radiation action plans, increasing viral illness monitoring, and encouraging environmentally friendly healthcare. Researchers hope that by actively dealing with the physical consequences of climate change, they might lessen the anticipated incidence of avoidable diseases and deaths (Carter *et al.*, 2015). Considering the certainty associated with certain climate-related health concerns, however, plenty remains to be accomplished to mitigate their effects and safeguard communities in danger (Rumsfeld, 2002).

Statement of Problem

The researcher is of the opinion that the public does not view climate change and its effects on health as a high-priority problem that should be considered in their everyday activities. This indicates that people do not take into account the environmental effects of their economic activities (Kuruvilla *et al.*, 2006). Some studies refer to this sentiment as environmental neglect. It suggests that the average individual does not view climate change as a current problem that requires active participation and attention to solve. Meanwhile, adequate sensitization and information to the public on the causes of climate change may be necessary to ameliorate its health impacts (Leroy *et al.*, 2012). Economic activities that ensure income and financial security are now subject to scrutiny due to the strain these activities put on the environment. It is worthy of note that developing countries like Cameroon may have a huge population in the lower echelons of the country's social class structure. As such, numerous lower-class citizens may lack education and foresight on matters relating to climate change and their direct effect on it (Pidgeon, 2012). The absence of understanding and instruction may result in a lack of intervention and preparation in dealing with the detrimental effects of climate change (Hilger *et al.*, 2021). As a result, authorities, including charitable organizations, must put in place initiatives that train and inform the public on the necessity of environmentally friendly procedures as well as climate change avoidance (Tumwine *et al.*, 2022). By providing all citizens with the necessary information and resources, we as a community can work together to create an environmentally friendly and healthier future for everyone (Dwivedi *et al.*, 2022).

Purpose of Study

Current literature shows established health risks brought on by climatic changes, as well as public awareness and concerns about climate change in Cameroon. Through this study, the researcher seeks to shed light on the general public's conception of climate change and its impacts on health (Macintyre *et al.*, 2002). This research aims to look into how people in Cameroon perceive and comprehend the possible health impacts of climate change. The study participant intends to gain significant insights into society's views and understanding of this topic, which will impact forthcoming public health campaigns and policies. The main objective is to strengthen society's resistance and readiness in the context of continued challenges related to climate change (Loizeau *et al.*, 2018).

Significance of the Study

The consequences of climate change can affect the availability of food as well as increase the prevalence of infectious diseases like cholera, yellow fever, and malaria. Due to the extreme sensitivity of vector-borne illnesses to variations in temperature and precipitation, they are more common in areas affected by the menacing change in climate. Regarding the potential negative outcome of climate change on health, there is reason to believe that people in Cameroon are not aware of this problem (Iwelunmor *et al.*, 2015). The public's perception of climate change as a health danger is influenced by a variety of factors, including education levels, cultural attitudes, and information availability (Reser & Swim, 2011). Addressing these elements is essential to creating communication techniques that can raise awareness and promote behaviour modification in order to reduce the hazards that the changing climate poses to the well-being of humanity. The public's perception of climate change as an imminent threat to health in Cameroon is a significant and timely research concern. Authorities as well as healthcare professionals can create focused initiatives that raise knowledge and support changes in behaviors to lessen the ramifications of climate change on the nation's health by studying the elements that shape public opinion (Tumwine *et al.*, 2022b). Governments and medical personnel may successfully enlighten the public about the harmful effects connected with climate change by employing successful interpersonal tactics such as focused communication, involvement in society, and the

use of credible websites that provide evidence (Borrelli *et al.*, 2020). Recognizing the elements that impact public opinion on this topic allows for the development of individual advertisements as well as actions to induce behavioral shifts, resulting in happier and more durable people in Cameroon. Weather-related consequences for public health can be significantly mitigated by integrated efforts based on proof-based engagement approaches (Schwartz *et al.*, 2022).

The Theory of Planned Behaviour

Concepts of behavioral control and attitude may be utilized for forecasting actions right away based on behavioral planning. The idea may possess a minimum of a couple of justifications (Ajzen, 1991). First, given apparent cognitive control, a person might expect that the work required to complete a sequence of activities will rise, maintaining the objective unchanged. For example, even when two people strive to achieve similarly ambitious objectives of teaching themselves to practice skiing, an individual who feels sure of their capacity to master the technique is far more inclined to keep going than those with hesitations and uncertainties (Drummond *et al.*, 2018). Also, perceived behavioral control is frequently employed as a stand-in indicator of absolute command, resulting in another argument to anticipate an immediate relationship between behavioral success and behavioral control. Naturally, the correctness of the judgments determines when an evaluation of apparent Behavioral control may replace a measurement of natural ability. Whenever objectives or resources on hand vary, unforeseen factors have entered the environment, or a person needs more understanding of behaviour, their perceived behavioral control might not be regarded as accurate. (Da Silva, 2020). In certain circumstances, the correctness of behavioral predictions may not be significantly improved by evaluating apparent behavioral control. Nonetheless, perceived power can be utilized to forecast the likelihood of an effective Behavioral effort to the degree that it is reasonable (Ajzen & Driver, 1992). likelihood of an effective behavioral effort to the degree that it is reasonable (Ajzen & Driver, 1992).

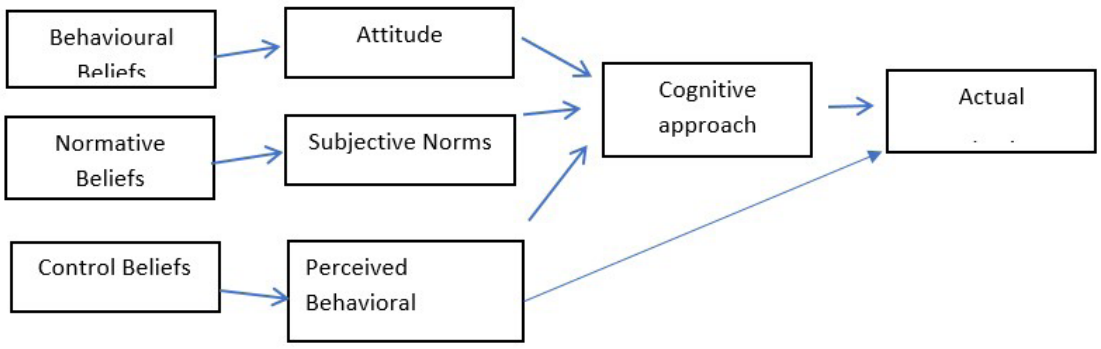

Figure 2: Theory of Planned Behaviour by Ajzen and Driver (1992)

Research Questions

- Will the public's conceptions of climate change reflect health risk awareness?
- Is there any significant presence of environmental negligence?
- Does being aware of the health associated risks of climate change influence their environmental behaviour?
- Will age affect public conceptions of climate change and health risks?
- Can the level of education affect public conceptions of climate change and health risks?

METHOOLOGY

Study Area

The research was conducted at the University of Dschang, founded in 1993 (Dschang town) Capital of Menoua Division. (Komo & Takor, 2019). Dschang is located in Cameroon, on the African continent. The DMS (degrees, minutes, and seconds) latitude and longitude coordinates for Dschang are 5°26'38.29"N, 10°3'11.95"E. The University of Dschang has about 30000 population based on recent statistics. Approximately 425 kilometres northwest of Yaoundé, the town of Dschang, West Cameroon, is home to the University of Dschang. Three agricultural training schools served as its foundation, and in 1993 it changed from being an agricultural-related institute to a university. (Ngwana, 2003). Many programs are available at the University of Dschang in a variety of subject areas, including science, medicine, technology, the agricultural sector, and the arts. The university is renowned for both its efforts in learning and growth and its dedication to giving learners an outstanding learning experience. The University of Dschang is still one of Cameroon's top universities, thanks to its committed professors and varied population of students. The educational institution of Dschang offers its learners the chance to engage in practical education via research assignments, apprenticeships, and community engagement initiatives. Additionally, the institution maintains solid relationships with both commercial and government organizations, giving students access to vital networks and first-hand knowledge. Students at the University of Dschang who are recent graduates are prepared to positively influence their surrounding societies.

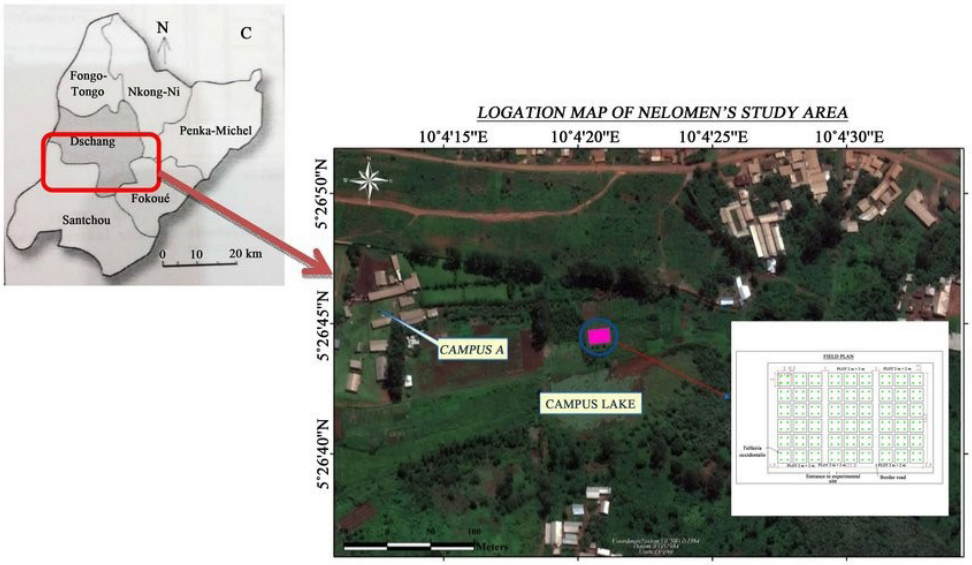

Figure 3: Location of the University of Dschang (Norbert *et al.*, 2017)

Figure 4: A view of students on the University Campus

Description of the Study Location

Geographic Region Characterization of the Demographic as well as Sampling Within the western African area, Cameroon is one of the most populated countries. The entire country is made up of several mixed ethnicities as well as is bilingual, multicultural, as well as multi-racial. Endowed with an abundance of biodiversity, Cameroonians have a very high level of contact with their surroundings region is adversely - considerably affected in the process of exploring for petroleum, which is the main form of revenue. Farming, which is an essential generator of income and has an impact on the surroundings, is particularly prominent in the southwestern part of the nation. Additionally, the entire area is seeing a rise in commercial and industrial activity, particularly in Douala and Yaoundé, where the majority of the population and industry are concentrated (Farvacque-Vitkovic & Kopányi, 2019).

Research Framework

As with other studies of significance that focus on understanding climate change perception as a concern to human health in Cameroon, the present research used the method of a quantitative study approach. specifically given the answers that this survey generated (Sunderland *et al.*, 2017). This study may gather participants' perspectives and draw statistical results with the help of the study's strategy (Wu *et al.*, 2021)

Research Tool

Research tools are crucial in gathering the necessary data for a study. Each tool is designed to collect data from different sources, providing the information most effectively utilized for the research objectives. For the main study, a sample of Cameroonians enrolled at the University of Dschang will be recruited to participate in the data collection process. The Climate Change

Awareness Scale will be administered to the participants through online surveys or in-person interviews, depending on the logistical feasibility and participants' preferences. The data collected using the scale will provide insights into the perception of climate change impacts as a human health risk in Cameroon, Precise an accurate summary of the participants' responses to every question and section of the climate change conception scale will be generated utilizing descriptive statistics, including means, standard deviations, and frequencies. This quantitative analysis will provide deeper insights into the participants' perceptions, beliefs, and experiences related to climate change and health. The findings obtained from the administration of the Climate Change Awareness Scale will contribute to a comprehensive understanding of climate change's impact as a human health risk. The results will shed light on the strengths and weaknesses of climate change responses. In conclusion, the Climate Change Awareness Scale is a newly developed research tool designed to assess the conception of climate change as a human health risk in Cameroon.

Population and Sample

The University of Dschang and the sample along with the group of individuals under study refers to the ensemble of individuals or entities under investigation or thought to be under investigation for informational reasons, in this instance, studies and data related to education.

Sample Size Determination

Choosing the appropriate amount of sampling Due to the impossibility of having all individuals of a group participate in the examination at once, researchers must choose a subset or proportion of the population size under investigation to serve as the analysis. Such calls for a thoughtful choice of a sample that accurately reflects the population. Sample is the process of choosing a subset of a population under investigation to serve as an example of that group. The number of participants for this research is 423 Cameroonian students and postgraduates who are aware of how climate change affects human health and who were selected using a straightforward random selection approach.

Conditions for Participation

Participants in the study had to be from first-degree to master-level students from various universities.

Exclusion Strategy

Students with undergraduate degrees and graduates who choose not to engage in studying are ignored (Solórzano & Yosso, 2002).

Data Collection Tools

The research variables are subject of quantitative data collection from the participants. To collect data, research participants were given standard survey questionnaires. From November 2023 to January 2024, research data were being gathered from the educational institution (University of Dschang). A straightforward sampling method will be used to contact the intended participants, who are adult male and female subjects above the age of 19. About 423 people will make up the planned sample size.

Data Analysis Procedures

After the survey's duplicates had been identified, each of them was organized, and then the results were input into a coding structures document using the most recent version of the SPSS 21 (statistical package for the social sciences). Following data entry, the proper evaluation was performed and the information was cleansed. Frequencies while straightforward ratios were used to perform the descriptive statistical analysis.

RESULTS

Analysis of Research Data

Table 1 summarizes Cameroonians views of climate change as a risk to human health. The material was assessed on a Likert scale with points ranging from Strongly Disagree (SD), Disagree (D), Undecided (U), Agree (A), and Strongly Agree (SA). According to the data, more than half of students at the University of Dschang believe climate change poses a serious risk to human health, with a significant amount expressing agreement or strong agreement. This shows that students are becoming more informed and concerned about the possible impact

Table 1: Public Conceptions of Climate Change Impact as a Human Health Risk

Public Conceptions of Climate Change Impact as a Human Health Risk.	**f (%)**	**f (%)**	**f (%)**	**f (%)**	**f (%)**	**Chi2/Sig. Sig for gender**
1) Climate change will result in people living in poverty, refugees, disease epidemics, and intense hurricanes, globally for twenty years from now.	SD	D	U	A	S A	3.302/.509 No Sig Dif. for Gender
	21.5	27.4	8.0	26.2	16.8	
	(19)	(116)	(34)	(111)	(71)	
2) Many people are currently injured or become ill each year due to global warming.	SD	D	U	A	SA	1.227/.874 No Sig Dif. for Gender
	16.3	18.4	29.1	20.8	15.4	
	(175)	(72)	(24)	(86)	(66)	
3) The ocean has a significant influence on climate change by absorbing, storing, and moving.	SD	D	U	A	SA	4.438/.350 No Sig Dif. for Gender
	12.8	19.1	23.2	17.7	27.2	
	(54)	(81)	(98)	(75)	(115)	

4) Worldwide, water shortages will occur due to climate change and cause waterborne diseases.	SD	D	U	A	SA	4.664/.323 No Sig Dif. for Gender
	16.3	18.4	29.1	20.8	15.4	
	(69)	(78)	(123)	(88)	(65)	
5) There have been Increased rates of serious disease worldwide due to climate change:	SD	D	U	A	S A	4.671/.323 No Sig Dif. for Gender
	19.2	9.9	18.5	21.2	30.5	
	(80)	(42)	(78)	(94)	(129)	
6) Water shortages will occur in Cameroon due to climate change.	SD	D	U	A	SA	3.237/.663 No Sig Dif. for Gender
	16.1	23.6	10.4	20.8	28.8	
	(68)	(100)	(44)	(88)	(122)	
7) Currently people die in Cameroon each year due to global warming.	SD	D	U	A	SA	6.433/.169 No Sig Dif. for Gender
	19.9	21.0	10.9	22.2	26.0	
	(84)	(89)	(46)	(94)	1100	
8) Knowing about climate and its impact on human health is important to me.	SD	D	U	A	S A	4.857/.302 No Sig Dif. for Gender
	20.3	25.8	13.9	26.2	13.7	
	(86)	(109)	(59)	(111)	(58)	
9) The actions of individuals can make positive changes in global climate change.	SD	D	U	A	SA	3.953/.412 No Sig Dif. for Gender
	10.9	19.1	6.6	24.8	38.5	
	(46)	(81)	(28)	(105)	(163)	
10) I believe my actions can contribute to solutions to climate change-associated problems in human health.	SD	D	U	A	SA	8.460/.076 No Sig Dif. for Gender
	21.7	23.4	19.1	19.1	16.5	
	(92)	(99)	(81)	(81)	(70)	
11) Each of us can significantly contribute to climate change mitigation.	SD	D	U	A	SA	4.699/.320 No Sig Dif. for Gender
	14.2	26.7	11.8	31.4	15.8	
	(60)	(113)	(50)	(133)	(67)	
12) Most concern about climate change's relation to health has been exaggerated.	SD	D	U	A	SA	.745/.946 No Sig Dif. for Gender
	21.0	26.5	12.3	28.1	12.1	
	(89)	(112)	(52)	(119)	(51)	
13) It is a waste of time to work to solve climate change-related problems.	SD	D	U	A	SA	3.269/.514 No Sig Dif. for Gender
	26.7	10.4	22.7	5.4	34.8	
	(113)	(44)	(96)	(23)	(147)	
14) There is evidence of climate change, global warming, and associated health problems.	SD	D	U	A	SA	
	26.7	16.8	12.5	18.4	25.5	
	113	71	53	78	108	
15) In my view, environmental issues or hazards pose the most significant risk to the health of Cameroonians.	SD	D	U	A	SA	11.968/.018 There is a sig in favour of male
	10.4	21.5	36.6	19.4	12.1	
	(44)	(91)	(155)	(82)	(51)	
16) I think climate change will start affecting the health of Cameroonians but in the future.	SD	D	U	A	SA	5.355/.253 No Sig Dif. For Gender
	14.9	12.8	34.8	22.5	15.1	
	(63)	(54)	(147)	(95)	(64)	
17) We can make the world a better place for future generations.	SD	D	U	A	SA	16.524/.002 Sig association Between the two Variation.
	22.0	15.6	35.7	19.9	6.9	
	(93)	(66)	(151)	(84)	(29)	
18) I am concerned about the impact of global warming on All people in Cameroon and my health.	SD	D	U	A	SA	3.046/.550 No Sig Dif. for Gender
	20.8	13.2	12.5	30.0	23.4	
	88	56	53	127	99	
Total F(frequency) = 423						

of climate change on public health. Further study should look at the particular elements that influence these beliefs, as well as the implications for future public health actions.

Findings

The findings of the questionnaire survey in Cameroon on their views about the conception of climate change impact as a risk to human health are displayed in Table 4.3. The findings demonstrate that there is strong proof of climate change and its implications, which will have a detrimental effect on the quality of life for generations to come if appropriate measures are not taken. The findings also show that human activity is the cause of both temperature rise and changes in the climate and that individual efforts may have a greater impact on reducing both issues. Moreover, the research findings demonstrate that a significant number of students feel that legislation and government rules play a vital part in combating the effects of climate change. This shows how young people understand the urgency for collaborative work and modifications to address the consequences of environmental degradation. Furthermore, data collected shows that youngsters feel a feeling of utmost importance and numerous people voicing objections to the absence of worldwide action to reduce the effects of the changing climate. In general, the findings from the survey highlight the necessity of developing consciousness and encouraging environmentally conscious behaviours to safeguard both people and our natural resources for those who follow us.

Additionally, the findings revealed that climate change has a detrimental impact on human existence and that understanding the sustainability issues posed by climate change could help address the issues, making the world more favourable for future generations to come, and ensuring sustainability. The results of the study show that there was no significant difference in the number of correct and wrong answers provided in Question 1. This is largely because the participants completed the questionnaire based on what they knew, regardless of their real-life situation. However, there were substantial exceptions in support of the right responses for Questions 15 and 17, showing that participants were more knowledgeable and comprehending. In contrast, there were substantial variances in favour of erroneous responses for Questions 1,2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13,14, 16 and 18. This shows a need for further understanding or information on climate change effects and human health. These questions might appear more complicated or unfamiliar to students, resulting in a higher percentage of erroneous responses. Participants might have lacked previous familiarity or experience with these certain themes, emphasizing the need for outreach and understanding in combating climate variability and its adverse effects on human health. Furthermore, our findings indicate a potential weakness in public understanding that may be filled by focused awareness as well as media campaigns. Ongoing investigation and examination might aid in identifying particular parts where misunderstandings occur, as well as informing efforts to increase general comprehension as well as consciousness.

Significance of the Findings

The findings as part of this research provide significant knowledge regarding Cameroonian students' perspectives about climate change and its effects on human health. These findings are critical when analysing the wider impacts of climate change awareness and the possibility of public health solutions. Climate change is a significant problem impacting everyone, such as people in Cameroon. The replies from Cameroonian students in this survey highlighted the importance of tackling the problem and the possible effects on human health. Recognizing these attitudes will help us develop sustainable public health programs to reduce the effects of climate change on people worldwide. The young people were concerned regarding the increasing prevalence of severe weather-related events in Cameroon, including flooding and drought situations, as well as whether they are connected to changing the climate. The researchers additionally emphasized the detrimental effects of pollutants in the atmosphere from cutting down trees and manufacturing operations on the quality of breath. They also reviewed how vector-borne illnesses such as malaria and dengue fever might spread as temperatures rise. Overall, the students stressed the importance of taking urgent action to combat climate change and safeguard human health in Cameroon.

Socio-Demographic Insights

The demographic statistics demonstrate that the bulk of those who took part were male (67.8%) and aged between 20 and 25 years of age (54.6%). Furthermore, a large majority of the participants (52.5%) had been master's students, indicating a well-educated group. This population composition is representative of the university context, which often comprises young people seeking more advanced degrees. The average of the sample gender disparity may indicate an urgent requirement to develop further distribution and initiatives that seek to involve female students in climate change debates and activities. The large proportion of master's students suggests a possible motivation and ability for technologically advanced study and representation in this field, which might be used to promote significant efforts across the local and national levels. In general, socio-demographic findings provide useful background for comprehension of the student population's opinions and possible approaches to tackling Cameroon's climate change concerns. Universities and other institutions may build an interesting and driven population of people capable of driving major improvements by concentrating on extending out to female students and leveraging the enthusiasm and skill sets of graduates with master's degrees. By incorporating these findings into project development and implementation, we can guarantee that

Cameroon's climate change programs are both efficient and comprehensive. This comprehensive strategy would additionally assist the education-deprived population, but it will also add to the larger objective of establishing a future of sustainability for everybody.

Public Conception of Climate Change and Health Risks

The study findings reveal a widespread understanding of climate change and its possible effects on health, with widespread agreement on several important points: Climate change is recognized as an essential problem that presents serious threats to public health. Participants agree on the significance of taking preventative steps to reduce such hazards and safeguard those who are most vulnerable. By embracing the viewpoints of everyone with an interest, we may create policies that have been certainly intellectually solid, nonetheless within society balanced as well as long-term

Global Impact and Health Risks

Many respondents recognize the serious repercussions of climate change, such as increasing illnesses and unusual weather occurrences. The findings are in alignment with the research, which emphasizes the extensive health consequences of changes in the climate.

If we are going to successfully handle such hazards, a diverse set of interested parties must be involved in the making of decisions. This comprises elected officials, health service specialists, municipal officials, and members of the underprivileged who are additionally most vulnerable. By embracing other views, we can guarantee that treatments are not only successful but also adaptable and comprehensive. Furthermore, it is critical to promote preventative approaches that emphasize avoidance compared to response. This includes constructing architecture to resist extreme climatic events, putting in place systems that notify people of emerging diseases, and supporting environmentally friendly practices that decrease greenhouse gases. By adopting these efforts today, we can safeguard vulnerable groups and develop better societies for the future.

Current Health Impacts

Although some acknowledge the health effects of climate change, many people remain hesitant or disapprove, suggesting a lack of quick comprehension or assumed importance. To close this knowledge gap, citizens must be educated on the undeniable relationship connecting climate change and public health. By raising knowledge of whether severe weather may raise sickness and mortality rates and also encourage the transmission of transmissible diseases, we as a society can motivate people to take steps and encourage projects that emphasize sustainable development and public health. We must resolve these concerns immediately to avoid even more damage to our societies and secure an enjoyable future for everybody.

Water Shortages and Disease

There is general concern regarding water scarcity including the possibility of waterborne illnesses, notably in Cameroon. This is consistent with findings showing the fact that water security is a key concern in many poor nations confronting climate change. Researchers can reduce the prevalence of infections brought about by water and improve public health results in Cameroon and various other areas of risk by solving problems with water and increasing the distribution of water that is clean. Investing in sustainable water infrastructure and conservation measures is critical to ensuring a consistent supply of clean water for vulnerable areas. By adopting preventive actions today, we as a species will ensure the well-being and security of contemporary as well as prospective generations that follow, and preserve the surroundings for many years.

Individual and Collective Action

The conviction regarding the capability of both private and public efforts to combat climate change fluctuates, with many participants doubting the capacity to successfully make any impact. These underscore the requirement for powerful outreach programs that emphasize the significance and value of both private and public activities in mitigating climate change. Everyone must recognize and understand that their activities, regardless of how tiny, have a profound influence on the natural world. By raising knowledge and presenting tools for fostering environmentally friendly habits, we as a species can motivate individuals to participate in order to make improvements in the battle regarding climate change. By doing teamwork and having a common dedication to environmental responsibility, we are capable of developing a happier and more robust world for everyone.

Exaggeration and Concern

A sizable majority of respondents think that the effects regarding climate change and health are overdone. This impression may weaken attempts to rally citizen backing for climate action, highlighting the need for stronger outreach tactics that appropriately explain hazards and avoid panicking. Through eliminating these myths and stressing the actual advantages of sustainable behaviours, we may help relieve worries while setting a solid platform for climate change mitigation. It is critical to emphasize the link between climate change and health in an educational and easily understood manner, with the goal of motivating people to make educated decisions and make significant efforts toward a future that is less destructive. Using open debate as well as instruction, we as a society can inspire populations to support environmental sustainability and collaborate to create a healthier, more durable planet.

CONCLUSION

The research study emphasizes the necessity of focused educational programs in bridging the information barrier

about both the short- and long-term health effects of climate change. Raising consciousness and providing for those who need tangible activities may encourage an active approach to climate change reduction and adaptation techniques. This is especially important in Cameroon, where susceptibility to climate-related health concerns needs strong public health interventions. By providing education on the relationship between climate change and public health, researchers can help people make knowledgeable choices that emphasize resilience and sustainability. We can create a happier and cleaner environment for the next generation by working together and implementing inclusive policies. It is critical that humanity take rapid measures to deal with the negative health effects of climate change in Cameroon and elsewhere, since taking preventive steps now may help limit future hazards and contribute to creating a nation with greater resilience. Collectively, people can make a difference in preventing climate change and ensuring the happiness of all. Further research ought to look at the root causes of doubt as well as the best ways to communicate the pressing issue of climate change to different communities. Including learners and the general public in conversation and activity can help build an improved resilient and educated population with the capacity to handle the numerous issues that arise from climate change on human health in Cameroon. By encouraging cooperation and information exchange, we may strive for fresh approaches that will help generations to come. It is critical that we strongly emphasize environmental preservation and sustainability initiatives for the purpose of building an improved, stable environment. Everyone has a responsibility to participate in tackling climate change and human health, and by collaborating, we may achieve a better tomorrow for everyone.

REFERENCES

Abubakar, I., Dalglish, S. L., Angell, B., Sanuade, O., Abimbola, S., Adamu, A. L., Adetifa, I. M. O., Colbourn, T., Ogunlesi, A. O., Onwujekwe, O., Owoaje, E. T., Okeke, I. N., Adeyemo, A., Aliyu, G., Aliyu, M. H., Aliyu, S. H., Ameh, E. A., Archibong, B., Ezeh, A., . . . Zanna, F. H. (2022). The Lancet Nigeria Commission: investing in health and the future of the nation. *Lancet, 399*(10330), 1155–1200. https://doi.org/10.1016/s0140-6736(21)02488-0

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-t

Ajzen, I., & Driver, B. L. (1992). Application of the theory of planned behavior to leisure choice. *Journal of Leisure Research, 24*(3), 207–224. https://doi.org/10.1080/00222216.1992.11969889

Borrelli, P., Robinson, D. A., Panagos, P., Lugato, E., Yang, J. E., Alewell, C., Wuepper, D., Montanarella, L., & Ballabio, C. (2020). Land use and climate change impacts on global soil erosion by water (2015-2070). *Proceedings of the National Academy of Sciences of the United States of America, 117*(36), 21994–22001. https://doi.org/10.1073/pnas.2001403117

Brauch, H. G. (2011). Concepts of security Threats, challenges, vulnerabilities and risks. In *Hexagon series on human and environmental security and peace* (pp. 61–106). https://doi.org/10.1007/978-3-642-17776-7_2

Carter, J. G., Cavan, G., Connelly, A., Guy, S., Handley, J., & Kazmierczak, A. (2015). Climate change and the city: Building capacity for urban adaptation. *Progress in Planning, 95,* 1–66. https://doi.org/10.1016/j.progress.2013.08.001

Christou, A. (2006). *Narratives of Place, Culture and Identity : Second-Generation Greek-Americans Return Home.* https://doi.org/10.5117/9789053568781

Da Silva, S. (2020). Data set used in "Robust approach for inverse problems based on generalised statistics", da Silva, *et al.* 2020 [Dataset]. In Figshare. https://doi.org/10.6084/m9.figshare.13280882

Demuzere, M., Orru, K., Heidrich, O., Olazabal, E., Geneletti, D., Orru, H., Bhave, A., Mittal, N., Feliu, E., & Faehnle, M. (2014). Mitigating and adapting to climate change: Multi-functional and multi-scale assessment of green urban infrastructure. *Journal of Environmental Management, 146,* 107–115. https://doi.org/10.1016/j.jenvman.2014.07.025

Drummond, A., Hall, L. C., Sauer, J. D., & Palmer, M. A. (2018). Is public awareness and perceived threat of climate change associated with governmental mitigation targets? *Climatic Change, 149*(2), 159–171. https://doi.org/10.1007/s10584-018-2230-2

Dwivedi, Y. K., Hughes, L., Kar, A. K., Baabdullah, A. M., Grover, P., Abbas, R., Andreini, D., Abumoghli, I., Barlette, Y., Bunker, D., Kruse, L. C., Constantiou, I., Davison, R. M., De, R., Dubey, R., Fenby-Taylor, H., Gupta, B., He, W., Kodama, M., . . . Wade, M. (2022). Climate change and COP26: Are digital technologies and information management part of the problem or the solution? An editorial reflection and call to action. *International Journal of Information Management, 63,* 102456. https://doi.org/10.1016/j.ijinfomgt.2021.102456

Hayes, K., Blashki, G., Wiseman, J., Burke, S., & Reifels, L. (2018). Climate change and mental health: risks, impacts and priority actions. *International Journal of Mental Health Systems, 12*(1). https://doi.org/10.1186/s13033-018-0210-6

Hilger, K. J. E., Scheibe, S., Frenzel, A. C., & Keller, M. M. (2021). Exceptional circumstances: Changes in teachers' work characteristics and well-being during COVID-19 lockdown. *School Psychology, 36*(6), 516–532. https://doi.org/10.1037/spq0000457

Iwelunmor, J., Blackstone, S., Veira, D., Nwaozuru, U., Airhihenbuwa, C., Munodawafa, D., Kalipeni, E., Jutal, A., Shelley, D., & Ogedegbe, G. (2015). Toward the sustainability of health interventions implemented in sub-Saharan Africa: a systematic review and conceptual framework. *Implementation Science, 11*(1).

https://doi.org/10.1186/s13012-016-0392-8

Kerekes, S., Szerényi, Z. M., & Kocsis, T. (2018). *Sustainability, environmental economics, welfare*. https://doi.org/10.14267/cb.2018k05

Kerr, A., Tompkins, W., Kimmell, K., Markham, A., Rivera-Collazo, I., Yazzie, J., Heller, N., Tickell, A., Workshops, B. S., Newell, J., Seekamp, E., Catanzariti, A., Sutton, S., Mcghie, H., Bunch, L., Fisher, A., Marino, A., Miller, S., Tunick, E., . . . Naugle, B. (2021). *Stemming the Tide: Global Strategies for Sustaining Cultural Heritage through Climate Change*. https://doi.org/10.5479/si.14750727.v1

Kuruvilla, S., Mays, N., Pleasant, A., & Walt, G. (2006). Describing the impact of health research: a Research Impact Framework. *BMC Health Services Research, 6*(1). https://doi.org/10.1186/1472-6963-6-134

Lal, R. (2008). Promise and limitations of soils to minimize climate change. *Journal of Soil and Water Conservation, 63*(4), 113A-118A. https://doi.org/10.2489/jswc.63.4.113a

Leroy, J. L., Gadsden, P., & Guijarro, M. (2012). *The impact of daycare programs on child health, nutrition and development in developing countries: a systematic review*. https://doi.org/10.23846/sr1004

Loizeau, D., Quantin-Nataf, C., Carter, J., Flahaut, J., Thollot, P., Lozac'h, L., & Millot, C. (2018). Quantifying widespread aqueous surface weathering on Mars: The plateaus south of Coprates Chasma. *Icarus, 302,* 451–469. https://doi.org/10.1016/j.icarus.2017.11.002

Macintyre, S., Ellaway, A., & Cummins, S. (2002). Place effects on health: how can we conceptualise, operationalise and measure them? *Social Science & Medicine, 55*(1), 125–139. https://doi.org/10.1016/s0277-9536(01)00214-3

McGranahan, N., & Swanton, C. (2015). Biological and therapeutic impact of intratumor heterogeneity in cancer evolution. *Cancer Cell, 27*(1), 15–26. https://doi.org/10.1016/j.ccell.2014.12.001

Meinshausen, M., Smith, S. J., Calvin, K., Daniel, J. S., Kainuma, M. L. T., Lamarque, J., Matsumoto, K., Montzka, S. A., Raper, S. C. B., Riahi, K., Thomson, A., Velders, G. J. M., & Van Vuuren, D. P. (2011a). The RCP greenhouse gas concentrations and their extensions from 1765 to 2300. *Climatic Change, 109*(1–2), 213–241. https://doi.org/10.1007/s10584-011-0156-z

Meinshausen, M., Smith, S. J., Calvin, K., Daniel, J. S., Kainuma, M. L. T., Lamarque, J., Matsumoto, K., Montzka, S. A., Raper, S. C. B., Riahi, K., Thomson, A., Velders, G. J. M., & Van Vuuren, D. P. (2011b). The RCP greenhouse gas concentrations and their extensions from 1765 to 2300. *Climatic Change, 109*(1–2), 213–241. https://doi.org/10.1007/s10584-011-0156-z

Mik, C. (2013). The Role of Regional State Integration Organizations in Combating Piracy in-between Africa and Asia. *Polish Review of International and European Law, 2*(1), 69–138. https://doi.org/10.21697/priel.2013.2.1.03

Nevitt, M. (2021). Is climate change a threat to international peace and security? *Michigan Journal of International Law, 527*. https://doi.org/10.36642/mjil.42.3.climate

Pidgeon, N. (2012). Public understanding of, and attitudes to, climate change: UK and international perspectives and policy. *Climate Policy, 12*(sup01), S85–S106. https://doi.org/10.1080/14693062.2012.702982

Reser, J. P., & Swim, J. K. (2011). Adapting to and coping with the threat and impacts of climate change. *American Psychologist, 66*(4), 277–289. https://doi.org/10.1037/a0023412

Rumsfeld, J. S. (2002). Health status and clinical practice. *Circulation, 106*(1), 5–7. https://doi.org/10.1161/01.cir.0000020805.31531.48

Saito, M., Kato, T., & Tang, Y. (2009). Temperature controls ecosystem CO2 exchange of an alpine meadow on the northeastern Tibetan Plateau. *Global Change Biology, 15*(1), 221–228. https://doi.org/10.1111/j.1365-2486.2008.01713.x

Schwartz, S. E. O., Benoit, L., Clayton, S., Parnes, M. F., Swenson, L., & Lowe, S. R. (2022). Climate change anxiety and mental health: Environmental activism as buffer. *Current Psychology, 42*(20), 16708–16721. https://doi.org/10.1007/s12144-022-02735-6

Tumwine, J., Mash, B., Okonofua, F., Ntumba, J. K., Kigera, J., Malaudzi, M., Yonga, P., Rashidian, A., Adawy, M. E., Haileamlak, A., Yassien, M. S., Ofori-Adjei, D., Snouber, A., Sidibe, S., Gbakima, A. A., Zakhama, L., Erhabor, G. E., Laybourn-Langton, L., Muhia, J., . . . Atwoli, L. (2022a). COP27 Climate Change Conference: Urgent action needed for Africa and the world. *International Nursing Review, 69*(4), 417–419. https://doi.org/10.1111/inr.12809

Tumwine, J., Mash, B., Okonofua, F., Ntumba, J. K., Kigera, J., Malaudzi, M., Yonga, P., Rashidian, A., Adawy, M. E., Haileamlak, A., Yassien, M. S., Ofori-Adjei, D., Snouber, A., Sidibe, S., Gbakima, A. A., Zakhama, L., Erhabor, G. E., Laybourn-Langton, L., Muhia, J., . . . Atwoli, L. (2022b). COP27 Climate Change Conference: Urgent action needed for Africa and the world. *International Nursing Review, 69*(4), 417–419. https://doi.org/10.1111/inr.12809

Willox, A. C., Harper, S. L., Edge, V. L., Landman, K., Houle, K., & Ford, J. D. (2013). The land enriches the soul: On climatic and environmental change, affect, and emotional health and well-being in Rigolet, Nunatsiavut, Canada. *Emotion, Space and Society, 6,* 14–24. https://doi.org/10.1016/j.emospa.2011.08.005

Winkler, M. S., Röösli, M., Ragettli, M. S., Cissé, G., Müller, P., Utzinger, J., & Perez, L. (2015). Mitigating and adapting to climate change: a call to public health professionals. *International Journal of Public Health, 60*(6), 631–632. https://doi.org/10.1007/s00038-015-0722-7