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Media Coverage of Climate Change: Audience Perspectives Through Social Cognitive Theory

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ABSTRACT

This study investigates the role of electronic media in shaping public perceptions of climate change in Pakistan. Using a quantitative survey methodology based on social cognitive theory, the study examines how news coverage by prominent channels such as GEO News and ARY News influences awareness, concern, and behavioral intentions regarding climate change. A total of 200 respondents from South Punjab, including students, teachers, professionals and housewives, were surveyed. The results show that while 83.5% of respondents are exposed to weather news, only 36.5% consider the coverage to be adequate. A high level of concern about climate change was observed, with over 90% of people recognizing the human contribution to global warming. However, the coverage lacks scientific depth and consistency, limiting public understanding and engagement. The study concludes with recommendations for media reform, policy support, and improved communication strategies to increase public knowledge and promote climate-related responses.

Keywords: *Climate change, electronic media, public perception, Pakistan, social cognitive theory, environmental communication, news framing, media impact, global warming, climate awareness*

INTRODUCTION

Climate change is one of the most important global challenges of the 21st century, affecting ecosystems, economies, and human well-being. It is defined as long-term changes in temperature and weather patterns primarily caused by human activities such as fossil fuel combustion, deforestation, and industrial emissions. Climate change has led to global warming, sea level rise, extreme weather events, and biodiversity loss (IPCC, 2021; NASA, 2022). While this trend is global, its consequences are disproportionately severe in developing countries like Pakistan, where limited adaptive infrastructure and socio-economic vulnerabilities exacerbate risks.

Pakistan is consistently ranked among the world's most climate-vulnerable countries. The country has faced recurring floods, prolonged droughts, melting glaciers, and increasing heat waves, particularly affecting areas like southern Punjab. Agriculture, which is the backbone of Pakistan's economy, The climate is highly sensitive to variability, and changes in rainfall patterns and water availability pose a threat to food security and livelihoods (WFP, 2011; Ahmed et al., 2020). In this context, raising public awareness and promoting climate-related responses becomes essential.

The media plays a significant role in shaping public perceptions of environmental issues. Through agenda setting and framing, the media can influence how people understand climate change, assess its risks, and

determine appropriate responses (Boykoff & Boykoff, 2004). In Pakistan, electronic media, especially television news, is one of the most accessible sources of information for the public. However, the quality, consistency, and depth of climate-related reporting is limited. News coverage often focuses on sensational events such as floods and heat waves, rather than providing scientific explanations or highlighting sustainable solutions (Ali, 2017; Khan et al., 2019).

This study explores the relationship between media content and public perception of climate change in Pakistan, with a special focus on electronic media outlets such as GEO News and ARY News. Drawing on social cognitive theory (Bandura, 1986), which emphasizes observational learning and the role of media in shaping behavior. The research examines how media portrayals of climate change influence awareness, concern, and individual action through a systematic quantitative survey conducted in southern Punjab a region frequently affected by climate issues.

The findings contribute to the broader conversation on environmental communication by offering insights into public perceptions in a climate-vulnerable region. Furthermore, the study emphasizes the importance of expanding media practices, educational outreach, and government engagement to foster an informed, active citizenry in the fight against climate change.

Floods in Pakistan

The 2010 floods were among Pakistan's worst natural disasters, affecting 20 million people, killing nearly 2,000, and causing $43 billion in damages. Triggered by heavy monsoon rains, the Indus River overflowed, submerging vast agricultural lands and displacing millions. The crisis revealed Pakistan's vulnerability to climate change and the need for better disaster preparedness (Mustafa, 2011; OCHA, 2010).

In 2020, Pakistan again faced severe monsoon floods, particularly in Sindh and Karachi. Over 400 people died, and urban flooding exposed critical weaknesses in drainage infrastructure and city planning. The agricultural sector was hit hard, further stressing the economy (Iqbal, 2020; OCHA, 2020).

Heat Waves

Heat waves prolonged periods of extreme heat have increased in frequency and intensity due to climate change. In Pakistan, they pose serious health risks (e.g., heatstroke), strain power grids, and reduce crop yields. Urban areas, due to the heat island effect, are especially vulnerable (WMO, 2024; Patz et al., 2020).

Food Security

Food security refers to consistent access to safe, nutritious, and affordable food. In Pakistan, it is threatened by climate change, water shortages, floods, heat waves, and socio-economic challenges such as poor infrastructure and market access (FAO, 2024; Godfray et al., 2010).

Deforestation

Deforestation, the large-scale clearing of forests for agriculture or urban expansion, leads to biodiversity loss, soil erosion, and increased greenhouse gas emissions. In Pakistan, it reduces the ability of forests to absorb carbon dioxide, worsening climate change impacts (UNFCCC, 2024; Laurance et al., 2020).

Objectives

1) To analyze the extent and nature of climate change coverage in Pakistani electronic media.
2) To examine, how news framing influences public perception of climate change.
3) Assessing the level of public awareness and concern about climate issues based on media exposure.
4) To suggest recommendations to improve climate change in Pakistani electronic media.

LITERATURE REVIEW

Climate change communication has emerged as a critical field of research globally, particularly in regions that are highly vulnerable to its effects. Media plays an essential role in shaping the public's understanding, perception, and response to climate-related issues. In developing countries like Pakistan, where formal environmental education is limited, mass media becomes the primary source of climate knowledge and environmental discourse.

Several studies have underscored the media's agenda-setting power and its capacity to influence public opinion (Boykoff & Boykoff, 2004; Nisbet, 2009). However, the consistency, depth, and framing of climate change content significantly impact the extent to which audiences are informed and engaged. In Pakistan, climate-related media coverage is often episodic, event-driven, and focused on disasters like floods or heat waves rather than long-term mitigation strategies or policy developments (Ali, 2017; Ahmad et al., 2020).

Online media usage has shown a positive correlation with pro-environmental behaviors among university students, suggesting digital platforms could play a powerful role in green awareness (Mirza et al., 2023). Yet, traditional media remains dominant in reaching the general population. Studies also highlight how media's emphasis on dramatic events contributes to a perception of climate change as a distant or occasional issue, rather than a persistent crisis requiring sustained action (Boykoff, 2008).

English-language publications like Dawn have shown relatively better climate coverage compared to their Urdu counterparts, yet both lack depth and context (Hussain, 2024). These findings underscore a need for improved science communication practices across platforms. Social Cognitive Theory emphasizes the influence of observational learning on public behavior; positive portrayals of climate action can foster change, while disaster-focused narratives may lead to passivity or helplessness.

To bridge this gap, researchers suggest improving journalistic training, focusing on solutions-based narratives, and integrating climate topics into educational and policy frameworks. In the context of Pakistan, this means leveraging both electronic and online media to create consistent, scientifically grounded, and locally relevant climate communication.

Theoretical Framework

This research is guided by social cognitive theory (SCT) developed by Albert Bandura (1986). SCT emphasizes the role of observational learning in shaping human behavior and attitudes. In the context of media, the theory suggests that individuals internalize models presented through media portrayals and may adopt behaviors related to them if they identify with these models. In climate communication, SCT is particularly useful in understanding how repeated exposure to environmental narratives – such as news reports, interviews with experts, or climate documentaries – can shape public attitudes, increasing self-efficacy and can influence pro-environmental behavior. Conversely, the absence of solution-oriented media content can reduce motivation or create a sense of helplessness in viewers.

Research Questions

1) To what extent do Pakistani electronic media cover climate change and environmental issues?
2) What themes and narratives dominate climate change reporting in Pakistani media?
3) What is the perception of the public regarding global warming and its impacts?
4) How do media shape public perception and understanding of climate change?
5) What solutions do people believe are necessary to mitigate and address climate change challenges?

Research Design

This study uses a quantitative research design to examine how electronic media coverage influences public perception of climate change in Pakistan. The research is based on the principles of social cognitive theory, which suggests that individuals learn behaviors and form attitudes through observation, especially through media channels (Bandura, 1986). The systematic survey method allows for the systematic collection and analysis of data from a large and diverse sample, making it possible to identify trends, correlations, and public attitudes. A cross sectional survey methodology was chosen to collect perceptions at a specific point in time, focusing on four key demographic groups: students, teachers, employed professionals, and housewives. This distribution was intended to provide a broad understanding of how different segments of society engage with climate-related content in the media.

Population and Sample

The study targeted the population of southern Punjab, a region marked by climate-related challenges and a diverse socio-economic profile. The cities included in the sample included Multan, Bahawalpur, Lodhran, Vehari, Dera Ghazi Khan, Muzaffargarh and Rahim Yar Khan. A simple random sampling technique was used to ensure fair representation across urban and semi-urban populations and a sample of 200 respondents was drawn. The sample was calculated using Cochran's formula to ensure a 95% confidence level and a margin of error within acceptable limits for generalization to the wider population.

The primary data collection tool was a structured questionnaire consisting of 25 closed-ended questions using a 5-point Likert scale ranging from “strongly agree” to “strongly disagree”. The questionnaire was divided into five thematic sections: Strongly disagree." The questionnaire was divided into five thematic sections:

1) Demographic information: age, gender, education, occupation, and region (urban/rural)
2) Media exposure: frequency and type of climate-related news consumed (TV, newspapers, digital)
3) Awareness of global warming: Understanding of causes, effects, and related scientific concepts
4) Perceptions and emotional responses: Concerns, beliefs, and perceived risks
5) Behavioral intentions and solutions: Attitudes toward environmentally friendly measures, government responsibility, and media influence

The questionnaire design was informed by previous studies of climate perception and was developed to reflect the Pakistani media and socio-cultural landscape.

RESULTS

The data for this study were collected through a systematic survey conducted among 200 respondents in South Punjab. The sample included students, teachers, working professionals, and housewives. The

results reveal important insights into media exposure, public awareness, perceptions, and attitudes towards climate change and its representation in Pakistani electronic media.

1. Media Exposure and Information Awareness

- 83.5% of respondents reported frequent exposure to climate-related news through electronic media.
- Only 36.5% of respondents agreed that climate change coverage by electronic media was adequate, while 51% disagreed.
- For print media, only 34.5% rated the coverage as adequate, with 49% expressing dissatisfaction.
- Despite repeated exposure, many respondents indicated that coverage was largely anecdotal, focusing on disasters rather than in-depth causes or scientific explanations.

2. Public understanding of climate change

- 92% of participants agreed that climate change is primarily caused by human activities such as industrial emissions, deforestation, and vehicle pollution.
- 93% recognized the impact of factory waste on public health.
- 95% believed that increased vehicle use contributes to global warming and rising temperatures.
- 91% observed significant changes in local weather patterns, such as erratic rainfall and extreme temperatures.

3. Perceptions and Emotional Responses

- 91.5% recognized global warming as a serious issue affecting Pakistan's economy, security, and health.
- 93.5% agreed that extreme weather events (e.g., floods and heatwaves) are related to climate change.
- The majority (90%) said that climate change affects their daily lives, particularly in terms of agriculture, food prices and water availability.
- Despite extreme concern, there is evidence of emotional fatigue and helplessness due to the lack of an empowering narrative in the media.

4. Trust in the media and institutional responses

- Respondents showed low confidence in the role of the media in promoting environmental action, with only 36.5% rating electronic media coverage as effective.
- Only 26% believed that the government was taking enough action to mitigate climate change, while 62% disagreed.
- The results reveal a gap between awareness and belief in workable solutions, highlighting the need for better communication and institutional transparency.

5. Public support for solutions

- 93.5% supported the tree planting campaign as a key measure against climate change.
- 91% advocated greater investment in renewable energy, such as solar and wind power.
- 88.5% believed that climate change education should be mandatory in schools.
- 87% supported international cooperation and climate diplomacy to collectively address global warming.

DISCUSSION

This study is designed to explore how Pakistani electronic media influence public perceptions of climate change, guided by social cognitive theory (SCT). The findings offer compelling insights into public attitudes, media effectiveness, and the broader communication gap that exists between awareness and action.

Media Exposure and Media Effectiveness

The high percentage of respondents (83.5%) reporting on climate-related content through electronic media reflects the reach and relevance of the media in Pakistani society. However, only 36.5% believe that the coverage is sufficient. Highlighting, disconnect between media reach and media depth. This supports previous criticisms that Pakistani media often prioritize event-based, sensational coverage over long-term narratives or solutions-oriented reporting (Ali, 2017; Boykov and Boykov, 2004).

This phenomenon is consistent with SCT, where repeated exposure to poorly framed or overly dramatic media narratives can reduce public efficacy and become emotionally disempowered. When the media focuses on images of disaster without offering clear solutions, audiences can become overwhelmed rather than empowered what SCT describes as “learned helplessness” through observational modeling (Bandura, 1986).

While 92% of participants acknowledge the human causes of climate change and 91.5% consider it a serious national threat, the study reveals limited understanding of the scientific and policy aspects. Respondents can identify the impacts of climate change Floods, rising temperatures, food insecurity but struggle to articulate systemic causes or mitigation strategies, due in part to inadequate scientific reporting in the mainstream media.

This mirrors the findings of Saleem et al. (2023), who argue that episodic framing dominates Pakistani media, lacking the thematic richness necessary for climate literacy. The observed public concern indicates that information alone is not enough. Framing, context, and actionable guidance are essential to translate awareness into behavior.

The Role of Social Cognitive Theory

Social cognitive theory helps explain these differences in understanding and practice. As Bandura (1986) points out, individuals learn and adopt behaviors through observational learning, especially when exposed to credible models or influencers. The study found strong support (88.5%) for climate change education in schools and widespread endorsement of renewable energy and tree planting efforts, demonstrating the public's readiness to take action when presented with a clear, solution-oriented narrative.

However, media coverage in Pakistan often fails to consistently deliver on these models. This not only limits public self-efficacy belief in one’s ability to make a difference but also shapes social norms that view climate change as an uncontrollable or remote problem. Improved media framing, as suggested by SCT, could enable this problem to be addressed through collective and individual actions.

Institutional Gaps and Trust Deficits

The results also highlight a trust deficit: only 26% of participants believe that the government is taking adequate action. This distrust may stem from poor communication strategies, a lack of transparency, and

infrequent updates on climate policy. Previous studies (Janwari et al., 2020; Amir, 2021) similarly note that climate policy implementation in Pakistan has been hampered by weak coordination and limited public engagement.

This once again reinforces SCT's emphasis on environmental indicators—in this case, the absence of institutional leadership and communication leads to low motivation among citizens to take action.

Public Willingness to Act

Encouragingly, the study revealed strong public support for solutions such as forests, clean energy, and mandatory environmental education. These results show that despite limitations in media performance, there is a clear demand for climate action and better communication. This is consistent with the SDG 13 framework, which emphasizes the need to educate, engage and empower local populations to build resilience.

CONCLUSION

This study is designed to examine public perceptions of climate change news coverage in Pakistani electronic media, focusing on how media narratives influence awareness, concern, and behavior. Based on social cognitive theory, the research explored how people internalize climate messages presented by outlets like GEO News and ARY News, and whether these portrayals promote understanding or contribute to confusion and inaction. The results reveal a dual reality: on the one hand, the public is highly concerned about climate change, with strong agreement on its human causes and tangible impacts on everyday life. On the other hand, there is deep dissatisfaction with media coverage, which is often episodic, shallow, and disconnected from scientific and solution-oriented discourse. Despite exposure to climate-related news, many individuals lack a nuanced understanding of policy, the scientific method, or their own role in addressing the crisis. This gap between awareness and action is partly due to a lack of media framing and modeling of positive behaviors—fundamental concepts in social cognitive theory.
In addition, low trust in government action further limits public motivation to participate in climate mitigation or advocacy efforts. Strong public support for initiatives such as tree planting, renewable energy, and climate education highlights a long-standing readiness to act, provided that institutional leadership, media narratives, and education systems align to empower citizens.

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