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**RESEARCH PAPER**

## Media Portrayal of Climate Change in Pakistan: A Systematic Literature Review

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### ABSTRACT

This study summarizes the media coverage of climate change in Pakistan. Pakistan is among the most climate-vulnerable countries, which leaves a long-lasting impression on the already crippling economy along with other issues. Climate communication is a crucial need of this hour. Media needs to play an important part in guiding people about their role in climate preservation to lessen the impacts. Various studies have been done on this issue to learn the media's role in climate change awareness in Pakistan. This research implies systematic literature review using studies from the last 15 years i.e., 2009 to 2023. The study concludes that Pakistani media did not have sufficient coverage of climate issues due to various issues like illiteracy, lack of infrastructure for reporting, lower rating and editorial preferences. It is recommended that media needs to design special programs and dedicate more time to climate reporting.

**KEYWORDS** Climate Change, Climate Journalism, Media Portrayal, Sustainability, Systemic Literature Review

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### Introduction

Environmental crises are a serious concern and have begun to pose a threat to the existence of life and Earth. World Meteorological Organization 2024 report, declares 2023 the hottest year on record. It also mentions that these high records of global temperatures can further rise. The rise in global temperatures is contributing to extreme weather events and increasing natural disasters. Many countries including Pakistan are witnessing these events recently.

However, people have an ambiguous understanding of climate change, unaware of its urgency, and are resistant to adapting habits (Manchanda, 2024). Media holds the power to fill this gap by not only informing people and stimulating conversations but also changing their viewpoints and actions towards the issue of climate change. (Carvalho, 2007; Arlt et al., 2011). Media agenda setting also leads to people being concerned about this rising problem as well. (Sampei & Aoyagi-Usui, 2009)

Climate change started appearing in scientific research and discussions as early as 1824, according to a BBC article "A Brief History of Climate Change" (2013). However, it took the media almost one and a half centuries more to initiate this conversation. Studies show that the media sporadically started mentioning the 'greenhouse effect' and 'climate change' terms in the second half of the 20<sup>th</sup> century. The New York Times published an article in 1956 discussing the research of a scientist, Gilbert Plass on the potential climatic impact of carbon dioxide. Yet, it was not until 2009 that climate change gained hype in the news media (Oxford Research Encyclopedia, 2020).

Media coverage on climate change, especially in Pakistan, has risen from absolutely zero to an average of approximately 146 stories per month in print media (Ejaz et al. 2023).

However, only the number of news stories cannot fully contribute to the much-needed climate awareness. To analyze the media's effect any single media message is seen with its functionality in conjunction with the source of the message, the diverse characteristics of recipients (e.g., age, gender, psychographics), the context and the channel through which it is conveyed, all contributing to the overall effect (McGuire, 1989). Pakistani news media go for the 'crispy news' for ratings and profit (Javed et al. 2020). Similarly, unlike in America, climate change is not a prominent political agenda in Pakistan. This often relegates climate-related stories to merely filling quotas rather than fostering substantial impact. Hence, the selection of news topics and their angles are influenced by various factors. Similarly, in Pakistan, the determinants influencing the coverage of climate-related news warrant thorough examination.

Systematic literature reviews are valuable because of their ability to conduct various analyses, condense the data, and contribute to the literature without needing new data collection. (Yavuz, 2022) Along with identifying research gaps, it also presents an appropriate answer to the research questions under study. (Karim et al., 2020) Many studies have been done on the role of media and climate issues globally and even in Pakistan. However, the trend in Pakistan is relatively new, hence it is important to do a systematic review to find out the kind of studies done in this regard and what did they conclude. This study attempts to do a systematic literature review to fill the gap, study the existing content, analyze the narratives, and find the tangled patterns in Pakistani media's portrayal of climate change. This will also provide important insights to policymakers, stakeholders, and future researchers on dealing with and covering this issue. The main research question for this study is: how does the mainstream media portray climate issues in Pakistan?

## Material and Methods

This systematic literature review tried to analyze the studies that were done in Pakistan on the topics of media and climate change. Main database used was Google Scholar to find out articles related to our research topic. A variety of keywords were used to track all studies done in the past 15 years (2009-2023) i.e. (1) "climate change" (2) "media" AND "climate change"; (3) "media" AND "Climate Change in Pakistan"; (4) "Pakistani media" AND "climate"; (5) "Pakistani media" AND "climate change" (5) "Pakistan" AND "climate journalism".

**Table 1**  
**Search Results**

Keywords	No of results
Climate change	9,750,000
Media AND climate change	5,580,000
Media AND climate change in Pakistan	483,000
Pakistani media AND climate	161,000
Pakistani media AND climate change	122,000
Pakistan AND climate journalism	38,300

34 articles that were found to be the most relevant were included for final review. After removal of irrelevant, duplicate papers, and the criteria selected, a total of 23 articles were included in the final selection. Full-text research papers from the past fifteen

years, only in English language were included in the review. Any duplicate papers or studies irrelevant to our topic or research question were excluded from the selected articles:

## Results and Discussion

The 23 studies that were reviewed were a mix of both qualitative and quantitative studies, focusing on both print and electronic media news coverage, whereas one paper also analyzed print media advertisements. There were studies with content, discourse, and thematic analysis as well. 5 studies were interview-based and 12 had content analysis. Most studies were done in the last 5 years' time span, whereas the least number of studies were done in the 2009 to 2013 time period. The following table shows an overview of some papers

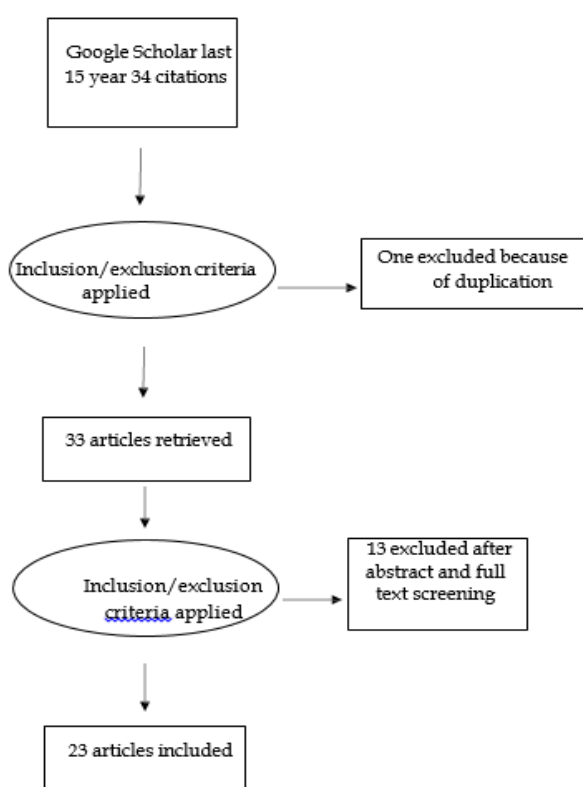


Figure 1 PRISMA Diagram (Preferred Reporting Items for Systematic reviews and Meta-Analyses)

**Table 2**  
**Overview of articles reviewed**

Author	Title of study	Method	Findings
Sharif et al.	Climate change news reporting in Pakistan: a qualitative analysis of environmental journalists and the barriers they face	Qualitative semi-structured interviews	Climate change comprises event-oriented coverage and is insufficient because of issues including political and sensational news culture, and lack of accessibility to technology and information.

Javed et al.	An Analysis of Media Portrayal of Climate Change in Pakistan: 2010-2019	Content analysis	Suggestive tone more than critics of management related to climate policies. Comparatively more coverage to climate change, water issue, need for dams. Lesser coverage of agriculture & food security, and drought in Pakistan.
Ahmed et al.	Environmental Journalists Perspective on the Coverage of Environmental Issues in Media of Pakistan	Survey	Floods, water pollution, and air pollution are given importance as climate news in the mentioned order. However, lack of public interest leads to its unsatisfactory coverage, especially on issues like risks from nuclear energy, acid rain, the greenhouse effect, and the ozone hole.
Ejaz et al.	Politics triumphs: A topic modeling approach for analyzing news media coverage of climate change in Pakistan	LDA topic modeling	On average two climate change-related stories are covered in Pakistani print media per day. However, the coverage mostly focused on political angles such as project funding, political statements, and international treaties. Themes like climate solutions and science receive very little attention.
Virk	Pakistani press representation of climate change: a framing analysis master of philosophy in media & communication studies	Content analysis	The topic is mostly covered from the world's perspective and local issues are mostly ignored. The most discussed points of the selected Pakistan newspapers are extreme weather conditions, global warming, and measures. Media lacks environmental journalism and very little coverage is given to climate change programs.
Chhachhar et al.	Assessing Print Media Coverage on Environmental Issues in Pakistan: A Study of Major Newspapers in Pakistan	Content analysis	Lack of national level, facts & research base and in-depth coverage on climate issues. It comprises either event-based reporting or weather forecasts.
Saleem and Rahman	Pakistani Print Media and Climate Literacy: A Study of Formal-Stylistic Frame Analysis During 2018-19	Qualitative frame analysis	Pakistani newspapers Dawn and Jang focus on episodic climate change coverage, only focusing on impacts and government actions but no details and in-depth explanation.
Rashid & Baloch	Media Framing of Climate Change: A Discourse Analysis of PTV Selected Programs on Water Resource	Discourse analysis	Programs with unaware guests miss the mark on public concerns, focusing on dams for electricity instead of water needs for drinking, irrigation, and rain. Shallow coverage and no in-depth discussion is being done on issues.
Yousaf et al.	Reporting of Environmental Issues in Pakistani Press	Interviews and content analysis	Environmental coverage is not on the top editorial priorities.

Saeed et al.	Criticism and attribution of responsibility: framing in leading newspapers of Pakistan for climate change	Content analysis	Dawn and Jang lacked criticism and accountability because of the lack of experts on climate change offering only descriptive coverage
Ahmad	Role of Media Creating Awareness with respect to Climate Change	Mix Method Approach	The study revealed the respondents believe that the media should not cover more on climate change, because of its overstated nature.
Javed et al.	Climate Change in the Mainstream Pakistani Press: Coverage and Framing Trends	Qualitative content analysis	Four newspapers (Jang, Nawai e Waqt, The News, and The Nation) gave high coverage of water shortage in Pakistan from 2011 to 2018. But, gave less coverage to the issue of agriculture and food security.
Fizzah	Print Media Coverage of Climate Change: Comparative Study of Opinion pages of Pakistan's Urdu and English Language Press	Content analysis	In climate coverage, The English newspapers are slightly faster than Urdu ones. However, the difference between them is narrow.
Ejaz et al.	Understanding Influences, Misinformation, and Fact Checking Concerning Climate-Change Journalism in Pakistan	Interviews	Lack of knowledge affect the coverage of climate issues. The study reveals that advertisers and corporations strongly influence the news stories about climate change. The Journalist expressed no misinformation about climate issues in Pakistan.
Ikram et al.	Construction of Climate Action News, Exploring Role of Media Professionals in Pakistan	Interviews	Political, economic, social, cultural, and technological factors contribute to the low and limited coverage of climate-based issues in Pakistan.

The paper systematically reviews the existing material on the media portrayal of climate and environmental problems from 2009-2023. The findings concluded that the Pakistani mainstream news media provides insufficient coverage of climate change issues. However, there are inconsistencies when examining the factors contributing to this inadequate reporting. This review found various internal and external factors including the role of advertisers, owners, political agendas, ratings, climate illiteracy, editorial priorities, etc., that influence the selection and coverage of news topics related to climate. (Ikram et al., 2023) Therefore, Pakistani media has been unable to effectively communicate with the audience on climate change matters.

A large number of studies by Sharif et al (2018); Chhachhar et al. (2021); Saleem and Rahman (2023); Rashid & Baloch (2020); Javed et al. (2020); Saeed et al. (2023), Ishaq et al. (2023) suggest that climate news is occasional and event-based, stimulated by certain happenings or incidents and most importantly they lack depth and detailed coverage. The issues are mostly discussed in the briefings with negligible research and cursory context.

Previous studies have also found climate illiteracy as a main hindrance in its coverage. Lack of expertise and education of journalists affect the coverage of

environmental issues. Jan et al (2020) state this as one of the key reasons for climate-related initiatives being unsuccessful in Pakistan. Lack of accessibility to technology, limited resources and information for advance reporting, and communication gap between journalists and climate scientists are the reasons for inadequate climate reporting in Pakistan. (Ahmed et al., 2020) Media houses and stakeholders despite seeing this void in journalism remain unbothered because of the high demand for sensational and political news in the industry. Programs host ill-informed guests who do not cover the issues adequately, by focusing on the surface-level information and ignoring other sensitive, interlinked issues. Predominantly, the climate change news is characterized by warm weather without addressing its broader impact on other sectors.

The study has found that most studies have examined print media more. The media focuses on episodic climate reporting, mainly sponsored by the authorities. The efficacy of reporting on climate-related issues is hindered by several factors including limited public awareness, complex political dynamics, and economic considerations. Environmental journalism is neglected in Pakistan and thus remains ineffective. This systematic review underscores the pressing necessity to promote literate environmental journalism in Pakistan. Furthermore, cooperation between academia and the news industry can facilitate the dissemination of knowledge and foster solution-driven awareness and discussion of climate-related challenges. However, it is observed that. The responsibility lies on the audience's part as well to make themselves aware of climate change and actively consume content related to climate change and support media outlets by doing so, either by citizen journalism or by actively engaging. So, the media knows that this is what the audience wants to see, forcing them to make such informational content.

## **Conclusion**

Climate change is affecting the world's ecosystem. Pakistan is vulnerable to the rapid change in climate and prone to devastating weather events like smog, heat waves, forest fires, and floods. Media as a watchdog, has the responsibility of highlighting the issue in a manner as to generate public awareness and accountability of policy makers. This systematic review accumulates valuable existing materials on the media's role in climate awareness.

## **Recommendations**

Based on the findings, it is suggested that the media should design specific segments and programs for comprehensive and profound climate reporting. This topic is mostly covered from the world's perspective and local issues are mostly ignored. Also, no study was done to do a comparative analysis of climate reporting in Pakistani media vs international media. This can give very crucial insight into how to go about climate journalism. An effective collaboration between environmental journalists and scientists can help solve this challenge. The media lacks climate journalism that could provide transparency on higher policy-making in this regard, criticize administrative measures, and offer expert opinions. One of the weak points that were noticed in this review was that most of the work was done only in the past 5 years. Hardly any study was conducted before that showing the lack of importance of this important area in the past. Out of all the papers reviewed, only one was longitudinal but there need to be more studies to study factors like the impacts of media on climate awareness or how the media has portrayed climate over time.

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