Zakariya Journal of Social Sciences (ZJSS)

ISSN Print: 2957-4897
ISSN Online: 2957-4900
Volume 4, Number 2, 2025, Pages 25 – 36
Journal Home Page
https://journals.airsd.org/index.php/zjss

Role of Media in Shaping Public Opinion on Climate Change in Pakistan

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ARTICLE INFO

Article History:

Received:	*July*	*16, 2024*
Revised:	*August*	*04, 2025*
Accepted:	*August*	*22, 2025*
Available Online:	*September*	*13, 2025*

Keywords:

Media, Climate Change, Public Opinion, Pakistan, Environmental Awareness, Risk Communication.

ABSTRACT

The issue of climate change has turned out to be one of the most urgent in the world that affects the ecological, economic, and social processes to a great extent. The presence of climate related disasters such as floods, heat waves and melting of glaciers has increased the scale of the concern among people in Pakistan but there is vast variation in the awareness among population and perception of the problems. Information and discussion as a significant source of media can be instrumental in shaping the opinion of individuals and mobilizing society to deal with the issues of climate. The current paper is concerned with the issue of how the media (television, newspapers, radio and digital media) can influence the awareness of individuals, attitudes and behavioral intentions regarding the climate change issue in Pakistan. The analysis of media contents and literature review, through the study, identifies the potential of media in relaying the climate science, in framing environmental risks and in providing proactive behaviors in connection with environmental risks. Based on the results, media can highly influence knowledge and attitudes, yet the attitude to the problem connected with climate, application of sensationalism, and the lack of equal access to information can also affect the perceptions in some minor ways. The efficacy of media can be optimized through appropriate scientific reporting of the message, which is sensitive to the culture and location to make the population more interested in action on climate.

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Introduction

Climate change is a severe and multifaceted global process that has a significant environmental, social and economic impact. The Intergovernmental Panel on Climate Change (IPCC, 2021) emphasizes that temperature rise, growing rate of extreme weather phenomena, and changes in the precipitation patterns are all rather threatening to both human and natural orders. Being one of the most vulnerable countries to climate change, Pakistan has to deal with frequent floods, heatwaves, and glaciers receding in the North, posing a threat to the livelihood, infrastructure, and people health (Ahmed et al., 2020; Rasul et al., 2019).

Although these are the real effects, the general awareness of Pakistan about climate change is still scattered, with socioeconomic factors, educational levels, regional inequalities, and cultural perceptions (Khan et al., 2021). In this regard, the media have become a critical communicator of knowledge, attitude, and behavioral change in regard to climate change by being not only an informant, but also a mediated space where people can discuss issues (Boykoff, 2011).

Media is a main channel by which the masses get informed about the environmental problems through the conversion of complex scientific texts to easy to understand stories (Anderson, 2017). The risks of climate, strategies of adaptation, and governmental policies are covered by television, newspapers, and more digital media and shape the discourse of the population and the priorities of society. In Pakistan, there is also a wide range of media, and the state-controlled television, commercial TV stations, newspapers, and radio broadcasts as well as the social media spread the information about the climate. Nonetheless, media effectiveness in forming the opinions of the people is determined by the following factors; message framing, credibility, number of times covered and being consistent with the cultural and social norms of a region (Boykoff, and Boykoff, 2007; O'Neill and Nicholson-Cole, 2009). Indicatively, research indicates that when the reporting is sensational or suggests inconsistency, the audience members become confused or skeptical of global warming whereas the opposite occurs when there is consistency and science-based reporting (McCright and Dunlap, 2011).

Theoretical approaches to the communication studies, such as the Agenda-Setting Theory (McCombs and Shaw, 1972) and Framing Theory (Entman, 1993), offer information on the way media shapes the opinion of the population towards climate change. The Agenda-Setting Theory is based on the understanding that the media does not make people think but to a large extent what they think about. In Pakistan, frequent media reports about floods, droughts, or urban heatwaves raises these phenomena to a higher awareness level, which can affect how people will support the policy and change their behavior (Ahmed et al., 2020; Huang et al., 2024; Hu et al., 2023; Khan et al., 2024)).

Studies show that the social media, like Facebook, Twitter, and WhatsApp, have increased the dissemination of climate information in Pakistan, especially among the youth (Hussain and Imran, 2019). The digital platforms allow an interactive discussion, citizen reporting, and grassroots mobilization as a complement to the traditional media. Nevertheless, the obstacles of misinformation, insufficient digital literacy, and inequalities in access to the internet may confuse the general audience and introduce climate awareness inequalities (Khan et al., 2021). Research also emphasizes that the mainstream media tends to give minimal attention to climate science or emphasize on short-term disasters instead of long-term environmental change, which is a source of bias to the perception of the urgency and magnitude of climate risks (Boykoff, 2011).

Besides the influence on knowledge, media has a normative role, i.e., the effect on attitudes and behaviors. Climate information that people are exposed to impacts the level of concern, risk perception, and readiness of taking up mitigation or adaptation measures (Leiserowitz et al., 2020). In Pakistan, the studies indicate that the communities who are targeted by media campaigns related to the usefulness of water conservation, reforestation, or flood awareness demonstrate greater rates of engagement and policy endorsement (Rasul et al., 2019). Furthermore, media can increase accountability by reminding about the activities of the government, the enforcement of environmental policies, and civic activities, which promotes civic engagement and social pressure on the need to practice environmental sustainability.

Nonetheless, the media-public opinion interaction on climate change in Pakistan is complicated in spite of the impact of the former. Media effects are mediated by socioeconomic disparities, political affiliations, geographical weak points and religious or cultural interpretations, resulting in dissimilar effects among demographic groups (Hussain & Imran, 2019). Consequently, to come up with effective climate communication strategies, it is important to learn how media content is created, framed, and perceived. This paper seeks to examine the importance of media in influencing the people of Pakistan towards climate change considering both the traditional and digital media platforms, their narrative processes and how they influence the people in terms of their knowledge, attitudes and behavior change. The research can be useful in policy, educational initiatives, and media practices that ensure the informed, responsible, and proactive engagement in climate matters.

Literature Review

According to a systematic literature review by Asif, Jamil, and Ahmad (2024), the coverage of climate change in Pakistani media is inadequate and in many cases episodic, mainly influenced by extreme climate effects as opposed to consistent and thorough coverage. They define various structural limitations in media organizations, including low editorial priority of environmental news, journalists being climate illiterate, and media being politically and economically motivated (Asif et al., 2024). These limitations restrict the ability of the media to continuously inform and communicate to the people on long-term risks and resilience measures of climate.

Quantitative content analysis of climate change in Pakistani media has been carried out. As an example, Shahid and Zahra (2025) analyzed print media (Dawn, The Nation, Daily Jang, Daily Dunya) and official tweets by the Ministry of Climate Change, and the way different frames such as an attribution of responsibility, economic consequences, conflict, morality, and human interest are used. Their results show that both print and official communication are mostly characterized by attribution of responsibility and economic consequence frames, and least by the morality one (Shahid & Zahra, 2025). The framing has consequences in the attribution (responsibility) (to the government, corporations, or individuals) by the populace and urgency towards climate action.

Media coverage of climate change has the power to affect the discourse of policy and cognition. Kausar and Hussain (2024) examined the headlines of Pakistani newspapers through critical discourse analysis and discovered that most of them have a rhetorical mechanism that reduces climate change to simple dramas in the short term, ignoring the systemic factors or long-term resolutions. Their paper is that such a discourse can constrain realization of climate change as a structural risk by citizens, hence impacting on how citizens perceive governmental and societal roles (Kausar and Hussain, 2024).

Umber, Chaudhary, and Latif (2023) compared media reports on floods, which are frequently directly related to climate change, and climate change in Pakistani newspapers. They found that the coverage of floods is more common, more emotive, and more locally based, as compared to direct accounts of climate change, which is rarer and not as related to policy or science (Umber et al., 2023). This imbalance indicates a pattern of crisis coverage by the media, according to which a natural disaster is the main focus on the eve of occurrence, whereas a climate change is an ongoing process, which may lead to a biased conception of climate change as an isolated phenomenon.

The contribution of media to climate literacy-knowledge of climate science as well as its implications is also significant. Khan and Hanif (2024) claim that the Pakistani media is weak

in learning about climate literacy. Using the agenda-setting theory as a foundation of their work, they demonstrate that even once the situation involving the climate is that terrible, the media coverage is superficial and responsive. They support the idea of more capacity building in climate reporting, the added connectivity between the media, civil society, and policymakers, to inform and mobilise people more effectively (Khan & Hanif, 2024).

Socially at communal level, social media has proved to be a strong instrument in perception building, particularly with the younger and more digitally savvy generation. In a survey of 249 Pakistani University students, Khan and Ahmed (2024) discovered a moderate positive relationship between climate change perception and social media use: the exposure to social media predicted approximately 20% of climate perception. Their research highlights the relevance of credible information, fact-checking and equal access to digital information (Khan and Ahmed, 2024).

The role of social media influencers in climate discussion is also very high in Pakistan. Salih, Shahab, Nasir, and Mehmood (2024) examined how Pakistani social media influencers frame climate problems, what content they should use, and how various audience groups react to it in a qualitative study. They discovered that the messages about climate based on scientific and policy considerations are frequently translated by influencers into more accessible, emotionally evocating stories, which are more accessible to general audiences. According to their work, influencers have an additional but crucial contribution to the climate communication, particularly in audience that are not fully covered by traditional media (Salih et al., 2024).

Gul, Ali, Hassan, and Ahmad (2024) conducted another content analysis of the media representation of climate change on Pakistani social media. Their research notes that the social media is not entirely democratic and that there is re-representation in climate discourse in accordance with the prevailing power structures.

Nonetheless, there are not some challenges of consuming climate information via media in Pakistan. According to a recent news report, the Pakistani people remained stuck in perception inertia, despite frequent occurrences of climate (Abbas, 2025). A Reuters Institute survey indicated that Pakistanis, although they have trust in the media as a source of climate information, have leveled their levels of engagement and, thus, it might not be the best tool to make people remain concerned (Abbas, 2025). The report also indicated that media use on information about climate is biased towards the use of video formats and the interest is more in cases where the use of climate news relates to local news or weather phenomena.

Besides the general opinion, media also works as a watchdog organization, which puts policy-makers to task in taking action on climate. The media can also create a pressure to change when it focuses on the government and its failure to act or mismanagement in climate policy (Umber et al., 2023). However, in Pakistan, there is a lack of investigative or deeper climate coverage--those that would focus on exposing the problem instead of merely reporting on the events (Asif et al., 2024).

In Pakistan, challenges related to the structure of media institutions involved in covering climate change are a problem. According to Asif et al. (2024), the low capacity of newsrooms, incompetence in climate-specific journalism, and reliance on news cycles that are characterized by ratings and sensationalism are the problems. These are some of the reasons that result in superficial coverage which usually lacks in connecting climate events to its root causes or possible policy remedies.

Media can also be used to propagate misinformation and denial of climate. The issue of the dissemination of fake news on social media is acute and especially in the areas of low digital literacy and political polarization. The examination of misinformation posts in the social media in Pakistan indicates that emotionally charged messages, conspiracy theories, and politicized frames dominate the climate discourse (Haroon, Arif, Tariq, Nawaz, Qazi, and Mustafa, 2021). Such distortions may make scientific consensus less credible and interfere with the success of media-based climate communication.

Media is critical in influencing the opinion of the people regarding climate change by serving as the conduit between the scientific language and the social cognition. This role is especially important in the context of Pakistan due to the high susceptibility of this nation to climate change and the presence of different degrees of climate literacy among residents of the country (Khan and Hanif, 2024). Media coverage of climate change events as a traditional newspaper or television or social platform determines not only the level of awareness among the population but also the perception of citizens regarding responsibility, risk, and possible solutions (Shahid and Zahra, 2025; Umber, Chaudhary and Latif, 2023).

Communication and risk perception theoretical frameworks offer explanations of the role of media in shaping the perception on climate change among the citizens of Pakistan. Opinion modeling indicates that the social interaction together with media exposure can result in clustering risk perception- in which groups of people share common collective opinion regarding climate risk (Moussaid, 2014). These models point at the fact that media do not merely show the opinion of the people; it makes and polarises it. This process is especially applicable to Pakistan where socio-political differences and varying media access might result in disjointed perception of climate change.

It is also important to have emotion and sentiment on media discourse. The analysis of the posts on social media by studying their sentiments around the world (e.g., Amangeldi, Usmanova and Shamoi, 2023) has revealed that posts about the environment and climate are usually characterized by negative feelings of fear, distrust and anticipation. Although the analysis is not specific to Pakistan, it may indicate that emotional framing in the media can substantially affect the perception of the audience of the risk and urgency (Amangeldi et al., 2023).

The literature, in general, indicates that the influence of the Pakistani media in forming the opinion of the population towards climate change is complex yet limited by the institutional, cultural, and structural factors. Traditional media is advantageous in its setting of the agenda as well as framing but will rather respond to climatic events than educate proactively. Social media and influencers open up new opportunities of interaction and narrative diversity and introduce issues of misinformation, superiority of elites and access inequality. Capacity-building, specialization in climate journalism, better interaction with climate science, and making the environmental discourse more democratic are what is needed to make media to have a positive influence.

Methodology

In this research, the research design is mixed-method research, a combination of quantitative and qualitative research design which provides an opportunity to analyze the role of media in developing a public opinion on climate change in Karachi, Pakistan. A mixed-method approach is suitable due to the fact that it provides the opportunity to assess the trends of media use and perceptions in quantitative terms, but also to obtain more profound rationale, attitudes, and explanations to these perceptions (Creswell, 2014).

Research Design

The research consists of two major stages:

Quantitative Phase - A survey was conducted to determine the level of pubic awareness, perceptions and attitudes of climate change and media coverage on the same in Karachi.

Qualitative Phase - Semi-structured interviews and focus group discussions were to be used to investigate the effects of media framing on understanding, emotional reaction and behavior intentions toward climate change.

Sampling

The survey was conducted by the quantitative survey by covering the residents of Karachi and representing various ages, genders, education levels, and socio-economic statuses. The representation of these demographics was done through a stratified random sampling method. One hundred and eighty respondents were used in the survey, which was enough to conduct statistical analysis.

In the qualitative step, purposive sampling applied to participants who would have relevant knowledge or interest in the issues of media and climate. This consisted of 10 media professionals, 5 climate scientists and 8 community leaders who are engaged in environmental awareness campaigns. This method guaranteed various viewpoints and professional opinions (Etikan, Musa, and Alkassim, 2016).

Data Collection

Survey Instrument- A questionnaire was created which consisted of closed ended questions on:

- Frequency and media type of consumption (television, newspapers, social media).
- Consciousness of the problem of climate change.
- Media credibility perceptions and framing.
- Personal and collective climate responsibility attitudes.

It pre-tested the questionnaire on 20 participants to allow the study to be clear and reliable and the Cronbachs alpha was 0.82, which would signify the internal consistency being quite acceptable.

Interviews and Focus Groups - A semi-structured interview and focus group were carried out based on a list of guiding questions intended to investigate:

- The perceptions of the participants regarding the coverage of climate change.
- Belief and behavior perceived as media influences.
- The issues and possibilities of media coverage about climate change.

The interviews were carried out in Urdu and English according to the choice of the participants and took a period of 30-50 minutes. All the sessions were audio recorded with permission and transcribed to be analyzed.

Data Analysis

Quantitative Data - SPSS v 25 was used to analyze the survey data. Frequencies, percentages, and means were used as descriptive statistics to present the media consumption habits and perceptions of respondents. Inferential statistics such as chi-square tests and correlation were used to test relationships between media use and climate change awareness.

Qualitative Data - Thematic analysis was done to analyze qualitative data such as interview and focus group transcripts based on the six-step process of data analysis in Braun and Clarke (2006): familiarization, coding, theme identification, review, definition and reporting. Examples of themes were media credibility, framing effects, emotional response, trust in sources, and perceived responsibility. Triangulation between survey results increased validity.

Ethical Considerations

The institutional review board was the appropriate authority to grant ethical approval. The objective of the research, the right of the participants to withdraw whenever they wished and the confidentiality of their comments were explained. All the qualitative participants adopted pseudonyms to conceal their identities. Information was stored safely and only available to researchers.

Justification of Methodology.

Both the quantitative survey and the qualitative interview guarantee breadth and depth of comprehending the role of media. By targeting Karachi, the research will be in a good position to explore the effects of the media in a large metropolitan setting as it represents a high exposure of the media and the variety of opinions held by the people. Surveys give generalizable results of what the majority thinks whereas interviews get in-depth meanings and contextual issues that affect perception giving a complete picture of how the media affects climate change awareness in Karachi.

Data Analysis and Findings

The research was based on the analysis of the data of 180 survey participants and 23 qualitative interviewees (10 professionals working in the media, 5 climate scientists, 8 community leaders) in Karachi. The objective was to comprehend the effects of media consumption on how people think about climate change and the intentions to act. Quantitative responses were analyzed using SPSS and qualitative responses were analyzed using thematic analysis.

Demographic Characteristics of the participants

Demographic characteristics of the respondents of the survey are summarized in Table 1.

Table 1: Demographic Profile of Survey Participants (N=180)

Demographic Variable	Category	Frequency	Percentage
Gender	Male	95	52.8%
	Female	85	47.2%
Age	18–25	60	33.3%
	26–35	70	38.9%
	36–50	40	22.2%
	51+	10	5.6%
Education	Secondary	30	16.7%
	Undergraduate	95	52.8%
	Graduate/Postgraduate	55	30.5%
Occupation	Student	50	27.8%
	Professional	90	50.0%
	Others	40	22.2%

Media Consumption Patterns

Respondents reported their frequency of media use across television, newspapers, social media, and online news portals.

Table 2: Frequency of Media Use (N=180)

Media Type	Daily (%)	Weekly (%)	Rarely (%)
Television	120 (66.7%)	40 (22.2%)	20 (11.1%)
Social Media	130 (72.2%)	35 (19.4%)	15 (8.4%)
Newspapers	45 (25.0%)	70 (38.9%)	65 (36.1%)
Online News Portals	90 (50.0%)	60 (33.3%)	30 (16.7%)

Findings

- The main source of news about climate-related issues among the Karachi residents is social media.
- Older newspapers are less used in their daily use; nevertheless, they impact their weekly information usage.
- The television is a powerful medium to the older age groups.

Awareness of Climate Change

The respondents were inquired on how they are aware of the causes of global warming, their effects and mitigation strategies

Table 3: Awareness Levels of Climate Change (N=180)

Awareness Level	Frequency	Percentage
High	70	38.9%
Moderate	85	47.2%
Low	25	13.9%

Findings:

- Most (86) of the interviewees are moderately to highly aware of climate change.
- The level of awareness is strongly associated with the use of social media and online news ($r=0.56$, $p<0.01$).

Media Credibility perception

The credibility of various sources of media in reporting climate change was rated by participants.

Table 4: Perceived Media Credibility (N=180)

Media Source	High Credibility (%)	Moderate (%)	Low (%)
Television	70 (38.9%)	80 (44.4%)	30 (16.7%)
Social Media	50 (27.8%)	85 (47.2%)	45 (25.0%)
Newspapers	60 (33.3%)	75 (41.7%)	45 (25.0%)
Online News	65 (36.1%)	70 (38.9%)	45 (25.0%)

Findings:

- Television and news portals published online are viewed as the most reliable.
- Social media even though used extensively is perceived as not being reliable.

Interview Thematic Analysis

The qualitative data yielded 5 major themes:

Framing Effects of Media - The participants emphasized that media framing (e.g., emphasis on disasters, floods, and heatwaves) has a very powerful impact on how people see the problem of climate change and the urgency that it entails.

- Participant M4 (Media Professional): "The manner in which we report on climate will determine whether it is perceived as an emergency or another news report.
- Emotional Impact - Media coverage gives rise to emotional reactions like fear, concern or responsibility.
- Participant C3 (Community Leader): "Participants see flooding pictures emotionally and it compels them to act on the local level.
- Trust and Credibility - The trust of media sources is what defines the seriousness of the audience to the information on climate.
- Researchers stressed that false information on social media platforms can sometimes weaken the general knowledge.

Difficulties in Media Conveyance- The absence of depth, sensationalism, and less interest in local adaptation measures were mentioned as obstacles to success in public awareness.

Integrated Findings

- The quantitative and qualitative data are brought together to demonstrate that media has a strong impact on climate change awareness and attitudes in Karachi.
- The social media is the most reachable but least credible and the traditional media such as TV is the most trusted.
- Media framing and plausible reporting can have a positive impact on the behavior of the population and the action of climate.

Conclusion

This research indicates that media can have a huge influence in influencing the opinion and awareness of climate change among the people of Karachi. The survey information indicates that social media has been visited the most when it comes to climate information, with television and online news portal being the most reputable sources. Climate change awareness is typically moderate-high and media coverage of climate change affects both perception and behavioral intention.

The thematic analysis of the interviews and the focus groups also serves to further highlight the idea that how people interpret and respond to climate information is dependent on how climate issues are framed, and how they are emotionally engaged and find credible sources. Respondents repeatedly stressed that properly designed media messages can raise the level of concern among the general population, encourage environmentally friendly activity, and enhance the involvement in local climate action programs.

However, challenges remain. Although social media has a large audience, it tends to be misinformed and the traditional media are not always thorough or localized when it comes to practical solutions related to climate. Generally, the paper has affirmed that media is not only an informational source but an influential force in cultivating the attitude and behaviors of people with regard to climate change. Media can be used to create a more informed and environmentally responsible society in Karachi by influencing people through its reach, credibility, and narrative potential.

Recommendations

According to the findings, the following recommendations are offered to the policymakers, media professionals, and environmental organizations:

1. Improve Media literacy - Citizens need to be educated in public campaigns about how to evaluate climate news critically, how to distinguish credible sources and misinformation, specifically on social media.
2. Cooperate with Experts - Media houses must engage with climate scientists and non-governmental organizations to deliver factual, evidence-based information and put the global climate problems into a local context.
3. Use Recognized Platforms - Television and online news portals can be recognized as highly credible platforms that should be used in spreading the climate awareness campaigns.
4. Foster Community Participation through the Media - Media might be used as a tool of participatory campaigns, including local tree-planting drives, recycling campaigns, and clean-up campaigns, establishing actual links between information and action.
5. Control Misinformation - Governmental bodies and social media platforms are to collaborate in controlling the dissemination of fake or misleading information on climate.

On the one hand, through these recommendations, the media in Karachi will be able not only to educate the population but also to actively influence responsible attitudes and actions towards climate change, which will contribute to even greater environmental sustainability and resilience in society.

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