



RESEARCH PAPER

Unveiling the Media's Lens: A Comparative Study of Climate Change and Floods Reporting in Pakistani Press

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ABSTRACT

This research delves into the media portrayal of climate change and flood-related events in Pakistan during the year 2022, focusing on newspaper coverage. The study specifically scrutinizes editorials from two prominent newspapers, Daily Dawn and Daily Jang, spanning the period from January 1st to December 31st, 2022. The framing theory serves as the analytical framework for this investigation. The findings reveal that Daily Jang provided more extensive coverage of environmental issues compared to Daily Dawn, particularly during certain periods. The primary thematic areas related to climate change during this period encompassed "Floods in Pakistan," "Environmental Conferences," and "Agriculture." Notably, the Monsoon season received the highest level of attention in terms of climate change and flooding coverage. A big discovery was the striking similarity in the narratives employed by both Daily Dawn and Roznama Jang in addressing climate change and flood-related topics, suggesting a shared strategic approach in presenting these critical subjects.

KEYWORDS Agriculture, Climate Change, Environmental, Floods, Food Security, Framing, Greenhouse Gasses

Introduction.

Climate change is a pressing global issue that is escalating at an alarming rate, posing significant threats to our planet and its ecosystems. According to Mgbemene (2011), climate change has emerged as a significant global concern and a key topic of discussion in international conferences. The study highlights that long-term and persistent alterations in climate patterns primarily result from human activities, which contribute to the overall increase in Earth's temperature. In the present days, the phenomenon of climate change poses a significant and pressing threat to human development and well-being. Climate change has a huge impact on the environment, agriculture, health sector, ecosystems, forests, oceans and water levels. The impact of these environmental changes on natural systems directly or indirectly influences the well-being and quality of life for all living organisms (Javed & Khan, 2019).

According to Intergovernmental Panel on Climate Change (IPCC) (2007), developing and the least developed countries are expected to suffer more due to climate change as compared to the developed countries. This is true if we scale down this fact to the community level; in case of any climatic anomaly the poor suffer the most due to lack of resources and access to information. Anthropogenic activities are mainly blamed to be responsible for the surging trend of climate related disasters occurring in different parts of the world and marginal income people with low income effectees. After

industrial revolution, emission of Green House Gases (GHGs) to the atmosphere increased drastically from industry and vehicular fossil fuel burning. Such gases have large warming potential and long life time to sustain warming process for decades to centuries.

During the 20th century, the increase in the global temperature was recorded as 0.76°C but in the first decade of this century 0.6°C rise has been noticed. Among 16 warmest years recorded over the globe, nine top most were from the first decade of 21st century with ranks in decreasing order; 2010, 1998, 2005, 2003, 2002, 2009, 2004, 2006, 2007, 2001, 1997, 2008, 1995, 1999, 1990, 2000 (Parry et al., 2007).

Pakistan is dealing with some big challenges because of climate change. Over the past 50 years, the average temperature in Pakistan has gone up by about 0.5°C. The number of really hot days has increased a lot in the last 30 years. Rainfall each year has been changing, with a slight increase over the last 50 years. Near Karachi, the sea level has gone up about 10 centimeters in the past 100 years. By the end of this century, the temperature in Pakistan might go up by 3°C to 5°C, and with higher global emissions, it could be 4°C to 6°C. Rainfall is expected to vary a lot from year to year. The sea level might rise another 60 centimeters by the end of the century, affecting low-lying areas along the coast and the Indus River delta (Chaudhry, 2017).

“According to German Watch, Pakistan has been ranked globally in the top ten countries most affected by climate change in the past 20 years owing to its geographical location. According to the Global Climate Risk Index annual report for 2020, Pakistan has lost 0.53 percent per unit GDP, suffered economic losses worth US\$ 3792.52 million and witnessed 152 extreme weather events from 1999 to 2018” (Pakistan Economic Survey 2019-20, 2020, p. 305).

Due to the significant and far-reaching consequences of climate change, political institutions at both national and international levels are actively involved in endeavors to mitigate and adapt to its effects. Simultaneously, there is an urgent need to raise awareness regarding the causes and impacts of climate change. According to Schmidt Ivanova et al. (2013) the news media plays a central role as the primary interpretative system in modern societies. Therefore, it holds immense importance in shaping the public's understanding and response to climate change and climate politics.

In the last few years, climate change has been getting a lot of attention worldwide, especially from 2010 to 2019. Countries like the United Kingdom, the United States, Japan, and Mexico have seen a big rise in media talk about climate change (Boykoff & Yulsman, 2013). In Pakistan, the complex problem of climate change, closely connected to many significant natural disasters, is sadly ignored. This highlights a lack of needed attention and awareness for these important issues (Javed, Basit, Hussain, & Shahwar, 2020).

In sum, climate change, a natural event, really affects our lives. In today's connected world, we're always dealing with the results of climate change. It's important for us to understand and recognize this happening to live healthier lives. The media, like on the radio, TV, newspapers, and the internet, plays a big part in teaching people about climate change and its big impacts.

A study is being done to check how good the media is at making people aware of climate change. The goal is to find out if the media has any problems or weaknesses in talking about climate change. The results will help the media fix these issues and do

a better job of covering climate change. Also, the study will help people choose where to get information about climate change so they can make smart decisions.

This research is building on what we already know, looking at how climate change is talked about in the media in Pakistan. It's using different themes and ways of studying to get a deeper understanding of how the media in Pakistan talks about climate change. Specifically, it's looking at how two big newspapers in Pakistan, Daily Dawn and Daily Jang, covered the important events of climate change and floods in 2022.

Literature Review

According to the insightful analysis provided by Schmidt (2013), it is explicated that the effects of climate change permeate across the globe, exhibiting their presence in diverse regions worldwide. These effects consistently attract considerable attention from the media, thereby enjoying a prominent place in public discourse. Additionally, Schmidt et al. (2013) effectively demonstrates that climate change has emerged as a pertinent and noteworthy subject in the media landscape, resulting in an increased responsiveness from media outlets to address climatic issues in numerous countries.

In their influential research, Boykoff and Rajan (2007) assert that media outlets in advanced countries such as the United States and the United Kingdom exhibit a strong awareness and understanding of the scientific consensus regarding climate change.

The study conducted by Kapoor (Kapoor, 2011), revealed that approximately 40% of the participants expressed a preference for television programs as their preferred source of information, while 26% of the rural population demonstrated an interest in radio programs.

Yadav and Rani (2011) hold a favorable stance regarding the role of media in educating and assisting individuals in understanding climate change. Their research highlights the significant potential of media platforms in raising awareness, disseminating knowledge, and fostering a better understanding of the complexities surrounding climate change.

The results of the study conducted in Malaysia indicate that the coverage of climate change in Malaysian print media was found to be moderate. The extent of media coverage on climate change appears to be influenced by overall events identical with climate abnormality (Azmi, Omar, Zaid, Wahab, & Yusof, 2015).

A comprehensive research study was undertaken to conduct an in-depth content analysis of the portrayal of climate change in the Canadian print media. The findings of this meticulous analysis unveiled a noticeable upward trend in both the extent and volume of climate change coverage in the Canadian press over the years. Interestingly, the study brought to light a crucial shift in the angle from which climate change news was reported (Young & Dugas, 2011).

The research conducted by Uzelgun & Castro (2015) shed light on an encouraging trend - there was a noticeable increase in the coverage of environmental issues, particularly those related to climate change, which were being presented as alarming and pressing matters in the selected newspapers.

A detailed research project looked into how the media covered a specific event – the Tharparker famine of 2014 in Sindh, Pakistan. This study explored how the media portrayed and dealt with the famine, revealing insights into how the media reports on important environmental events. To do this research, a careful selection process was

used to choose four widely read newspapers in both Urdu and English for collecting data. The findings showed that Urdu newspapers gave more attention to the famine compared to English ones. However, both Urdu and English newspapers tended to focus more on the time after the famine rather than before it happened (Zaheer, 2015).

An analysis highlights the paramount importance of media in disseminating crucial information, raising public consciousness, and drawing the gaze of governmental authorities and policymakers to these pressing issues. As the sentinel of information flow, the media plays a crucial role in bridging the gap between the intricate nuances of environmental challenges and the general public's understanding of their gravity and implications. He farther added, the power of media's influence lies not only in the dissemination of information but also in shaping public sentiment and influencing policy agendas. By constructing compelling narratives that highlight the human dimensions of environmental crises, media can evoke empathy, galvanize public support, and nudge authorities to prioritize climate resilience and sustainable practices. This dynamic underscores the media's capacity to be a change agent, steering the societal ship towards calmer waters even amidst turbulent environmental shifts (Riaz, 2018).

Recently, Barri and Shahzad (2022) embarked on a thorough exploration of the landscape of editorial content within the prominent Pakistani newspapers, the Daily Dawn and the Daily Jang. Their research venture aimed to unravel the intricate layers of editorial coverage pertaining to the pressing concern of Climate Change within the realm of Pakistani print media. The chosen time frame, spanning from 2018 to 2019. The findings of the study painted an intriguing picture. Daily Jang, was observed to have devoted more space to emerging environmental issues during the specified timeframe in comparison to the Daily Dawn. However, the study also underscored the importance of granularity when examining specific environmental concerns. While Daily Jang exhibited greater interest in general environmental topics, Daily Dawn emerged as the frontrunner when it came to the pivotal issue of Climate Change.

A study embarked on a comprehensive exploration of the extent and nature of climate change coverage within Pakistan's print media landscape. Specifically, the research took a closer look at the columns dedicated to climate change, which found their place in the esteemed opinion pages of four prominent Pakistani newspapers. The study's purview extended to a comparative analysis, distinguishing between two influential Urdu newspapers, namely Roznama Jang and Roznaama Nawaiwaqt, and two well-regarded English newspapers, namely Daily Dawn and The Express Tribune. The findings of this meticulous investigation illuminated intriguing trends within the print media's climate change coverage. Notably, the English newspapers exhibited a marginally higher degree of attention towards climate change in comparison to their Urdu counterparts (Fizzah, 2023).

The foundation of this research lies within the overarching framework of the Framing theory with a lineage deeply rooted in communication and media studies, especially in content analysis (Matthes, 2009). This theory has garnered widespread acclaim for its ability to elucidate the intricate mechanisms through which media influences public perception and shapes the societal discourse.

Originating from the seminal work of McCombs and Shaw (1972), the Agenda Setting theory posits that media's selection and prominence of particular issues can significantly impact the salience and importance attributed to those issues within the public consciousness.

Academic scholars have approached the conceptualization of news frames through diverse lenses, adopting varying discourse units of analyses. This multifaceted exploration of news framing underscores the dynamic and evolving nature of media research (Matthes, 2009).

One common way researchers have looked into this is by closely studying news stories or articles. They carefully examine the words and ideas used in these pieces to find out how the information is presented and what ideas influence it. (Husselbee & Elliott, 2002).

In parallel, another contingent of scholars has turned their attention to the proposition as their chosen unit of analysis. By dissecting the language, syntax, and semantic structures underlying news narratives, these studies aim to uncover the profound influence of linguistic choices in shaping how issues are framed within the media landscape. This approach illuminates how framing extends beyond mere content selection to encompass the intricate nuances of linguistic framing, contributing to the construction of specific perceptions and interpretations within news audiences (Pan & Kosicki, 1993).

Yet another captivating avenue of exploration within this realm is the investigation of visual features as discourse units. These studies delve into the realm of images, layouts, and design elements that accompany news content, recognizing the intrinsic power of visuals in shaping meaning and evoking emotions. By focusing on these visual components, researchers unveil the symbiotic relationship between text and imagery, shedding light on how visual cues can amplify, reinforce, or even challenge the framing strategies presented through textual content (Kenix, 2001) (King & Lester, 2005).

In this study, we use the framing approach developed by Husselbee & Elliott (2002) as a framework. This approach helps us understand how the Pakistani media presents and emphasizes ideas and themes related to climate change. By using this approach, we want to closely look at how climate change is depicted and talked about in the Pakistani media.

H1: Urdu daily gave more space than English daily about the issue of climate change.

H2: There is a significant difference in the editorial policies between Urdu and English daily newspapers in Pakistan concerning the subject matter of climate change and floods.

H3: During monsoon, issue of climate change and floods got more coverage?

Methodology

This study uses content analysis approach to examine how climate change is portrayed in newspaper editorials. The editorial section of a newspaper is where the publication expresses its opinions on various national and global topics. So, why did we choose to focus on climate change? The reason is that climate change is connected to all other environmental issues. It can cause problems like global warming or lead to natural disasters. In this study, climate change is the main topic, and all other environmental issues are connected to it.

The sources chosen to serve as the foundation for this study are the Roznama Jang (published in Urdu) and the Daily Dawn (published in English), spanning a comprehensive one-year period from January 1st, 2022, to December 31st, 2022. These newspapers were strategically selected to form the basis of the sampling process, taking

into consideration their widespread circulation and influence within the media landscape.

The data collection process was executed using the cyanosis sampling technique, which entails treating each editorial related climate change and flood coverage from the chosen newspapers over a one-year period as individual units of analysis. This approach involves a comprehensive consideration of every editorial piece about climate change and flood coverage, published within the selected newspapers during the specified time frame. By adopting the Cyanosis sampling technique, the research ensures an exhaustive examination of the editorial content, enabling a thorough exploration of the media's portrayal of climate change-related themes and narratives.

To compile the relevant editorials for this study, a comprehensive exploration of the e-paper archives was undertaken, encompassing the time span from January 1st, 2022, to December 31st, 2022. This timeframe was meticulously chosen to encapsulate a one-year period of media coverage, allowing for a thorough examination of climate change and flood-related topics within the selected newspapers.

Table 1 provides a comprehensive overview of the selected daily newspapers, indicating instances where specific editions were not found within the specified dates. It was observed that the Daily Dawn was accessible on July 13th.

Table 1
Dailies not available

Date	Event
4-May	Eid-ul-Fitar
5-May	
11-Jul	Eid-ul-Adha
12-Jul	
13-Jul (Daily Dawn available)	
10-Aug	Ashora
10-Oct	12-Rabi ul Awal

The coding sheet served as a pivotal tool in the content within the selected newspapers. This comprehensive sheet will systematically capture various dimensions of the content, offering a multifaceted lens through which to analyze the data.

Within the coding sheet, each editorial is meticulously examined and dissected at three pivotal junctures, each shedding light on distinct dimensions of the content. These three critical points of analysis serve as the cornerstones of the research, offering a comprehensive framework to decode and interpret the content within the selected editorials.

- Central Idea of Editorial
- Editorial Approach
- Framing Angle of Editorial towards Government of Pakistan

Three skilled coders played a pivotal role in the data analysis process. Each coder has meticulously contributed to the examination and coding of the content within the selected editorials. These coders have collectively ensured a comprehensive and

thorough analysis of the data, adding depth and rigor to the research. All are well trained by researcher according to main themes of content.

The presence of multiple coders, each bringing their perspectives and expertise to the analysis, enhances research's reliability and validity. The collaborative efforts of the coders ensure that the content is scrutinized from various angles, minimizing potential biases and increasing the accuracy of the findings. The high coding reliability coefficient .768 further solidifies the trustworthiness of the study's results, attesting to the consistency and consensus achieved among the coders.

Results and Discussion

Table 2
Frequency Distribution of editorials across the Newspapers

	Frequency	Percent
Daily Dawn	57	38.3
Roznama Jang	92	61.7
Total	149	100.0

Data from table 2 revealed a total of 149 editorial articles that focused on climate change and flood issues in Pakistan over the span of one year. Among these articles, 57 (which constitutes 38% of the total) were identified within the English daily newspaper, specifically the Daily Dawn. On the other hand, a larger portion of 92 articles (making up 62% of the total) were discovered within the Urdu daily newspaper, namely Roznama Jang. In accordance with the data presented in Table 3, RQ 2 has been addressed, indicating that Urdu daily newspapers provide more frequent coverage to climate change and flood issues in Pakistan as compared to English daily newspapers in Pakistan. In simpler terms, Hypothesis 1 (H1) has been accepted. The data demonstrates that Urdu newspapers cover the subject matter more extensively than their English counterparts.

Table 3
Monthly Frequency Distribution

	Frequency	Percent
January	1	.7
February	3	2.0
March	2	1.3
April	5	3.4
May	10	6.7
June	6	4.0
July	17	11.4
August	27	18.1
September	42	28.2
October	16	10.7
November	12	8.1
December	8	5.4
Total	149	100.0

Table 3 displays the distribution of editorials on a monthly basis throughout the year 2022 in the two selected daily newspapers. This table reveals a notable pattern, indicating that a significant concentration of articles related to climate change and floods was discovered in the month of September, amounting to 42 articles, which accounts for approximately 28% of the total editorials.

Furthermore, the data showcases that a substantial majority, totaling 57% of the content, was identified within just three specific months: July, August, and September. This finding suggests that the coverage of climate change and floods within the selected newspapers was particularly pronounced during this concentrated timeframe.

Table 4
Comparison of Dawn and Jang in Terms of Monthly Editorial

		Frequency	Percent
Dawn	February	1	1.8
	March	2	3.5
	April	3	5.3
	May	2	3.5
	June	3	5.3
	July	8	14.0
	August	12	21.1
	September	15	26.3
	October	2	3.5
	November	5	8.8
	December	4	7.0
	Jang	January	1
February		2	2.2
April		2	2.2
May		8	8.7
June		3	3.3
July		9	9.8
August		15	16.3
September		27	29.3
October		14	15.2
November		7	7.6
December		4	4.3

Table 4 provides a comparative analysis between the Daily Dawn and Roznama Jang in terms of their monthly editorials. Interestingly, the data pattern observed in Table 4 mirrors the same trend exhibited in Table 3 for the total editorials. Specifically, it becomes evident that both newspapers share a similar distribution of editorial coverage across the months.

Delving further into the data, it is worth noting that a substantial portion of the content in both newspapers is concentrated in just three months: July, August, and September. Within the Daily Dawn, 61% of the 57 editorial articles were concentrated in these three months. Similarly, the Roznama Jang exhibited a similar trend, with 55% of the total of 92 climate change and floods-related editorial articles concentrated in the same three months.

Table 5
Frequency Distribution in terms of Seasons

	Frequency	Percent
Cold Season	24	16.1
Pre Monsoon	21	14.1
Monsoon	66	44.3
Post Monsoon	38	25.5
Total	149	100.0

According to data in table 5 Monsoon is a year where most climate change and floods stories are covered by Pakistani press. Based on the data presented in Table 6, it is evident that the monsoon season emerges as the period during which the Pakistani press provides the most extensive coverage of climate change and flood-related stories. This data underscores the heightened media attention directed towards these issues during the monsoon season.

Table 6
Main Themes Covered Related to Climate Change and Floods Issues

	Frequency	Percent
Climate Change & Global Warming	15	10.1
Water Scarcity and Needs of Dam in Pakistan	13	8.7
Agriculture and Food Security	24	16.1
Flood in Pakistan	43	28.9
Drought in Pakistan	1	.7
Air, Land and Water Pollution	16	10.7
Global Conferences on Climate Issues	28	18.8
Other	9	6.0
Total	149	100.0

Table 6 illustrates a significant trend in the coverage of climate change and floods in Pakistan, revealing that approximately 64% of the content revolves around three prominent focal points. These key themes include "Flood in Pakistan," which comprises 29% of the coverage, "Global Conferences on Climate Issues," accounting for 19%, and "Agriculture and Food Security," representing 16%.

The analysis of framing involves a dual perspective, examined through two distinct levels: "Editorial Approach" and the "Framing Angle of Editorial towards Government of Pakistan." The data related to these two levels is presented in Tables 7 and 8, respectively.

Table 7
Framing Approaches

	Frequency	Percent
Suggestive Approach	43	28.9
Critic Approach	88	59.1
Appreciative Approach	18	12.1
Total	149	100.0

The data presented in Table 7 reveals, a smaller portion of 29% of the content takes on a suggestive approach. This suggests that some editorials offer constructive suggestions or recommendations regarding the government's strategies and responses to climate change and floods.

Lastly, a mere 12% of the content is appreciative in nature. This implies that a relatively smaller fraction of the editorials applaud and commend the government's efforts and initiatives related to these issues.

Table 8
Framing Stance

	Frequency	Percent
Positive	61	40.9
Neutral	51	34.2

Negative	37	24.8
Total	149	100.0

Table 8 presents a comprehensive view of the framing angle towards the government of Pakistan concerning counter policies for climate change and floods. The data in this table reveals distinct patterns in how the media portrays the government's actions in response to these challenges.

Table 9
Comparison of Framing Approaches

		Frequency	Percent
Dawn	Suggestive Approach	17	29.8
	Critic Approach	33	57.9
	Appreciative Approach	7	12.3
	Total	57	100.0
Jang	Suggestive Approach	26	28.3
	Critic Approach	55	59.8
	Appreciative Approach	11	12.0
	Total	92	100.0

Both Table 9 illustrate that the framing approaches in both newspapers are remarkably similar. This alignment in framing strategies across the two papers underscores a consistency in how they present and approach the subject matter.

Table 10
Comparison of Framing Stance

		Frequency	Percent
Dawn	Positive	21	36.8
	Neutral	21	36.8
	Negative	15	26.3
	Total	57	100.0
Jang	Positive	40	43.5
	Neutral	30	32.6
	Negative	22	23.9
	Total	92	100.0

Framing stance depicted in Table 10 demonstrate a consistent framing stance across both newspapers, further highlighting the similarities in their approach to framing issues related to climate change and floods.

Given this data and analysis, we can effectively respond to RQ5 by stating that the Daily Dawn and Roznama Jang share the same editorial policy when it comes to addressing climate change and floods in Pakistan. The framing angles, central themes, and overall editorial approaches are highly consistent between the two newspapers. It suggests a significant alignment in their strategies for presenting and discussing these critical issues, ultimately reflecting a unified editorial policy in this specific context. So, H2 is rejected.

Conclusion

In conclusion, this study reveals that the proportion of editorial articles pertaining to climate change and floods in Pakistan constitutes approximately 7% of the total. The empirical evidence strongly emphasizes that Urdu newspapers exhibit a

notable dedication to addressing these critical subjects, allocating a considerable portion of their editorial content to them, in contrast to their English-language counterparts. The central themes that dominate the content primarily revolve around three significant focal points: "Floods in Pakistan," "World Conferences on Environmental Issues," and "Agriculture and Food Security." Additionally, the analysis of data highlights that the Monsoon season witnesses the highest coverage of climate change and flood-related issues, signifying the heightened attention given during this time.

Furthermore, a significant finding emerges from this study: both the Daily Dawn and Roznama Jang share a uniform editorial policy when addressing climate change and floods in Pakistan. This striking alignment in framing angles, central themes, and overall editorial approaches points to a coherent strategy employed by both newspapers in presenting these crucial topics.

While this research has provided valuable insights into the editorial coverage of climate change and floods in the chosen newspapers, there remains potential for future studies to extend the scope by incorporating a wider range of newspapers, opinion pieces, and additional variables. Such endeavors could further enrich the understanding of media coverage and framing of these significant environmental issues in Pakistan.

Recommendations

In this study, the examination has been restricted to a single Urdu and one English daily newspaper, as by Barri & Shahzad (2022) with a focus solely on the editorial section as the sample. However, it is worth noting that there is potential to enhance the research outcomes by broadening the scope. For instance, a more comprehensive and robust analysis could be achieved by incorporating a broader sample size that encompasses three Urdu and three English newspapers. This would allow for a more diverse representation of viewpoints and editorial policies, providing a broader understanding of how different newspapers address climate change and floods.

Furthermore, expanding the analysis beyond just the editorial section to include other forms of opinion articles could yield richer insights. Opinion pieces from various sections of the newspapers could shed light on how different perspectives and viewpoints are expressed throughout the publication. This extension could contribute to a more holistic understanding of how climate change and flood-related issues are discussed and framed in the media.

By incorporating these suggested enhancements, the research could potentially yield more comprehensive and nuanced results, enabling a deeper exploration of the editorial policies, framing approaches, and overall coverage of climate change and floods across a broader spectrum of newspapers and opinion pieces.

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