Knowledge On the Cause and Effect of Climate Among College Students of Selected College Aizawl, Mizoram

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***Abstract*—Climate change is a major global environmental issue that affects human health, ecosystems, and sustainable development. Adequate knowledge of its causes and effects is essential among young adults to promote awareness and encourage environmentally responsible behavior. This study aimed to assess the level of knowledge regarding the causes and effects of climate change among college students at Govt. Aizawl West College, Aizawl, Mizoram. A quantitative descriptive research design was used, and data were collected from 254 college students using a self-administered structured knowledge questionnaire. The data were analyzed using descriptive and inferential statistics, and Fisher's exact test was applied to examine the association between knowledge level and selected demographic variables. The findings revealed that 37.4% (95) of participants had inadequate knowledge, 31.9% (81) had moderate knowledge, and 30.3% (77) had adequate knowledge regarding the causes and effects of climate change. Statistical analysis showed that gender and source of information were significantly associated with knowledge level, with students receiving information from television, the internet, and educational institutions demonstrating comparatively better knowledge.**

However, age, residence, and previous knowledge were not significantly associated with knowledge level. The study concludes that although some students had adequate knowledge, a considerable proportion still lacked sufficient understanding of climate change. These findings highlight the need to strengthen educational initiatives and improve access to reliable information in order to enhance awareness and understanding of climate change among college students.

***Index Terms*—Climate change, knowledge, college students, causes and effects, awareness, Mizoram.**

I.INTRODUCTION

Climate change means long-term changes in climate patterns, whether caused by natural processes or by human actions. Climate change refers to changes in the Earth's climate that are caused, either directly or indirectly, by human activities that modify the composition of the global atmosphere, beyond the natural variations that occur over similar periods of time.

Recent scientific assessments also confirm that global surface temperatures have already risen by around 1.3°C to 1.4°C compared to pre-industrial levels, bringing the world close to the critical 1.5°C threshold set by the Paris Agreement. This increase has resulted in more frequent and intense extreme weather events, including heatwaves, heavy rainfall, and prolonged droughts, which directly affect ecosystems, agriculture, and human health.

Statement of the problem:

Knowledge on the cause and effect of climate change among college students of selected college Aizawl, Mizoram.

II. METHODOLOGY

The objective of the study was to assess the knowledge on the cause and effect of climate change among college students at selected college in Aizawl, Mizoram and to find out the association between knowledge regarding cause and effect of climate change with the selected demographic variables. Quantitative research approach was used and for the study design Descriptive research design was selected.

Sample size: 254 students who are studying in Govt. Aizawl West College, Aizawl, Mizoram is taken for the study. The sample size is calculate using Yamane formula.

Data collection
Tools for data collection –
Section I - Socio-demographic proforma
Section II - Self structured knowledge questionnaire
Formal permission for data collection was taken from the concerned authorities. The data was done on the 17th to 22nd April 2026 and was collected after taken informed consent from the college students and ensure confidentiality of the data collected. Knowledge score was assessed using Self-Administered Knowledge Questionnaire.
Data analysis: The data was analysed by using both descriptive and inferential statistics.

Table No. 1: Frequency and Percentage distribution of college students according to demographic variables.

n = 254

Demographic Variables	Frequency	Percentage (%)
Age		
18-22 years	231	90.9
23-27 years	21	8.3
28-32 years	2	0.8
Gender		
Male	138	54.3
Female	116	45.7
Transgender	0	0
Area of Residence		
Urban	128	50.4
Rural	126	49.6
Previous Knowledge Regarding Climate Change		
Yes	223	87.8
No	31	12.2
Source of Information		
TV/Internet	208	81.9
Newspaper	10	3.9
School/College	36	14.2

The data presented in table 2 indicates that the majority 231(90.9%) were 18-22 year of age, 138(54.3%) were Male, 128(50.4%) were from Urban, 223(87.8%) has pervious knowledge and 208(81.9%) get their information from TV/Internet.

Table No. 2: Frequency and percentage distribution of level of knowledge of students regarding cause and effect of climate change.

n = 254

Knowledge Score	Frequency	Percentage (%)
Adequate (20-25)	77	30.3
Moderate (15-19)	81	31.9
Inadequate (1-14)	95	37.4

The data presented in table 2 indicates that 37.4% (95) of college students has inadequate knowledge, 31.9% (81) has moderate knowledge and 30.3% (77) has adequate knowledge

Table No. 3 – Associations between level of knowledge with socio-demographic variables among the college students.

n = 254

Demographic Variables	Knowledge Score			Fisher's Exact Test (P value)
	Adequate	Moderate	Inadequate	
1. Age				
a. 18 – 22	68	75	87	
b. 23 – 27	7	6	8	0.498
c. 28 – 32	2	0	0	
2. Gender				
a. Male	34	42	62	
b. Female	43	39	33	0.018 *
c. Transgender	0	0	0	
3. Area of residence				
a. Urban	43	41	43	
b. Rural	34	40	52	0.384

4. Previous knowledge regarding climate change				
a. Yes	71	68	83	0.283
b. No	6	13	12	
5. Source of information				
a. TV/Internet	56	71	80	
b. Newspaper	7	0	3	0.028*
c. College/School	14	10	12	

*$p < 0.05$

The data presented in table 3 revealed that significant association was obtained between the knowledge score with selected demographic variable i.e., Gender and Source of information at level of significance ($p<0.05$). The other demographic variables like Age, Area of residence and Previous knowledge regarding climate change were found non-significant.

III. CONCLUSION

The study was conducted to assess the knowledge regarding cause and effect of climate change among college students of selected college Aizawl, Mizoram. From the finding of the present study, it can be concluded that most of the students have inadequate knowledge regarding cause and effect of climate change. Therefore, strengthening educational programs and improving dissemination of accurate information through reliable media and educational institutions may help improve public knowledge and awareness regarding climate change and its effects.

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