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Global to Local and Awareness to Action: The Power of Place-Based Communication in Climate Messaging to Empower Communities

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Abstract:
Emphasizing the solutions is much more important than over-highlighting the problems. Global climate narratives often fail to inspire local action at the grassroots level because they mostly overlook the lived realities of people and give limited attention to climate action communication that highlights individual and local-level adoption and mitigation strategies. To support effective grassroots climate action, this study evaluates localized framing techniques as a communication strategy for implementing SDG13 in the local semi-arid rural areas by examining the role of place-based communication in strengthening climate action communication. This research was primarily conducted in the Zaheerabad region of Telangana, India, and uses an exploratory quantitative survey method. The main findings of the study reveal the widespread recognition of climate change, with a limited familiarity and exposure to the climate action concepts. A majority of respondents consider locally tailored climate action content to be very important to tackle climate change in their area by enhancing the relatability. The community media, NGO campaigns appear as primary sources of CAC rather than mass media and social media. And the respondents emphasize that local environmental challenges and solutions are the most helpful form of place-based communication framing strategies for effective grassroots-level communication, helping to bridge the gap between scientific knowledge and affordable actions. From the research, the four main points to be highlighted for effective communication are clearer connections to practical local solutions, communication in local dialects, and involvement of the local leaders with community-based storytelling. To transform awareness into meaningful climate action, without localization, climate communication will remain abstract.

Keywords: Climate Action Communication, Localized Framing, SDG13, Place-Based Communication, Climate Change, Adoption and Mitigation.

Introduction:

Climate change is a global, controversial issue (Weber & Schmidt, 2016), and it is already being felt locally. (Reyes-García et al., 2024). In recent years, Climate change communication (CCC) (Nerlich et al., 2010) and climate action communication (CAC) areas have undergone significant evolution. The consequences of climate change vary drastically from location to location. For instance, some areas grapple with intense typhoons and substantial flooding, whereas others contend with severe droughts and rising temperatures. Additionally, some regions experience frequent extreme weather events while others face rising sea levels that endanger coastal areas. Irrespective of regions and locations, we are facing the

greatest challenges, i.e., lowering greenhouse gas emissions to pre-industrial levels and limiting the increase in average global warming temperatures to not more than 1.5 degrees Celsius by the year 2050 (IPCC, 2013). According to the UN Sustainable Development Goal 13.3, which aims to build knowledge and capacity to address climate change, improving education and awareness on climate change mitigation and adoption is crucial. The major role of creating region- or location-specific content for effective communication with populations arises here. In this way, it is important to understand geographical and place-based causes and impacts of climate change to communicate climate action adoption and mitigation measures effectively with the general public.

Generally, the Global South mostly relies on the Global North data, especially 50 percent from the USA (Badullovich et al., 2020) (Schweizer et al., 2013), and includes several case studies from Australia (Lyth et al., 2015), Canada (Gislason et al., 2021), and New Zealand for communicating climate change issues, along with it, the Global South focused on the frequency of coverage and the quality of news content about climate change (Evans et al., 2017), there is a need for future research that should explore the connections between place and climate change for their better engagement with the issue (Nicolosi & Corbett, 2017) (Khadka et al., 2021). India is a (global south) country with unity in diversity of different cultures, languages, dialects, climatic and economic conditions, etc. Without understanding the location-specific basic causes and effects, guiding climate action at the gross-root levels is impossible. Our India relies mostly on monsoon seasons but also has diverse climates from location to location, including arid, semi-arid, tundra and ice caps, subtropical, and tropical regions; each location requires tailored solutions to address the distinct challenges of effectively communicating climate action. There is a need for every individual to change their attitudes and behaviors to mitigate the effects of climate change, adopt eco-friendly practices such as sustainable agriculture, and use renewable energy sources to reduce greenhouse gas emissions. For example, when it comes to our country's specific data, the point discussed below may be applicable. According to the PIB post (Release ID: 1809123) on 24/03/2022, Indian MoES's climate change report entitled "Assessment of Climate Change over the Indian region," the average temperature on the land surface of India has increased by merely 0.7-degree centigrade from 1901-2018, while the sea surface temperatures in the tropical Indian Ocean about 1-degree centigrade during the period of 1951–2015. It is mentioned that the rise in temperatures is gradual, and the increase in extreme events is driven by global warming and regional anthropogenic causes of climate change.

Moreover, effectively conveying the urgency of the issue and the necessity for public action presents a significant challenge in the 21st century (Penz, 2022) (Khadka et al., 2020). To address, adopt, and to mitigate human-induced climate change in the Indian region and effectively communicate scientific knowledge to the public, it is crucial to encourage behavioral change (Goodwin & Dahlstrom, 2014), especially to inspire marginalized groups such as women and youth. (Harris, 2014), For this place-based communication plays a major role, providing locally relevant, culturally appropriate, individually engaging, and collectively adaptable content for effective communication with the masses. Mostly, the Location-specific place-based communication (LSC) is all about 1. Using local climate data and climate change impacts that affect the local community, economy, and environment by highlighting the regional climate trends and changing long-term weather patterns, such as temperature rise, precipitation changes, and extreme weather events that directly impact people's daily lives and people-place relationships (Hu & Chen, 2016) (Schweizer et al., 2013). This creates a sense of community ownership over climate issues and inspires action at individual and local levels. 2. Tailoring and crafting the messages in local languages in such a way as to reflect local cultural values, priorities, and traditions using rationalized mother tongues

and dialects about using Indigenous knowledge (Smith et al., 2024) (IPCC, 2007), (IPCC, 2023) local storytelling traditions (Gislason et al., 2021) incorporating place-based solutions (Leisorowitz et al., 2010) (Devine-Wright, 2013) (George & Reed, 2017) (Marshall et al., 2018) (Blakeney & Siddique, 2020) (Schweizer et al., 2013). community-based climate action's grassroots initiatives, local practices of sustainability efforts that the communities may already be engaged in, and local layman language's proverbs, idioms, metaphors, narratives, quotes, and symbols that resonate with the audience. This can make the message more relatable and create a stronger emotional and cognitive connection to the issue (Lorenzoni et al., 2007). Concentrating on the local frame highlights local effects rather than their broader global implications. Many studies highlight the positive impact of local framing over global framing (Degeling & Koolen, 2022). 3. Addressing the economic implications of climate change on local firms such as agriculture, fishing, etc., proposing practical, region-specific solutions that people can implement in their daily lives, such as water conservation practices in drought-prone areas, as well as ensuring these solutions align with regional economic priorities, like renewable energy practices and sustainable agricultural practices that help to drive local economies to reduce the carbon emissions. 4. Discuss incentives and subsidies for sustainable practices on energy-efficient housing, electric vehicles, and solar panel installation, as well as explain how residents can participate in or benefit from local government initiatives and climate policies. According to the available literature mostly, there are a number of CCC frames with varying effectiveness influenced by the particular nations, their socio-political contexts (Badullovich et al., 2020) and with the different public by taking productive and thoughtful dialogues into consideration (Corner et al., 2014), but there is a need for significant research on CAC frames for effective communication to the public, especially to the local communities.

In this globalized era, the dissemination of knowledge regarding this issue continues to pose difficulties due to the lack of effective methods for framing the messages (McNaught et al., 2014; Sussman et al., 2016) (Van Zeben, 2015). However, nowadays, the effective way of framing the messages plays a crucial role in crafting the information to engage a diverse audience (Guenther et al., 2023) (Nousiainen et al., 2022) (Altinay, 2017) with place (Hulme, 2008) amplifies action (Bolsen & Shapiro, 2017), and benefits researchers across various including political science, behavioral economics, and psychology (Cacciatore et al., 2015). Framing gives particular aspects of reality greater importance than others, making it easier to understand how to perceive reality. As a result, framing is an essential component of an effective communication process and is recognized as a vital tool for combating climate change (Bernstein & Hoffmann, 2019). When it comes to the frames of Climate action communication, the local frame rather than the global frame, strategic frames, health frames (Kreslake et al., 2016), gain and social frame (Spence & Pidgeon, 2010) rather than the losses and personnel frames (Halperin & Walton, 2017) which are more effective in communicating climate change adoption and mitigation practices, but perception of risk, efficacy, and behavioral intentions frames (Ngo et al., 2020) have gained limited attention.

Objectives:

- To examine the perceptions on impacts of Climate change (CC), and levels of familiarity with climate action (CA) in their daily life and local area.
- To identify the level of concern about climate change and major information sources of climate action communication at the grassroots level.
- To assess location-specific content's perceived importance, relatability, and visibility across different media in enhancing personal engagement among community members.

- To examine the role of community media (community radio) in educating the public about climate action.
- To analyze the types of local frames, LSC creation strategies, and motivational factors for improving the accessibility, relatability, and effectiveness of place-based communication creation for the awareness programs about effective localized communication to mobilize action against climate change.

Research questions:

- What are the perceived effects of climate change on daily life and local areas across different occupational groups?
- What is the familiarity level across various occupational groups with the concept of climate action?
- How do the gender differences influence the level of concern about climate change?
- What are the primary predominant sources of CAC for different types of gender groups?
- To what extent is climate action-related content that is tailored to local contexts observed by the public?
- What is the importance level of LSC, and does it enhance the relatability of climate action?
- Which kinds of LSC are considered most helpful by various age groups in understanding CAC?
- How does the perceived impact of CAC on individual action against CC vary across age demographics?
- What is the role of community media in raising climate action awareness with different levels of education?
- What suggestions do respondents offer for framing an effective and relatable climate action content?
- What are the primary motivational drivers for climate action across the gender of respondents?

Significance of the study:

This study is significant for effective local engagement, as it addresses the intersection of global SDGs related to Climate Action and the necessary communication strategies. While many studies from the available literature focus on the framing of CCC, there is a notable scarcity and limited research on CAC frames. Consequently, this study provides valuable insights into the significance of using location-specific content, avoiding the use of global north data when conveying climate action messages to local communities. The findings of this research paper will help develop more effective climate action awareness programs that use local frames and dialects to make the projected information easier to understand and enable urgent action against climate change across individual dimensions. In this manner, the study underscores the importance of local framing in climate action by emphasizing the integration of indigenous knowledge in the creation of localized content, and it also proposes various aspects of local frames tailored to semi-arid, hot, and dry climate regions, aiming to transform the global SDG 13: Climate action to the grassroots level.

Methodology of the study:

This study employed an exploratory research methodology to achieve its objectives and used a quantitative survey to engage the local community in the Zaheerabad region of Telangana, India. The study's theoretical framework is based on linking communication strategies to climate action through established communication theories and models, including framing theory, the binding communication model, and

participatory communication models. A sample of 100 respondents was selected (n=100) via a simple random sampling method. The data collection process was carried out using the primary method, which involved a questionnaire comprising 16 questions (and six informal interviews). This questionnaire was structured into two sections. Section one gathered demographic data, and section two focused on perceptions of climate change and understanding of climate action, the effectiveness of location-specific climate action content, and various aspects of local frames and motivations for effective communication to take action against climate change. The questionnaire design was intended to yield valuable insights relevant to the study's objectives. The survey was carried out in February 2025 in a region characterized by a semi-arid, hot, and dry climate, with a rich cultural diversity reflected in local dialects.

Data Analysis:

The data were obtained from the Primary data collection process, i.e., the exploratory survey method of the study. An offline paper survey questionnaire with closed-ended questions was used. A total of 100 respondents' data were coded in a Microsoft Excel sheet and analyzed with IBM SPSS (Statistical Package for the Social Sciences), version 27, a quantitative analysis software. Mainly descriptive statistics and crosstabs were used to analyze the data. The socio-demographic variables of the study include gender, age, educational level, and occupation type. Bar and pie charts were used for better visualization. After data analysis from the collected data, the results and interpretation were provided below.

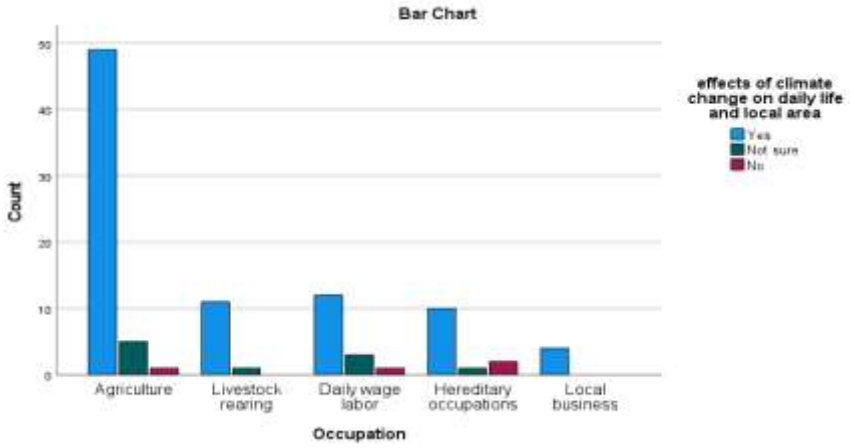
Results and Interpretation:

Research question 01: What are the perceived effects of climate change on daily life and local areas across different occupational groups?

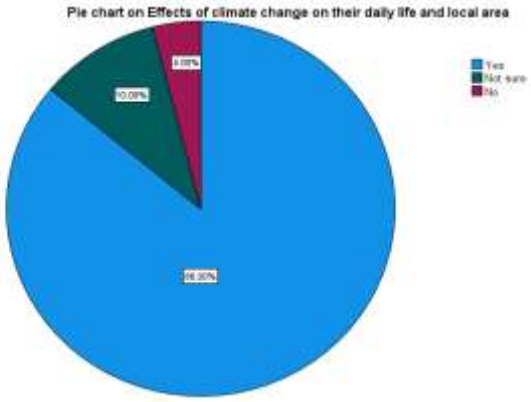
For the above research question, the SPSS results for Crosstabulation on Occupation and Effects of Climate Change on the Daily Life and Local area are given below.

Occupation * Effects of climate change on the daily life & local area					
Count					
		Effects of climate change on the daily life and local area			
		Yes	Not sure	No	Total
Occupation	Agriculture	49	5	1	55
	Livestock rearing	11	1	0	12
	Daily wage labor	12	3	1	16
	Hereditary occupations	10	1	2	13
	Local business	4	0	0	4
Total		86	10	4	100

Table 01: Crosstabulation on occupation and effects of climate change on daily life and local area



Bar chart 01: Bar chart on occupation type and effects of climate change on daily life and local area



Pie chart 01: Pie chart showing effects of climate change on daily life and local area

After analyzing this crosstabulation, Table No. 01 shows the relationship between occupation and the perceptions of the effects of climate change on daily life and local areas. This indicates that 86% of respondents believe climate change affects their daily lives and the local area. 10% are uncertain about this, and 4% of respondents do not feel the effects of climate change. Overall, the majority of respondents across all types of occupations, especially those that are directly tied to the environment and nature, acknowledged the effects of climate change, mainly agriculture (89.1%), livestock rearing (91.7%), and local business (100%) on their daily life and local area. Overall, these results suggest a strong consensus across all occupational groups regarding the effects of climate change.

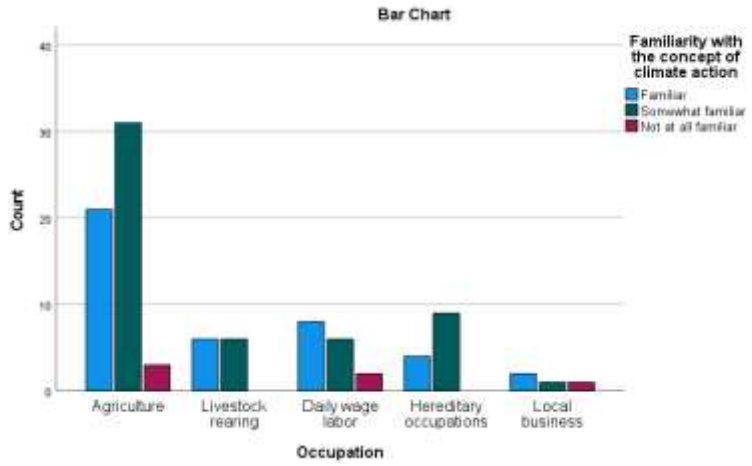
Research question 02: What is the familiarity level across various occupational groups with the concept of climate action?

For the above research question, the SPSS results for crosstabulation on occupation and familiarity with the concept of climate action are given below.

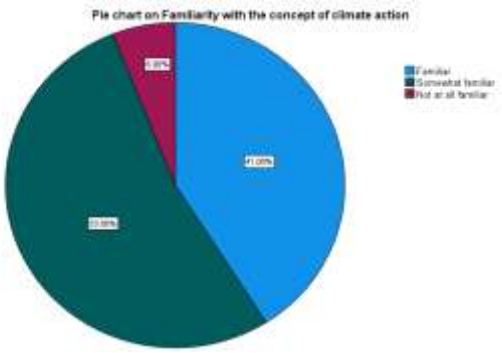
Occupation * Familiarity with the concept of climate action Crosstabulation		
Count		
	Familiarity with the concept of climate action	Total

		Familiar	Somewhat familiar	Not at all familiar	
Occupation	Agriculture	21	31	3	55
	Livestock rearing	6	6	0	12
	Daily wage labor	8	6	2	16
	Hereditary occupations	4	9	0	13
	Local business	2	1	1	4
Total		41	53	6	100

Table 02: Crosstabulation on occupation and familiarity with the concept of climate action.



Bar chart 02: Bar chart on occupation and familiarity with the concept of climate action.



Pie chart 02: Pie chart showing occupation and familiarity with the concept of climate action.

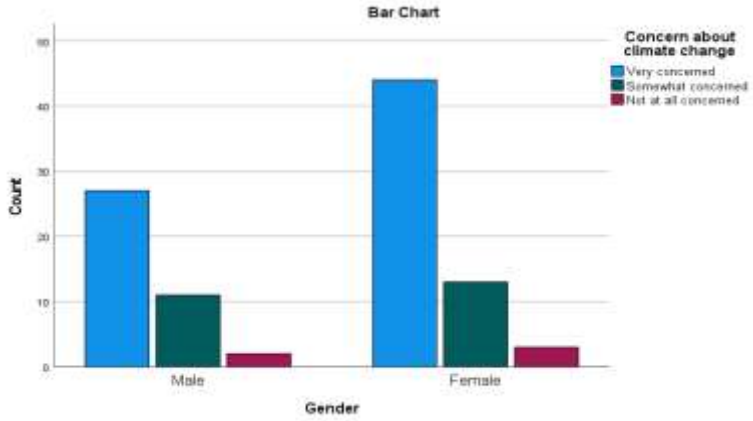
The crosstabulation between occupation and familiarity with the concept of climate action (CA) reveals differing levels of familiarity with the concept of climate action across various groups of occupations in that area. Overall, the table data indicates that 41% are familiar with the concept of climate action, 53% are somewhat familiar, and 6% of respondents are not at all familiar with the concept of climate action. The agriculture occupation shows the highest level of familiarity with the concept of climate action (94.54%), with the clear majority of respondents either familiar or somewhat familiar with the concept of climate action than livestock rearing and daily wage labor sectors. In particular, heredity occupation respondents show a slightly higher uncertainty level than familiarity level of climate action.

Research question 03: How do gender differences influence the level of concern about climate change?

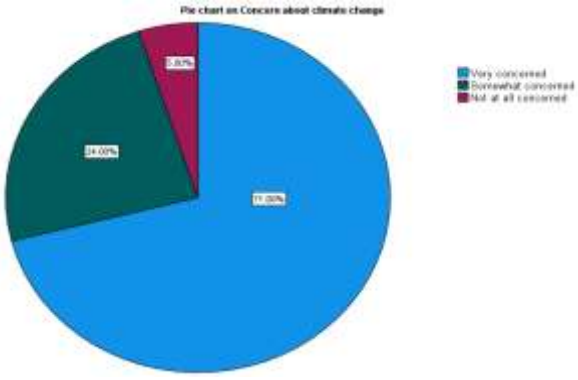
For the above research question, the SPSS results for Crosstabulation on gender and concern about climate change are given below

Gender * Concern about climate change Crosstabulation					
Count					
		Concern about climate change			
		Very concerned	Somewhat concerned	Not at all concerned	Total
Gender	Male	27	11	2	40
	Female	44	13	3	60
Total		71	24	5	100

Table 03: Crosstabulation on gender and concern about climate change.



Bar chart 03: Bar chart on gender and concern about climate change.



Pie chart 03: Pie chart showing gender and concern about climate change.

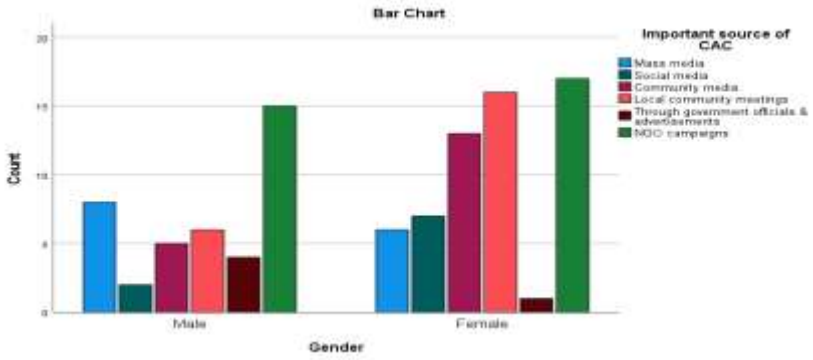
The above table shows the relationship between gender and concern about climate change by providing insights into the level of concern about climate change. Overall, the crosstabulation table reveals that 71% of respondents across all occupations are very concerned about climate change, 24% of respondents are uncertain, and 5% are not at all concerned about climate change. In particular, as compared to male participants (67.5%), female participants (73.33%) are highly concerned about climate change.

Research question 04: What are the primary predominant sources of CAC for different types of gender groups?

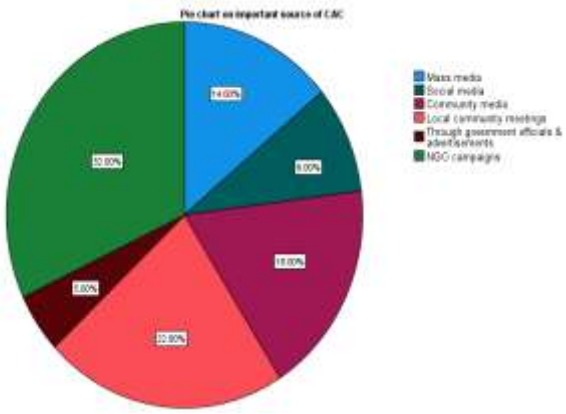
For the above research question, the SPSS results for Crosstabulation on gender and important sources of CAC are given below.

Gender * Important source of CAC Crosstabulation								
Count								
		An important source of CAC						
		Mass media	Social media	Community media	Local community meetings	Through government officials & and advertisements	NGO campaigns	Total
Gender	Male	8	2	5	6	4	15	40
	Female	6	7	13	16	1	17	60
Total		14	9	18	22	5	32	100

Table 04: Crosstabulation on gender and important sources of CAC.



Bar chart 04: Bar chart on gender and important sources of CAC.



Pie chart 04: Pie chart showing gender and important sources of CAC.

The crosstabulation table between gender and important sources of climate action communication (CAC) shows the differences in primary sources of CAC between the genders of participants. In the overall, the analysis reveals that while both males and females rely on multiple sources of CAC, however, both genders primarily depend more on NGO campaigns (32%) and local community meetings (22%) than the

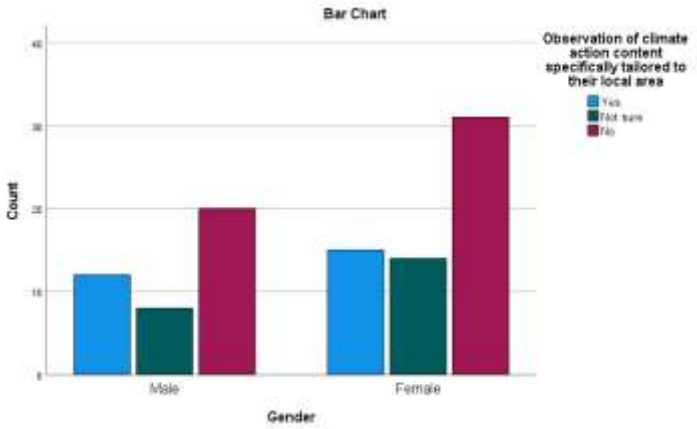
community media (18%), mass media (14%), social media (9%) and through government officials and advertisements (5%). In particular, the order of percentage of CAC sources for males varies from NGO campaigns, mass media, local community meetings, community media, government officials and advertisements, and social media. In contrast to the above for females, the order of percentage of CAC sources varied from NGO campaigns, local community meetings, community media, social media, mass media, and, at last, government officials and advertisements. This reveals that both genders have a variety of importance about CAC channels, but females are more active in community-oriented and social media sources of CAC than mass media, while males tend to rely on more NGO campaigns and official channels of communication.

Research question 05: To what extent is climate action-related content that is tailored to local contexts observed by the public?

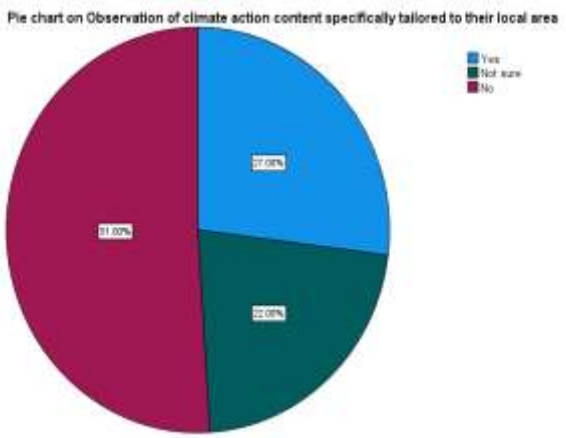
For the above research question, the SPSS results for Crosstabulation on gender and observation of climate action content specifically tailored to their local area are given below.

Gender * Observation of climate action content specifically tailored to their local area Crosstabulation					
Count					
		Observation of climate action content specifically tailored to their local area			
		Yes	Not sure	No	Total
Gender	Male	12	8	20	40
	Female	15	14	31	60
Total		27	22	51	100

Table 05: Crosstabulation on gender and observation of climate action content specifically tailored to their local area



Bar chart 05: Bar chart on gender and observation of climate action content specifically tailored to their local area



Pie chart 05: Pie chart showing gender and observation of climate action content specifically tailored to their local area

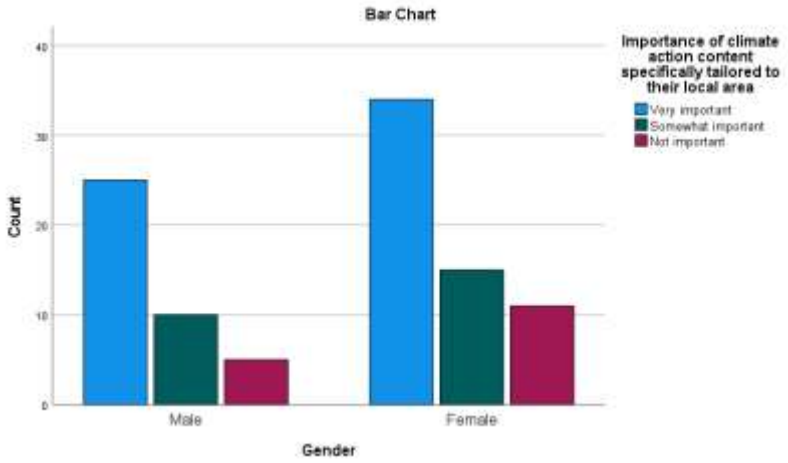
The above crosstabulation table indicates the gender-based differences in the observation of climate action-related content specific to their specific area. A higher percentage (51%) of the participants have not observed climate action-related content specific to their specific area across the media channels. While 22% of participants are unsure about it and 27% of participants have observed climate action-related content specific to their area in the mass media channels. Finally, the data indicates that there is only a slight gender difference in the observation of climate action-related content specific to their specific area and reveals a lack of locally tailored climate action-related content, while the trend of the bar chart is the same across male and female participants.

Research question 06: What is the importance level of LSC, and does it enhance the relatability of climate action? For the above research question,

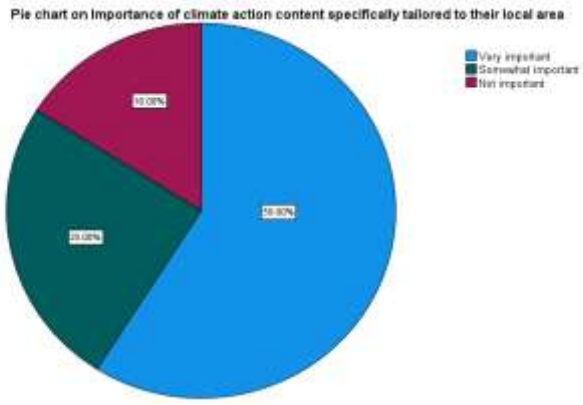
the SPSS results for Crosstabulation on gender and the importance of climate action content specifically tailored to their local area are given below.

Gender * Importance of climate action content specifically tailored to their local area					
Count					
		Importance of climate action content specifically tailored to their local area			
		Very important	Somewhat important	Not important	Total
Gender	Male	25	10	5	40
	Female	34	15	11	60
Total		59	25	16	100

Table 06: Crosstabulation on gender and the importance of climate action content specifically tailored to their local area.



Bar chart 06: Bar chart on gender and the importance of climate action content specifically tailored to their local area.



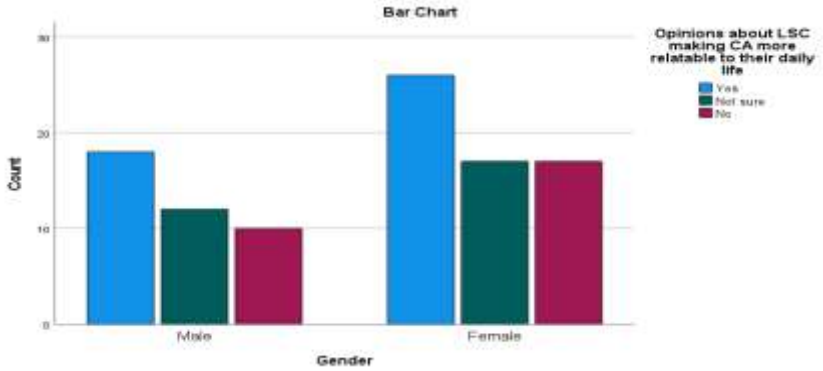
Pie chart 06: Pie chart showing gender and the importance of climate action content specifically tailored to their local area.

The cross-tabulation table's data analysis reveals the relationship between gender and perceived importance of climate action content specifically tailored to their areas. A majority percentage (59%) of respondents show a strong inclination toward climate action content specifically tailored to their local area by signifying (rating)it as very important, followed by 25% of respondents indicating that it is somewhat important, and 16% of respondents see it as not important. As compared to the percentage of female participants (56.7%), the percentage of male participants (62.5%) is slightly higher in giving importance to climate action content specifically tailored to their area.

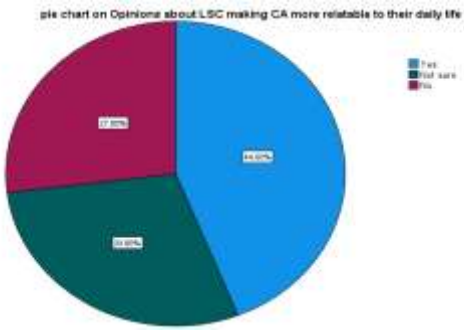
Gender * Opinions about LSC making CA more relatable to their daily life Crosstabulation					
Count					
		Opinions about LSC making CA more relatable to their daily life			
		Yes	Not sure	No	Total
Gender	Male	18	12	10	40
	Female	26	17	17	60

Total	44	29	27	100

Table 07: Crosstabulation on gender and opinions about LSC making CA more relatable to their daily life



Bar chart 07: Bar chart on gender and opinions about LSC making CA more relatable to their daily life



Pie chart 07: Pie chart showing gender and opinions about LSC making CA more relatable to their daily life

This crosstabulation examines the relationship between gender and individual respondents' opinions on whether location-specific content (LSC), makes climate action (CA) more relatable to their daily lives. Overall, 44% of the total participants responded to the opinion yes and indicated that they believe LSC makes CA more relatable to their daily lives. While 29% of participants had uncertain opinions about it, and 27% clearly indicated that LSC does not make CA more relatable to their daily lives. Both male (45%) and female (43.3%) participants have similar levels of agreement that location-specific content (LSC) enhances the relatability of climate action (CA) to their daily lives. While 29% of respondents indicated a not sure opinion, 29% of participants indicated no opinion about LSC, suggesting there is a need for better communication or more tangible examples of localized climate action messaging.

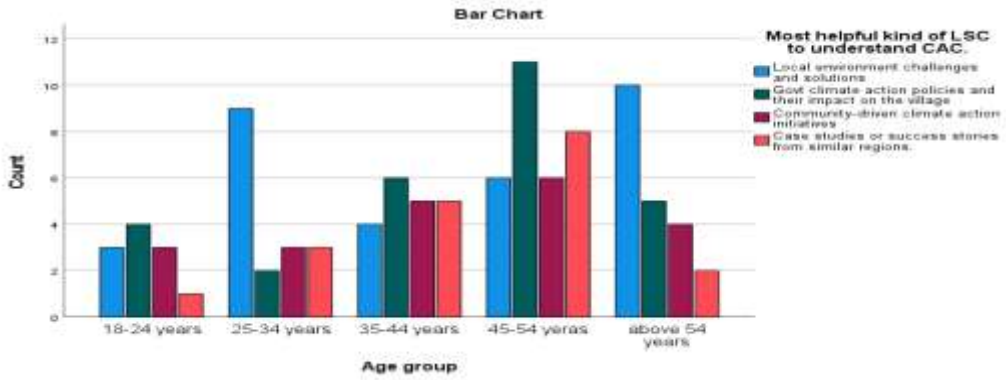
Research question 07: Which kinds of LSC are considered most helpful by various age groups in understanding CAC?

For the above research question, the SPSS results for Crosstabulation on age group and the most helpful kind of LSC to understand CAC are given below.

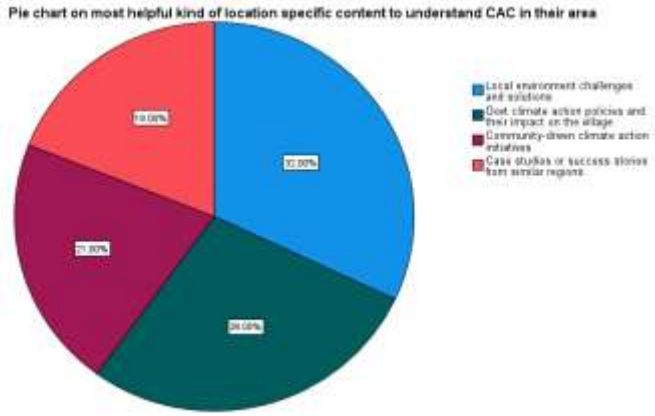
Age group * Most helpful kind of LSC to understand CAC. Crosstabulation		
Count		
	The most helpful kind of LSC to understand CAC.	Total

		Local environment challenges and solutions	Govt climate action policies and their impact on the village	Community-driven climate action initiatives	Case studies or success stories from similar regions.	
Age group	18-24 years	3	4	3	1	11
	25-34 years	9	2	3	3	17
	35-44 years	4	6	5	5	20
	45-54 years	6	11	6	8	31
	above 54 years	10	5	4	2	21
Total		32	28	21	19	100

Table 08: Crosstabulation on age group and the most helpful kind of LSC to understand CAC



Bar chart 08: Bar chart on age group and the most helpful kind of LSC to understand CAC



Pie chart 08: Pie chart showing age group and the most helpful kind of LSC to understand CAC.

The above table's data analysis highlights the perceived effectiveness of the helpful kind of LSC to understand CAC content in their areas according to the different age groups. Among all age groups, local environment challenges and solutions with 32% emerged as the most helpful type of LSC to their local area, followed by Government climate action policies and their impact on the village (28%), Community-driven climate action initiatives (21%), and Case studies or success stories from similar regions (19%). The 18-24 years age group is slightly more inclined to Government climate action policies and their impact on the village; the majority of respondents from the 25-34 years age group have clearly indicated that local environment challenges and solutions are the most helpful type of LSC. The 35-44-year-old age group

responses are evenly distributed across all four types of LSC, and the 45-54-year-old age group preferred Government climate action policies and their impact on the village, and Case studies or success stories from similar regions were more helpful in understanding CAC. Lastly, among the above 54-year-old age group, respondents predominantly preferred local environment challenges and solutions type as the most helpful kind of LSC to understand CAC in their local area. Overall, younger (18-34) and older (54+) age groups show interest and lean more toward local environment challenges and solutions type of LSC, while middle age groups (35-54 years) have a balanced focus by valuing policies, real-world examples, and community-led initiatives.

Research question 08: How does the perceived impact of CAC on individual action against CC vary across age demographics?

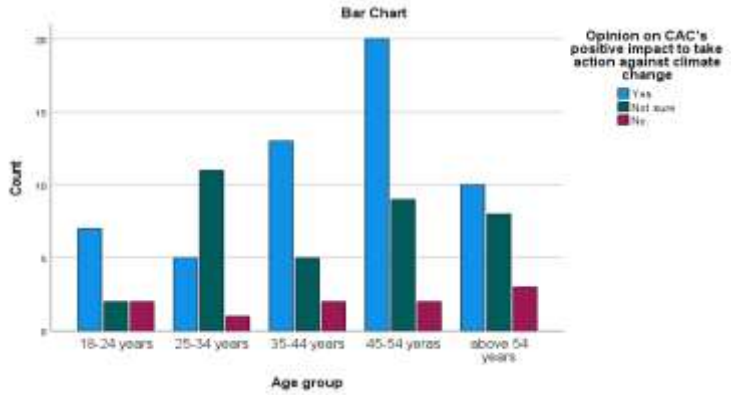
For the above research question, the SPSS results for Crosstabulation on age group and opinion about CAC's positive impact on taking action against climate change are given below.

Age group * Opinion about CAC's positive impact on taking action against climate change Crosstabulation

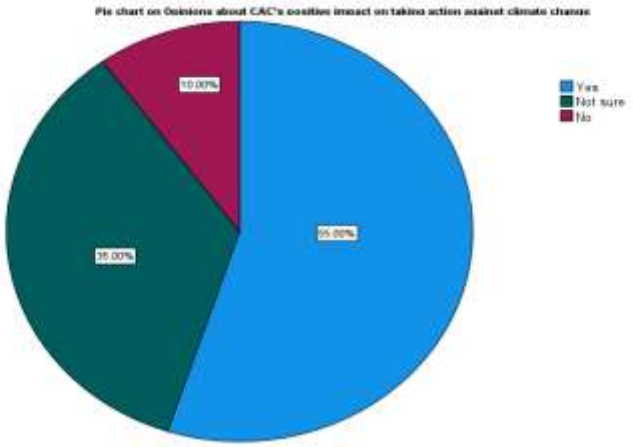
Count

		Opinions about CAC's positive impact on taking action against climate change			
		Yes	Not sure	No	Total
Age group	18-24 years	7	2	2	11
	25-34 years	5	11	1	17
	35-44 years	13	5	2	20
	45-54 years	20	9	2	31
	above 54 years	10	8	3	21
Total		55	35	10	100

Table 09: Crosstabulation on age group and opinion about CAC's positive impact on taking action against climate change



Bar chart 09: Bar chart on age group and opinion about CAC's positive impact on taking action against climate change



Pie chart 09: Pie chart showing age group and opinion about CAC's positive impact on taking action against climate change

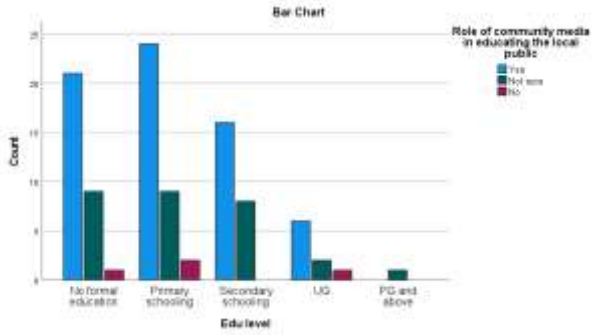
This crosstabulation table examines how different age group participants perceive the positive impacts of climate action communication on their ability to take meaningful action against climate change. Overall, a majority of respondents (55%) across all age groups believe that CAC positively encourages meaningful action against climate change among individuals. This is followed by 35% of participants with uncertain opinions or lack exposure to effective CAC, and only 10% of participants believe CAC has no impact on their ability to take meaningful action against climate change. Mostly, all age groups, particularly the 35-54 years age group, strongly affirm the positive influence of CAC, while the 25-34 years age group has the highest level of uncertainty in opinion about it.

Research question 09: What is the role of community media in raising climate action awareness with different levels of education?

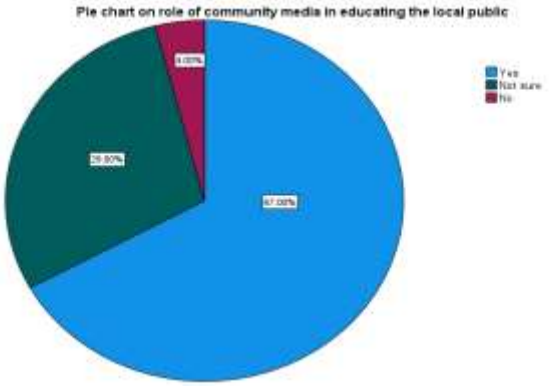
For the above research question, the SPSS results for Crosstabulation on the educational level and role of community media in educating the local public are given below.

Educational level * Role of community media in educating the local public Crosstabulation					
Count					
		Role of community media in educating the local public			
		Yes	Not sure	No	Total
Edu level	No formal education	21	9	1	31
	Primary schooling	24	9	2	35
	Secondary schooling	16	8	0	24
	UG	6	2	1	9
	PG and above	0	1	0	1
Total		67	29	4	100

Table 10: Crosstabulation on the educational level and role of community media in educating the local public.



Bar chart 10: Bar chart on the educational level and role of community media in educating the local public.



Pie chart 10: Pie chart showing the educational level and role of community media in educating the local public.

The cross-tabulation table's data analysis reveals the significant differences between respondents' educational levels and views on the role of community media, especially community radio, in educating the local public to encourage climate action. A substantial majority of respondents (67%) across all educational levels, especially participants who have no formal education, believe that community media have a significant role in educating the general public to encourage action against climate change against climate change. While 29% of respondents are not sure about it, only 4% of participants believe that community media does not play a significant role in educating the general public to take action against climate change. This underscores the notable importance of community media as a grassroots-level communication tool to encourage action against climate change, irrespective of educational level.

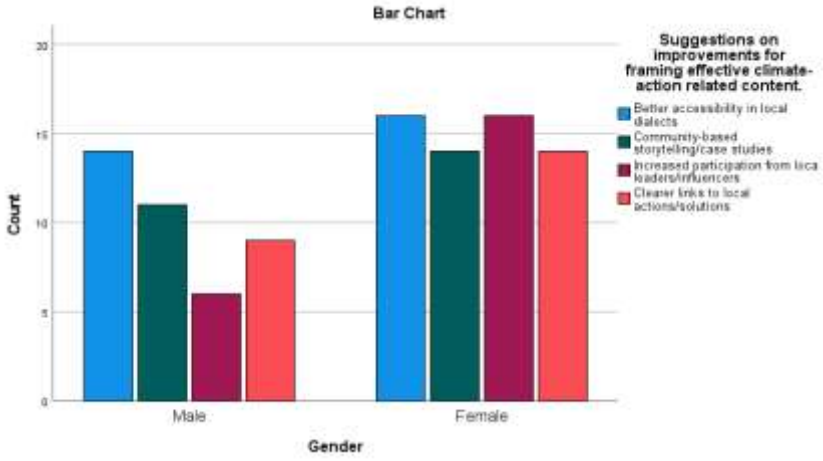
Research question 10: What suggestions do respondents offer for framing effective climate action content?

For the above research question, the SPSS results for Crosstabulation on gender and suggestions on improvements for framing effective climate action-related content are given below.

Gender * Suggestions on improvements for framing effective climate action-related content Crosstabulation		
Count		
	Suggestions on improvements for framing effective climate action-related content.	Total

		Better accessibility in local dialects	Community-based storytelling/case studies	Increased participation from local leaders/influencers	Clearer links to local actions/solutions	
Gender	Male	14	11	6	9	40
	Female	16	14	16	14	60
Total		30	25	22	23	100

Table 11: Crosstabulation on gender and suggestions on improvements for framing effective climate action-related content.



Bar chart 11: Bar chart on gender and suggestions on improvements for framing effective climate action-related content.

Pie chart 11: Pie chart showing gender and suggestions on improvements for framing effective climate action-related content.

The above crosstabulation table highlights the gender-based differences in suggestions for improving the framing of effective climate action-related content. Overall, both males and females emphasize the importance of better accessibility in local dialect frames, with a significant percentage (30%) highlighting the importance of linguistic inclusivity and local dialect for a better understanding of CAC at the rural levels. This is followed by 25% of responses with Community-based storytelling/case studies, 23% of responses with Clearer links to local actions/solutions, and 22% of responses with increased participation

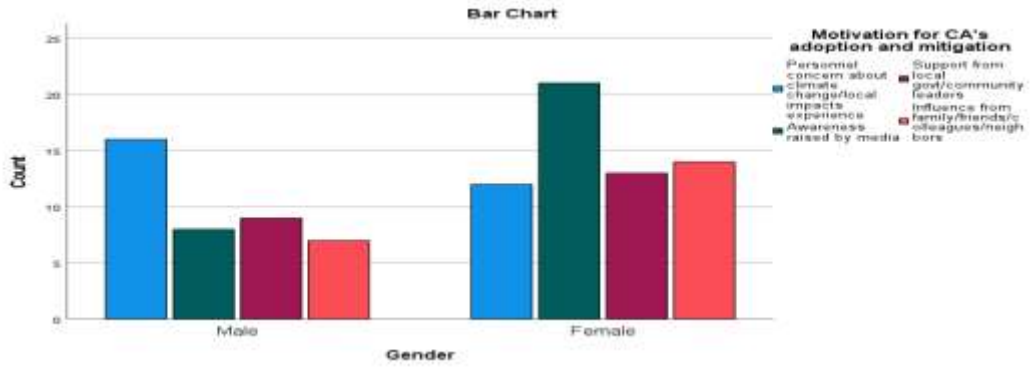
from local leaders/influencers frames. Male respondents preferred better accessibility in local dialect frames, with 30%. At the same time, female respondents preferred better accessibility in local dialects and Increased participation from local leaders/influencers frames, with 26.7%

Research question 11: What are the primary motivational drivers for climate action across the genders of respondents?

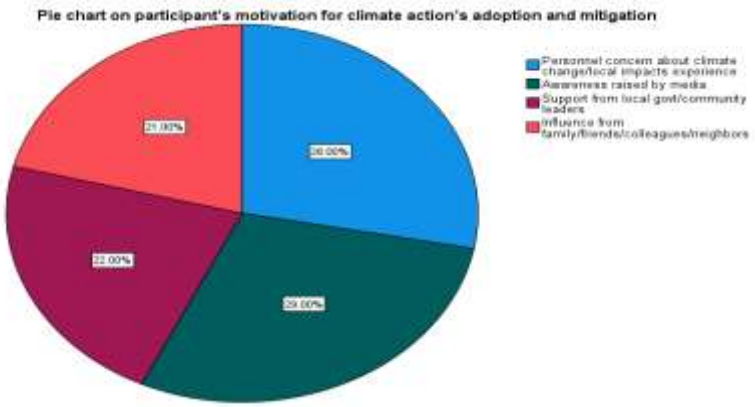
For the above research question, the SPSS results for Crosstabulation on gender and motivation for CA adoption and mitigation are given below.

Gender * Motivation for CA adoption and mitigation's Crosstabulation						
Count						
		Motivation for CA's adoption and mitigation				
		Personnel concern about climate change/local impacts experience	Awareness raised by media	Support from local govt/community leaders	Influence from family/friends/ colleagues/neighbors	Total
Gender	Male	16	8	9	7	40
	Female	12	21	13	14	60
Total		28	29	22	21	100

Table 12: Crosstabulation on gender and motivation for CA adoption and mitigation



Bar chart 12: Bar chart on gender and motivation for CA adoption and mitigation



Pie chart 12: Pie chart showing gender and motivation for CA adoption and mitigation

The above crosstabulation table explores and presents the gender-wise motivations behind climate action's adoption and mitigation strategies. Overall, the participants are motivated more by Awareness raised by media, with 29%, and closely followed by Personnel concern about climate change/local impacts experience, with 28%. In contrast to this, Support from local govt/community leaders (22%) and influence from social circles like family/friends/colleagues/neighbors (21%) results in comparatively a lower motivation level. In the highest, 40% of males are motivated by personnel concern about climate change/local impacts experience, and at the same time, females are motivated by awareness raised by media, with 35%.

Discussion:

From the results of the study, when it comes to objective one, it is concluded that respondents are more concerned about CC and climate change perception on them is more, but familiarity with the concept of CA is less. Regarding objective two, there are primary information sources about CA ranging from NGO campaigns (32%), Local community meetings (22%), Community media (18%), Mass media (14%), Social media (9%), and lastly Through government officials and advertisements (5%). This means that the first two are more popular than the rest; community media is more popular than mass media and social media. and there is less effect of government officials and advertisements to disseminate the information about climate action at the local level. Then, about objective three of the study, it is concluded that the importance of climate action content specifically tailored to their local area is more significant (59%), understanding of location-specific information makes climate action more relatable to their daily life (44%) and participant's feeling about to take action against CC is more (55%), but identification of climate action content among the respondents that specifically tailored to their local area is less (51%), Local environment challenges and solutions (32%) kind of location-specific content is most helpful to understand CAC in their area than rest of three types. When it comes to objective four, respondents' opinion on community media's role in educating the local public is more (67%). In the last, regarding objective five, almost the same percentage of people suggested that better accessibility in local dialects, Community-based storytelling/case studies, Increased participation from local leaders/influencers, and Clearer links to local actions/solutions have made climate action-related content more effective for them. Reducing emissions and educating the public are more important steps that local communities can take to address climate change issues than supporting sustainable local businesses and agricultural practices, and advocating for stronger local government policies. Awareness raised by the media, Personal concern about climate change/local impacts, Support from local government/community leaders, and influence from family/friends/colleagues/neighbors have similar motivation levels for adopting and mitigating climate action in their communities. It means that sub-aspects of frames have almost equal importance in communicating CA at the local level.

An additional finding is that, If we see broadly, both Climate change communication (CCC) and Climate action communication (CAC) may deal with the same topic, but if we concentrate on the small and thin differentiated line between both CCC and CAC, a closer analysis reveals a significant distinction between the two in terms of both topic's main focus and communication strategies. Generally, CCC focuses on raising awareness and concern about causes and impacts, while CAC focuses on adoption and mitigation methods to take meaningful action to decrease climate change. When it comes to the context of CCC's communication strategies, it presents the scientific evidence regarding climate change and emphasizes its impacts on the human population and on the environment, while CAC highlights the urgency of the climate

crisis, concentrates on the presenting potential solutions across individual, industrial, and policy-making dimensions to combat the climate change issue and empowers the communities to take the collective action collaboratively and build resilience against climate impacts and early warning systems.

Conclusion:

Based on the detailed data analysis and interpretation of the collected data from the grassroots level, the present exploratory study reveals a comprehensive understanding and offers an in-depth exploration of community-level awareness, responsiveness, and perceptions regarding climate change and climate action communication (CAC) through various socio-demographic variables. The findings clearly indicate a widespread recognition of climate change impacts on their daily life and local areas across various occupational groups, with particularly high acknowledgment from people who engage in agriculture and its allied sectors, which are closely intertwined and interdependent with the environment. A significant percentage of people show partial familiarity rather than familiarity with climate action concepts, although there remains a noticeable gap in the complete understanding, particularly in the adoption and mitigation issues of climate action, while climate change mainly focuses on causes and effects.

Gender-wise analysis reveals that women exhibit deeper concern for climate change and are more engaged with community-centric communication and social media channels, while males gravitate towards NGO campaigns and formal communication channels, and, importantly, both genders show a strong preference for locally tailored content on climate action. This variance underscores the critical demand for relevant, inclusive, localized, and participatory communication strategies. Furthermore, NGO campaigns and community meetings are major and pivotal CAC sources at their local level. A considerable portion of participants reported the lack of localized climate action-related content in the media; this limits the relatability and effectiveness of the adoption and mitigation of climate change in climate action. However, a majority recognize the value of location-specific content and believe it enhances their engagement and understanding of climate action-related messages. The role of education level and age demographics further illustrates that older and less formally educated individuals perceive community media (Sangham CRS) as a crucial tool to create climate action awareness among individuals. However, across all groups, there is a clear demand for more accessible, locally relevant, and contextually framed climate action communication. Suggestions from the participants emphasize the importance of local dialects, storytelling, and actionable content with examples.

Collectively, these results affirm that localized, inclusive, participatory, contextually framed, and culturally grounded climate action communication is essential to foster meaningful climate action at the grassroots level. The integration of local narratives, stories, trusted community figures, and personnel experiences of local impacts in discourse can bridge the existing gaps in awareness and motivation regarding climate action.

Future scope:

Based on the insights derived from the present study, key directions for future research and practical applications will include, first, the usage of localized communication strategies and models to explore the development and testing of appropriate and customized CAC frameworks that integrate local dialects, community narratives, personnel stories, inclusive participatory messaging to increase the relatability of CAC at the grassroots level, which drives to decrease the causes and impacts of climate change by increasing the awareness on adoption and mitigation measures of climate action. At the same time, this

effective CAC intervention must go beyond information dissemination to foster emotional, cultural, personal, societal, and practical resonance for taking action against climate change. Secondly, at the local level, there is a pressing need to investigate how community media, particularly community radio and its storytelling formats, is used as a vehicle for climate action education. For this, experiments with locally tailored CAC content (location-specific content) in the community media, especially with radio, may help the creation of effective climate action awareness programs to evaluate the relative effectiveness of different CAC formats across diverse demographic groups in enhancing engagement and action among the local public. This tailoring messages to the lived personal experiences of communities by considering different demographic variables will be pivotal for encouraging action regarding climate change at the local level. Future research could examine the role of local governance structures and institutional support in facilitating effective CAC by ensuring the diverse community voices and needs to be addressed. Lastly, longitudinal studies can also be conducted to assess the awareness of climate action and behavioral change over time. Replicating this study across different ecological zones and different socio-economic settings would also offer comparative insights into location-specific variations in the perceptions of people and the efficacy of communication regarding climate action.

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