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From Awareness to Action: Exploring the Role of Media in Climate Change Education and Engagement in Pakistan

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Article Details

ABSTRACT

Keywords: Climate Change, Media, Awareness, Action, Engagement

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Global sustainability is at risk because of climate change and solving this issue needs good communication. Pakistan is one among those countries across the globe which is facing adverse effects of Climate Change in the region. With a focus on how different media channels helps to increase awareness, create public opinions and actions; this study examines the role of media in Pakistani public discourse involvement and climate change education. The research examines how traditional media platforms like television, radio, newspapers and now digital social media online news portals is used to inform and mobilize the public especially youth and urban populations in the context of a developing nation with varied media consumption patterns and educational disparities. The study investigates the efficacy reach and impact of media driven climate message using a mixed-methods approach that combines surveys interviews and content analysis of media coverage. Climate change is nowadays a multi-disciplinary and researchers scholar conduct studies according to their own field and interest but the subject matter is common it effects all as nation and it needs to be resolved via various developmental steps. The results show that using media as an educational gadget has both advantages and disadvantages including problems with accessibility public trust and disinformation. The study concludes that action is dependent upon awareness and media in Pakistan plays a significant role in bridging awareness and action by offering insightful climate change education that motivates media audience for engagement with climate change initiatives like clean-green Pakistan and billion tree tsunami project. The analyzed data is presented through pie charts for the ease of understanding of its readers. This study advances the readers, scholars, researchers and policy maker's knowledge of how Pakistani media might operate as an agent of change to close the gap between active environmental behavior and climate awareness. Climate change is somehow a national emergency which is not understood by Pakistani leaders and are not addressed similarly a very less work is done in this domain. This study recommends several aspects to reduce nature disturbance by humanized activities, collective efforts to reduce water, air, and land pollution. This study suggests taking developmental initiatives like E-Bikes and clean-green Pakistan initiative. Digital media plays a vital role in youth activation, national agenda setting, virtual national movements, and policy development.

Introduction

One of the biggest and most important worldwide issues of the twenty-first century is climate change which has significant impacts on human cultures economics and ecosystems. Public awareness and education are becoming more and more important as nations work to reach environmental goals and make a move to sustainability. In this regard media both digital and conventional are essential in influencing attitudes inspiring action and forming public awareness of climate challenges.

It is especially important to have good climate communication in Pakistan a nation that is extremely at risk for climate-related disasters like heat waves floods and glacial melt. Even while there is increasing scientific agreement about the causes and effects of climate change there is still a lack of practical engagement and disparate public knowledge. There is a lot of opportunity to use media as an approach for civic engagement and climate education because of the quickly growing media environment and the population's increased connectivity particularly among young people.

This study proposes to find out how Pakistani media supports public involvement and education about climate change. It looks into how well different media such as radio newspapers television and social media raise awareness encourage climate education and motivate people to change their behavior. The study also looks at the difficulties media companies have in providing compelling readable and accurate climate content particularly when faced with technological political and financial limitations.

This study aims to fill the awareness to action gap by examining media content and audience reactions. By offering context specific views from a developing country view and emphasizing the role that media can play in fostering a climate conscious society it advances the area of environmental communication.

Background

Nowadays, the idea of climate change usually refers to changes in the environment caused by human activity in the ecosystem. One of the most serious environmental problems that mankind have ever encountered is climate change (Moser & Dilling, 2004). Despite being centuries old, the problem only gained widespread notice in the 1980s (Seacrest et al., 2000). Since then, those who care about the environment have expressed alarm over the frightening effects of human activity on the climate, which are threatening social, economic, and geophysical systems.

Extreme weather events changing agricultural trends shortages of water and increased health risks are just a few of the ways that climate change is already affecting Pakistan making it one of the most affected countries in the world. Tragic droughts heat waves and floods have struck the nation endangering both its environmental sustainability and socioeconomic stability. Despite these urgent issues there is still a lack of knowledge about climate change and its effects especially in rural areas and among underserved people. Effective climate action is gravely hindered by this lack of understanding.

Antonio Guterres, the UN Secretary General at the time, warned the world that "climate change is indeed running faster than we are, and we have the risk to see irreversible damage that will not be possible to recover if we don't act very, very quickly" (Guterres, 2018). Climate change is defined as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods" by the United Nations Framework on Climate Change Convention (UNFCCC, 1992).

Traditional and digital media have long been crucial in forming public opinion and affecting social behavior. The media plays a crucial role in climate change awareness in Pakistan since media consumption vary and changing quickly. Particularly in rural areas television and radio are still widely used information sources but social media and other digital platforms have grown to be effective instruments for public discourse youth activism and information sharing. The growing internet accessibility and the prevalence of smartphone use

among young people present special chances to close the understanding gap on climate change.

There are a number of obstacles Pakistani media must overcome in order to effectively communicate climate change. These include a dearth of qualified journalists as well as developers covering environmental issues the spread of competing information and the government's scant funding of climate journalism. The politics of climate concerns frequently blocks the media's ability to function as a reliable teaching instrument by complicating public conversation.

The way the media presents the subject of climate change has changed recently as the significance of quick action has come to light more and more. Local youth-driven climate initiatives have been sparked by organizations such as global Fridays for Future which are led by young activists like Greta Thunberg. This demonstrates how effective social media is at inspiring the next generation to support sustainable behaviors and climate policies.

While climate change is receiving more attention in Pakistani media there aren't many extensive studies on how well the media promotes climate involvement and education. In order to close this gap this study looks at how the media may help the Pakistani public to become more climate aware and take action with a focus on the role of young and digital platforms.

Problem Statement

There is a serious climate problem in Pakistan where millions of people are affected by extreme weather and degradation of the environment. There is still a large understanding and awareness gap about the problem especially with regard to its sources effects and potential remedies despite the fact that the nation has become extremely sensitive to the effects of climate change. The lack of practical climate communication techniques insufficient coverage of environmental problems in the main stream media and insufficient climate change education in institutions all contribute to this knowledge gap.

As climate-related conversations are becoming more common in the media it is yet unknown how these exchanges will affect the development of significant environmental action. While conventional media sources like radio television and newspapers still have a significant impact on public opinion digital media platforms particularly social media have become effective instruments for youth-led climate support and participation. The difficulty is in figuring out how various media from social media campaigns to mainstream news help spread awareness of climate change and promote sustainable methods.

The young people in Pakistan are becoming more involved in climate campaigning it is not generally known how well the media can convert awareness into practical climate action. With a focus on encouraging concrete long lasting action among the public particularly the youth this study seeks to solve the following critical issue:

How can media both digital and traditional be maximized as a vehicle for climate change education and participation by the public in Pakistan?

By addressing this gap the study investigates the obstacles and look for possibilities for enhancing climate communication in Pakistan and offer insightful information about how media may be used more successfully to close the distance between knowledge and action in relation to climate change.

Research Gap

Research on climate change has revealed that Pakistan lags behind other Asian and European countries (Kim, 2011). Studies from Norway and the United States have connected climate change to extreme weather occurrences, ice melting, and climate (Smith & Leiserowitz, 2012). Although scientists agree that human activity is causing climate change, the public discourse often portrays the issue as a natural event (Boykoff, 2007). The pressures journalists encounter in the workplace and media elites have been blamed for the lack of coverage of climate change in the media (Boykoff, 2007).

The impact of media in climate change awareness and public involvement in Pakistan is the subject of relatively little research despite the increasing acceptance of climate change as a worldwide emergency. Study on the media role in communicating about climate change has been conducted all over the world most of it has concentrated on industrialized nations or areas where media networks are more developed and conversations on climate change are more established. Pakistan on the other hand has been underserved in research on climate media despite being a developing nation that is extremely sensitive to the effects of climate change.

In addition social media in particular is becoming more popular among Pakistani youth little research has been done on how these channels are used for campaigning and education on climate change. Without investigating the minute details of digital media influence on teenage involvement and activity the majority of research has either concentrated on traditional media radio television or more general environmental communication initiatives. In Pakistan social media ability to impact climate behavior and promote real change remains poorly appreciated especially in light of regional issues including disinformation access restrictions and low digital literacy.

Media stories and articles frequently mirror their predetermined policies, despite Western media's diligent efforts to spread awareness of the climate change threat (Bolsen & Shapiro, 2018). More research is needed on climate change reporting in other parts of the world, such Pakistan, but it has been extensively examined in English-speaking nations, especially the US. In the end, this would inform more effective communication strategies and policy interventions by offering insightful information about how various media systems and cultural contexts influence public awareness of and engagement with climate change issues.

There hasn't been enough research done in Pakistan on the link between awareness of the climate and true behavioral change. Research that has already been done frequently focuses on climate information without discussing how that knowledge is applied to specific activities such supporting climate policies or embracing sustainable practices. A significant gap in the literature on climate communication in Pakistan is the absence of framework for assessing how well the media transforms awareness into action.

By emphasizing on the function of both digital and traditional media in advancing climate change education increasing awareness and promoting youth engagement in Pakistan this study aims to close these gaps. Given the nation's social and political cultural and technical context the study also examine the difficulties the media experiences in conveying accurate and effective climate messages. (Tanveer et al., 2025)

Research Objectives

This study aims to investigate the part of media in Pakistani public involvement and education regarding climate change with a particular emphasis on the ways in which both digital and traditional media might help close the gap between action and knowledge. This research specifically aims to:

1. **Examine the Role of Traditional Media:** To evaluate how well Pakistani traditional media such as radio television and newspapers inform and educate the people about environmental issues and to examine how they contribute to the country's efforts to manage climate change.
2. **Explore the Impact of Digital Media:** To inquire out how young people and environmental activists utilize digital media particularly social media sites like Facebook Instagram TikTok and Twitter to spread awareness of climate change and encourage participation in climate action.
3. **Assess Media Influence on Public Perception:** To analyze the impact of media portrayals of climate change on public attitudes perceptions and comprehension of climate issues with a focus on urban and youth populations.
4. **Identify Barriers to Effective Climate Communication:** To identify the main obstacles and difficulties that Pakistani newspapers face while providing education on climate change including

issues like false information accessibility technology restrictions and political or financial restraints.

5. **Evaluate the Effectiveness of Media in Driving Behavioral Change:** To assess the media's ability to inspire concrete climate-related acts among the general public especially young people and to investigate how the media could move from promoting awareness to promoting environmentally responsible actions.
6. **Investigate Youth Engagement in Climate Activism:** To look into how media platforms affect Pakistani youth's action climate advocacy and participation in environmental movements as well as how they interact with content related to climate change.
7. **Propose Recommendations for Effective Climate Communication:** Considering the results suggests ways to improve the media contribution to climate change education and public action in Pakistan.

1. Research Questions

1. What part do Pakistani traditional media such as radio television and newspapers play in educating the public about climate change and how successful are they at doing so?
2. How do digital media channels especially social media Facebook Instagram TikTok and Twitter support youth activism and education about climate change in Pakistan?
3. How do Pakistani media accounts of climate change affect the general public's attitudes perceptions and comprehension of environmental issues particularly among urban and young groups?
4. What are the main obstacles Pakistani media outlets have in their efforts to communicate climate change effectively and how do these challenges affect the level of efforts to raise awareness and educate people about the issue?
5. How much does Pakistani press coverage of climate change influence the public behavior specifically in terms of embracing sustainable habits or taking climate-related action?
6. How do young people in Pakistan interact with content about climate change on digital media platforms and how does this interaction affect their involvement in activism and climate advocacy?
7. What steps can be taken to increase the media capacity to educate Pakistanis about climate change and promote meaningful citizen participation?

Significance

This study is important for a number of reasons including the fact that it attempts to close important gaps in the field of information on global warming communication in Pakistan specifically with regard to the function of the media in informing the public and encouraging environmental action. A lot of study has been done on climate change communication worldwide little of it has been done especially on Pakistan a nation that is extremely sensitive to the effects of climate change. By offering insightful information about how different media both digital and traditional might be utilized to engage people in climate action and increase climate literacy in developing nations this study advances the academic disciplines.

The effectiveness of various media platforms television radio print and social media in influencing climate discourse will be better understood by investigating how the media affects public perceptions and participation with climate change in Pakistan. Government officials environmental groups and media professionals looking to create more successful communication methods that appeal to a variety of audiences from urban teenagers to rural communities will find significant value in the study's conclusions. (Tanveer et al., 2024)

This study has real world significance for Pakistan's efforts to communicate about climate change. The research conclusion guide the development of more focused and effective media campaigns which can raise awareness promote learning and motivate concrete change. A more knowledgeable and involved populace is important for the success of climate policy and the advancement of sustainable practices in Pakistan which is confronting an increasing number of environmental problems.

A focus on young people involvement in climate action underlines how digital media may empower the next generation particularly in a nation where a huge proportion of the population is under 30. This study could be crucial in fostering youth leadership in climate change initiatives by examining how social media platforms can be used for climate advocacy. This would ensure that a new generation is inspired to confront the climate changes.

At last this study provides a thorough framework that how the media might be used in Pakistan to promote climate education and action which is advantageous to scholar's decision makers journalists and climate activists equally.

Hypothesis

1. H1: Traditional media such as radio television and newspapers play a crucial but restricted role in educating Pakistanis about climate change having a greater influence on rural than on urban inhabitants.
2. H2: Digital media especially social media platforms like Facebook Instagram TikTok and Twitter are essential for educating advocating for and enlisting Pakistani youth in climate change action.
3. H3: Public views on environmental issues are positively impacted by media coverage of climate change in Pakistan with a focus on the desire of the younger generation to support sustainable practices.
4. H4: Both digital and traditional media are ineffective at promoting awareness of climate change issues to promote change in behavior in Pakistan due to a number of major obstacles such as disinformation restricted access and political influence.
5. H5: Measurable changes in behavior in the adoption of climate friendly activities and participation in environmental actions come by the use of media for environmental education and advocacy especially among young people in Pakistan.
6. H6: Compared with more general media channels media platforms that convey tailored climate change messaging such as social media campaigns will have a greater influence on young engagement and action.

Literature Review

Actors in the environmental sector are compelled by the current climate emergency to create novel approaches to involving civil society in climate change and encouraging sustainable behavioral change (Tavares et al., 2020). Previous studies have shown that news media coverage of climate change can differ significantly according on the media system and context of a nation or region (Carvalho & Burgess, 2005; Boykoff, 2007; Peters & Heinrichs, 2016). Their media usually only reports on climate change issues after an incident happens, despite though environmental change commonly has catastrophic repercussions on developing nations like Pakistan (Azmi et al., 2015). In contrast, throughout 2009, the media in wealthy countries such as the US, UK, Mexico, and Japan focused more on climate change (Boykoff, 2010).

The most contentious and dangerous issue facing the modern, civilized world is climate change. The effects of climate change on human settlements, food production, water resources, and energy are unmatched. Despite having a far lower percentage of greenhouse gas emissions than wealthy nations, developing nations are particularly vulnerable due to their reliance on climate-sensitive industries like agriculture and water. Pakistan is sixth among the nations most at risk from climate change and has characteristics in common with poor nations (Javed, 2016).

The supply of water and food is significantly impacted by climate change, one of the most dangerous problems of the twenty-first century. The problem contributes to the rise in sea level, which leads to hurricanes, as well

as variations in monsoon rains and snowmelt, which produce floods (Scheffran, 2011). The world's population may face serious issues as a result of the frequent, large-scale disasters, particularly in poorer nations that are thought to be more vulnerable to climate change. According to Douglas and Wildavsky's (1982) "Cultural Theory of Risk," culture typically represents a variety of conventional viewpoints, ideas, and beliefs. As members of a specific community, it also symbolizes behaviors that people learn, share, and modify.

Both journalists and the general public need to have a certain amount of scientific expertise because environmental change is a complex, long-term issue (McKnight & Dunlap, 2011). Even if digital media is raising public knowledge of climate change, mass media continues to be the most important source of information for the general public on such topics (Anderson, 2009). It has been said that "one of the greatest natural challenges facing our planet" is global warming (BBC News, 2015).

With its regional pollution making up only 0.46% of global greenhouse gas emissions, Pakistan is especially susceptible to the effects of global emissions, such as earthquakes, floods, droughts, hurricanes, rising temperatures, and sea level rise (World Bank, 2018). As a result, the financial and economic elites must prioritize climate action and adopt more sustainable behaviors (Cox, 2015). Therefore, in order to successfully address the growing threat of climate change, it is imperative to comprehend how the media shapes public views and behaviors in Pakistan.

It is indisputable that media analysis has an impact on public attitudes and perceptions about climate change. Media coverage is equally important in influencing views and bringing about change, even while scientific research and policy discussions are crucial in forming public knowledge and action (Boykoff & Roberts, 2007). It is true that how environmental issues are portrayed in the media has a significant influence on how people view these issues and how they respond to them (Nisbet & Scheufele, 2009). Public perceptions of a number of issues, including climate change, are significantly shaped by the news media (Stecula & Merkley, 2019).

By highlighting certain aspects of a problem while downplaying others, these tactics create narratives around it. Public perception and the actions that follow are influenced by the way that climate change is presented in the media (Nisbet & Scheufele, 2009). Public knowledge and comprehension of science are significantly impacted by media consumption, particularly when it comes to intricate and technical topics like climate change (Wilson, 1995). According to Nisbet and Scheufele (2009), media coverage has the power to transform scientific information into language that the general public can easily comprehend. Public knowledge and comprehension of science are significantly impacted by media consumption, particularly when it comes to intricate and technical topics like climate change (McCombs, 2011).

Research Design and Methodology

In order to investigate the role of media on climate change awareness and engagement with the public in Pakistan this study uses a mixed-methods research approach that combines content analysis research and interviews. In order to better understand how media platforms affect public views and motivate climate action especially among young people the research approach is qualitative and descriptive.

Population and Sample

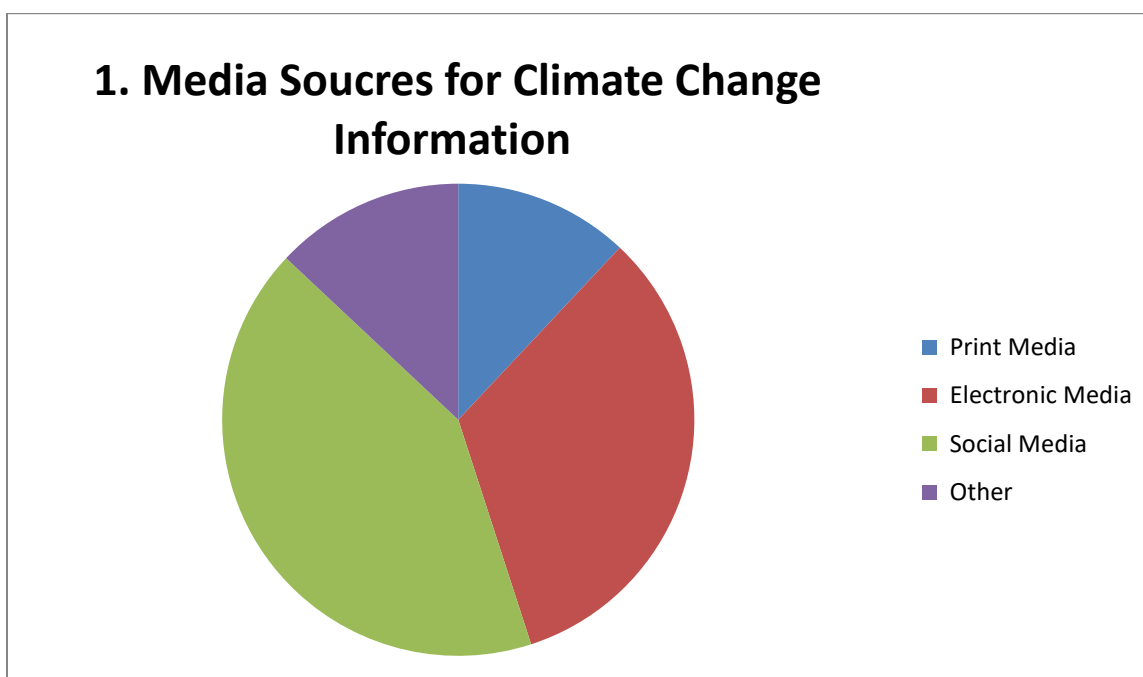
- **Media Sample:** From 2019 to 2024 a selection of climate-related information from Pakistani newspapers radio television and social media networks Facebook Instagram Twitter and TikTok is examined.
- **Public Sample:** To ensure diverse representation 500 young people ages 15 to 35 from rural as well as urban locations people are questioned using a random sampling strategy.

Data Collection Methods

1. **Content Analysis:** To find how climate issues are framed and how young people are involved media content from both conventional and digital channels are coded.
2. **Surveys:** To evaluate young awareness the use of media and attitudes about climate change a systematic survey is conducted.
3. **Interviews:** To gain qualitative insights into media techniques and challenges in global communication 20 media professionals and 15 young activists has participated in in depth informal conversations.

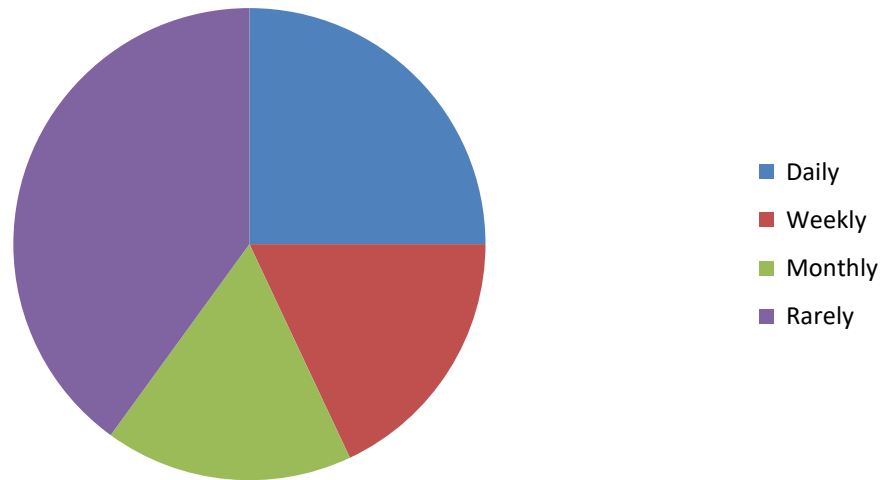
Data Analysis

- **Quantitative:** To find trends in media influence and engagement survey data is examined using statistical methods such as descriptive statistics and inferential tests such as ANOVA and Chi-square.
- **Qualitative:** To identify important themes regarding media effectiveness and barriers media content and interviews are subjected to thematic coding.
- The data and results are displayed via Pie Charts below for ease of understanding;



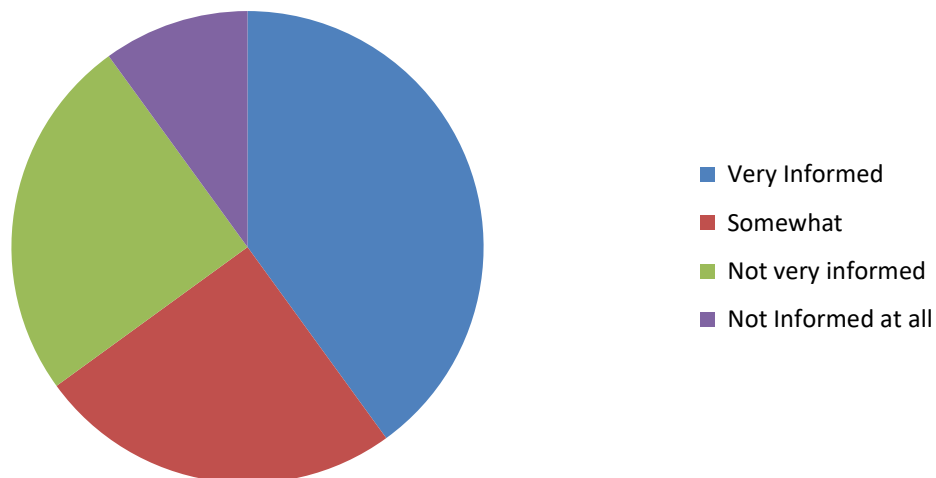
Discussion: The demographic data collected from the population of the study shows that majority of the people are dependent upon social media for climate change information while electronic media on the other is also a vital source found among the participants for climate information consumption. Some people also still rely on print media and other sources for climate change information.

2. How often do you see media stories or conversations on climate change?



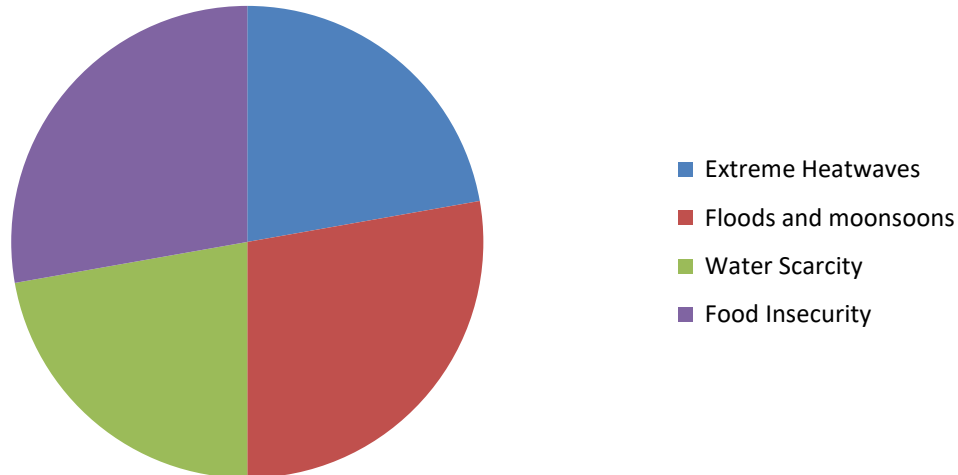
Discussion: Based on the data collected, due to limited coverage of climate change in media the audience see media stories or discussions on climate change rarely in mainstream media while those are interested in climate change search daily for climate change information consumption to update themselves while $\frac{1}{4}$ respondents also that they rarely see stories related to climate change in media.

3. How knowledgeable are you about Pakistan's climate change and its effects?



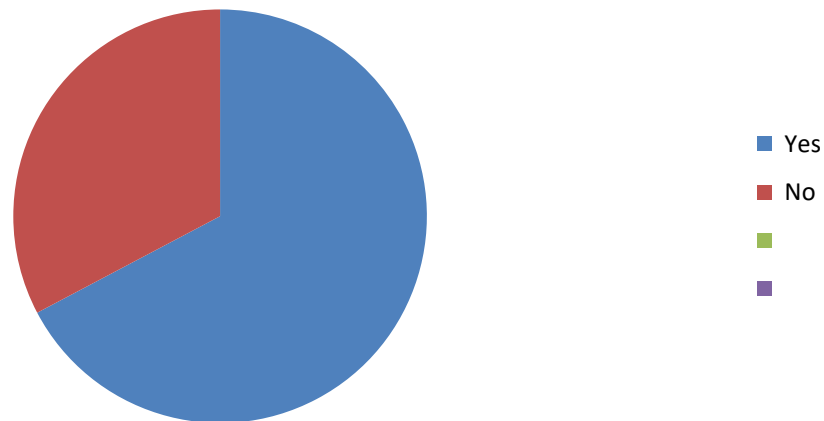
Discussion: Interestingly the majority of respondents of the questionnaire were very informed or informed and knowledgeable about Pakistan's climate change and its effects while few were not very informed regarding climate literacy of Pakistan.

4. In Pakistan, which of the following effects of climate change worries you the most?



Discussion: Nation overall is worried about climate change multi factors like people are concerned about extreme heat waves, floods and monsoon, water scarcity, and food insecurity in Pakistan. They need practical on ground solutions to these issues occurred as a result of climate change.

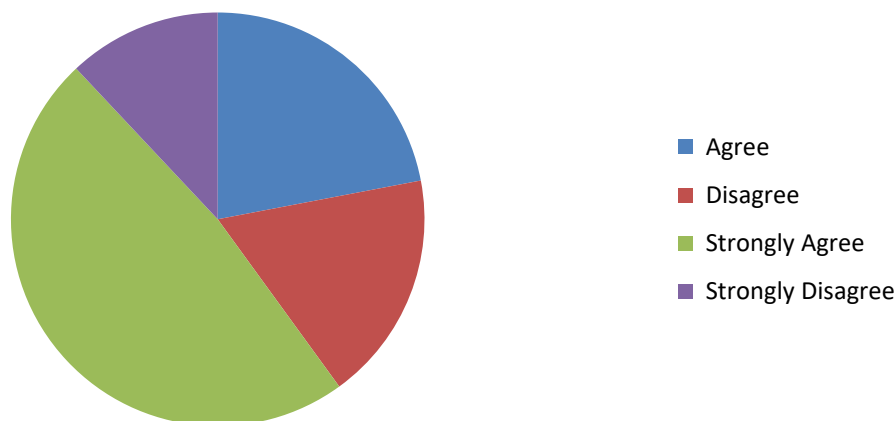
5. Have you ever been inspired to take any action in response to climate change by media coverage?



Discussion: Media is a driving force behind activism and inspiration. Majority of the respondents are inspired to take actions in response to climate change by media coverage in many ways at different levels to combat

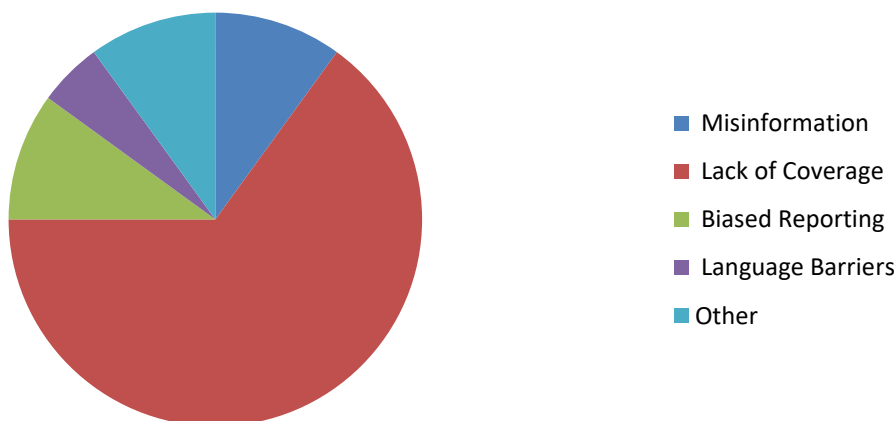
climate change in Pakistan.

6. Do you think Pakistani youth can be effectively mobilized for climate action through social media?



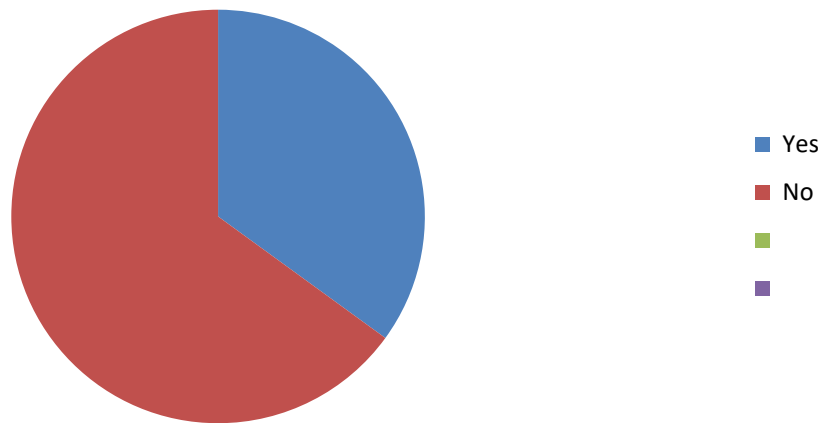
Discussion: Social media is platform where youth is surrounded by different messages that influence them gradually to take actions. Social media is considered to be the media of youth. This study found that Pakistani youth can be effectively mobilized for climate actions through social media.

7. What obstacles do you encounter when trying to find trustworthy information about climate change in Pakistan?



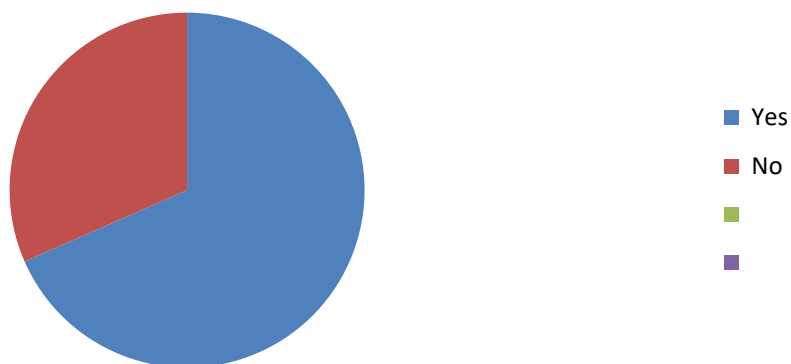
Discussion: Lack of climate change stories and news coverage in a huge level is the most alarming obstacle to encounter when trying to find trustworthy information about climate change in Pakistan while misinformation, biased reporting and language barriers are also found as a secondary obstacles.

8. Do you believe that Pakistani media adequately covers solutions to climate change?



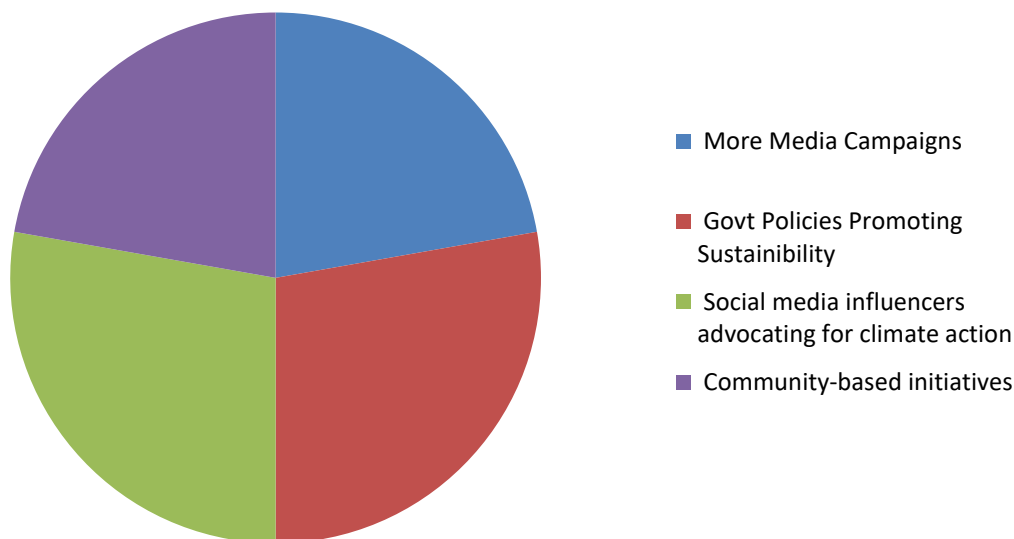
Discussion: The study found that the respondents claim that they do not believe that Pakistani media adequately covers solutions to climate change while a very few disagree this response and claim that yes Pakistani media covers solutions to climate change news and stories.

9. After viewing media coverage of a climate-related campaign or movement (such as Clean-Green Pakistan or Billion Tree Tsunami), have you ever joined in?



Discussion: Especially youth after viewing media coverage of climate change related campaigns or movements such as clean green Pakistan or billion tree tsunami joined in to bring positive change while respondents didn't joined response was found during data analysis.

10. What's your recommendation?



Discussion: Experts, citizens and netizens recommend that more media coverage, promoting government policies for sustainability, social media influencers advocating for climate action and community based initiatives can bring change and can solve our climate related problems like water scarcity, floods, and other adverse factors.

Findings

1. **Media Consumption:** Social media is the main source of content about climate change for Pakistani youth with traditional media outlets like television and news organizations coming in second.
2. **Awareness of Climate Change:** Many respondents believe they are well informed on climate change there is still a visible lack of complete understanding especially in rural areas.
3. **Action Taken:** After interacting with media information a significant amount of respondents claimed that they had taken climate change-related action such as accepting sustainable behaviors or promoting environmental causes.
4. **Social Media Impact:** It is believed that social media especially sites like Instagram and TikTok is a crucial tool for promoting new involvement and increasing public awareness of climate change issues.
5. **Barriers:**
Effective climate change communication was found to be limited by misinformation uneven information and poor media availability in rural areas.

Conclusion

This study shows how important social media is for enlightening and involving Pakistani youth about the effects of climate change. Digital channels are becoming more and more important in raising awareness and encouraging action even while conventional media still has a part to play. But issues like misleading information and unequal access to the media must be addressed. To encourage increased action future initiatives should concentrate on developing media campaigns focused at young people and enhancing climate communication techniques.

Recommendations

In 2015, the United Nations member states created the 2030 Agenda for Sustainable Development in response to global issues. This agenda includes 17 Sustainable Development Goals (SDGs) and 169 goals that must be accomplished by 2030 (Nerini et al., 2017). SDG 13, which specifically addresses climate action, aims to take prompt action to reduce climate change and its repercussions (United Nations General Assembly, 2017).

1. Leverage Social Media:

Put attention on using social media sites like Twitter Instagram and TikTok to share awareness and get young people involved in climate change action.

2. Improve Media Literacy:

Increase media literacy activities to counter false information and assist the public in properly assessing climate related news.

3. Inclusive Climate Campaigns:

Create inclusive media efforts to ensure that people in rural as well as urban areas have more access to information on climate change.

4. Collaboration with Influencers:

Work together with young activists and influencers to spread climate messages and inspire followers to take action.

5. Support Policy and Media Initiatives:

To produce regular true and effective narratives on climate change promote collaboration between the news media leaders and environmental organizations..

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