

Visual Coverage of Climate Change in Pakistani Print Media

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Abstract

Climate change is a worldwide occurrence that impacts societies across the globe. Pakistan is currently experiencing a high level of vulnerability as a result of climate change. The current study assesses the depiction of climate change in Pakistan's media. This study involved the analysis of five climate-related issues: (1) climate change and global warming, (2) water scarcity and the requirements of dams in Pakistan, (3) agriculture and food security, (4) floods in Pakistan, and (5) droughts in Pakistan. The study conducted a content analysis of news images from four prominent newspapers (The Nation, The News, Nawa-i-Waqt, and Jang) between 2010 and 2019. Furthermore, the researchers discovered that all four newspapers extensively addressed three specific topics: climate change and global warming, water scarcity, and the flood in Pakistan. However, they overlooked the other issues, namely agriculture, food security, and drought in Pakistan. Overall, the articles on the representation of climate change in Pakistan were predominantly positive in their approach to addressing the climate issue.

Keywords: Climate Change, Photographs, Global Warming, Media Portrayal.

Introduction

Climate change is a worldwide issue that impacts all parts of existence. Currently, climatic changes pose a significant risk to the progress and well-being of humanity. Climate change significantly affects various aspects of Pakistan, including the atmosphere, biosphere, agriculture, temperature, health sector, rainfall, ecosystems, forestry, and sea and water levels. When environmental changes impact the natural system, the quality of life for all living organisms is altered, either directly or indirectly (Naeem, 2019). Climate change pertains not only to the reduction of gas emissions but also to the preservation of human dignity and the assurance of social reliability. The text discusses the importance of our way of living and supporting ourselves and the need to protect the most impoverished and vulnerable individuals. It also emphasizes the necessity of discussing complex subjects in a manner that does not perpetuate injustice and highlights our obligation to address these matters. In their most recent research, the World Bank and International Energy Agency warned that the global temperature will rise by 4 degrees Celsius. The ramifications of climate change are deeply concerning. It will increase devastating floods, hurricanes, super storms, droughts, and heatwaves and lead to a decline in food reserves, severe water scarcity, and loss of human life (World Bank, 2018). This discussion does not pertain to a far-off future; it has the potential to occur within our lifetime.

Suppose governments do not take action and do not decrease greenhouse gas emissions. In that case, we will condemn future generations to a life characterized by limited resources and the

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potential for several risks, such as sickness, water scarcity, loss of livelihood, displacement, and perhaps war (Ghani, 2013). Climate change poses a significant threat to the decrease of poverty and has the potential to reverse the progress made in development over the past few decades (Olufemi et al., 2014). Environmental fluctuations significantly influence the atmosphere, biosphere, agriculture, temperature rise, healthcare industry, precipitation, ecology, forestry, and sea and water levels. Climate change can directly and indirectly affect the natural system and living beings (Kakade et al., 2013). Obtaining accurate and organized information regarding climate change is a first requirement for developing effective strategies in Asian and African nations (Tagbo, 2010). Climate change has emerged as a significant obstacle for Pakistan, a country primarily dependent on agriculture. Pakistan is classified as one of the top 8 countries in the world that are most susceptible to the impacts of climate change (Choudhry, 2016). The glaciers in Pakistan are projected to undergo melting by the year 2035, resulting in a significant negative influence on the flow of fresh water. Pakistan's economy primarily focuses on agriculture, contributing 21% to the GDP. Pakistan is 135th in CO2 emissions (Naseer, 2013) and, unfortunately, is ranked 7th in terms of vulnerability to climate change (Global et al., 2017). The agricultural industry is the primary pillar of Pakistan's economy, accounting for most of its land area, with 4/5th of the land used for irrigated crops in the South Asian regions. In addition to its vulnerability to flooding and famine, the state is highly prone to indoor and outdoor air pollution (Shakoor et al., 2011). Pakistan is located in a region where the air temperature is expected to be higher than the average global temperature. As a result, Pakistan is particularly susceptible to climate change (IPCC, 2007A). As a result of environmental variability, specific locations will experience favorable conditions, while others may endure severe hardships due to fluctuations in weather patterns.

Environmental changes will significantly impact agricultural productivity, economic stability, and the stability of stock and demand for farming supplies. Additionally, these changes will affect the profitability, trade, and prices of farm products (Kaiser & Drennen, 1993). Production is influenced by several factors, including changes in rainfall patterns, increases in temperature, availability of water, fluctuations in sowing and harvesting dates, and the sustainability of the land (Kakade et al., 2013). The durations of farming seasons in South Punjab and Baluchistan have noticeably shortened due to changes in sowing and harvest times. It suggests that more than income from conventional methods is needed to maintain several households adequately. Global warming would increase the frequency and intensity of extreme events such as droughts, floods, and cyclones, negatively impacting agricultural productivity (Baig, 2020). The functioning of Pakistan's agriculture industry is contingent upon surface water, which is currently experiencing strain (Baig & Amjad, 2014). The recent catastrophic environmental events include extensive flooding in Pakistan and India, as well as Hurricane Katrina in the United States. The persistent drought in Australia, Pakistan, China, India, and Texas directly results from elevated temperatures caused by global warming. In the 21st century, climatic disasters have experienced a fivefold rise in fatalities and have impacted seventy times more individuals. With its diverse meteorological conditions, Pakistan is considered one of the country's most prone to catastrophic events worldwide (Ahmad et al., 2011).

The media has a crucial role in informing the public and government about the importance of preserving and safeguarding natural resources in the face of climate change for future generations. The sustainable advancement of the globe will be accomplished by conscientiously preserving the atmosphere through the judicious utilization of natural resources. Both affluent and impoverished nations have an equitable interest in the responsible management of the planet (Sonwalkar, 2002). Our planet's true stability hinges on its environment's long-term viability. The media has a crucial role in creating awareness among the general public and promoting a positive shift in societal behavior toward addressing human-caused environmental problems (Yadav & Rani, 2011). The media has the primary role in

establishing the agenda and shaping public opinion on climate change, its consequences, and the urgency of taking action (Khan et al., 2017).

It is crucial to examine print media's impact on climate change representation in a country such as Pakistan, which is prone to disasters and has a vibrant media landscape. It is important to note that much research has been conducted on climate change and its effects through literature evaluation. Numerous studies have been conducted in various nations worldwide (Rybalko, 2011). In his research, Riaz (2018) discovered that media can raise significant awareness among individuals about climate change. In recent decades, there has been a rise in global media coverage of the problem of climate change, primarily due to its high news value. From 2010 to 2019, there was extensive media coverage on climate change worldwide, particularly in the UK, USA, Japan, and Mexico (Boykoff et al., 2019).

However, no previous research has been discovered in Pakistan regarding "An Analysis of Media Portrayal of Climate Change in Pakistan: 2010-2019". Therefore, it is crucial to carry out this research to establish the importance of the newspaper coverage pattern on climate change issues. The climate crisis and natural disasters in Pakistan are often disregarded, and their significance is overlooked. The mainstream media lacks interest in reporting on climate challenges. In this study, researchers aim to analyze how the climate issue is portrayed in the Pakistani print media, the function of media as a trendsetter, and the frequency of climate reporting in Pakistani newspapers. This research is expected to create a platform for expanding media coverage of climate change in Pakistan. It would also foster increased public awareness of the connections between climate difficulties, social problems, and the broader economy.

Climate Change and National Media

Given the significant effects of climate change inequality, it is imperative to examine how the media represents various climate-related topics such as climate change and global warming, water shortages and the necessity of dams in Pakistan, agriculture and the food sector, floods in Pakistan, and droughts in Pakistan. In contemporary times, mass media has emerged as the prevailing component of life and society. In addition to providing enlightenment and information, the media also plays a crucial role in raising awareness about significant topics such as climate change and its associated consequences. The media understands the importance of reporting on environmental and climate change news. The communication between scientists and policymakers regarding climate change and their dissemination of information through mass media has been a subject of great interest in raising public awareness about climate issues (Kakade et al., 2013). The national press, regional press, and small and local language newspapers all provide coverage of climate change and natural disasters by their policies. These coverages inform the public about the effects of environmental and climate change, warnings, and the activities that may be taken to avert those effects (Christian & Nordenstreng, 2010).

According to meteorological analysis, Pakistan is considered one of the most severely affected countries by extreme weather events (Ahmad et al., 2011). The climate in coastal areas of Pakistan is characterized by dry and hot conditions, whereas the winter in the northeast plateau is typically freezing and dry (Sajjad, 2004). Pakistan experiences four distinct seasons throughout the year. The first season, from November to February, is characterized as cold. The pre-monsoon season, characterized by hot weather, begins in March and lasts until mid-June. The monsoon season typically occurs from mid-June to mid-September. The post-monsoon season often starts in mid-September and extends through October. The weather is quite hot in the summer, and the humidity ranges from 25% to 50%. During daylight hours, temperatures in plain parts can reach up to 49 degrees Celsius, while in the winter, the average temperature ranges from 4 to 20 degrees Celsius. In the Northern regions, temperatures on Mercury typically fall below freezing. The primary geographical areas of the country are characterized

by arid to semi-arid conditions, with annual rainfall ranging from 760 mm to 2000 mm. Approximately 75% of its range experiences less than 250 mm of rainfall, while 20% of the area receives only 125 mm of rainfall (Naeem, 2020).

Current Study

Only a few research studies have been conducted on the climate issue in Pakistani media. These studies have been restricted in duration, typically lasting only 2 to 3 years. However, this study has chosen a more extended period of 10 years. Prior studies have focused solely on analyzing the extent of news coverage of climate change. However, this study aims to address this gap by explicitly examining the published images in two English and two Urdu newspapers. In previous literature, researchers primarily focused on analyzing print media coverage or conducting discourse analysis of only two or three climate-related issues. However, in this study, the researchers conducted both qualitative and quantitative analyses, delving deeply into five research issues: climate change and global warming, water scarcity, the need for dams in Pakistan, agriculture in the food sector, floods in Pakistan, and drought in Pakistan. The researchers examined these issues through various approaches, including the suggestive, critical, and appreciative approaches. This study is a significant achievement in addressing a vacuum in the current body of literature. The researcher aims to determine the function of print media as a trendsetter, assess its framing strategies, and examine its reporting frequency in the leading mainstream newspapers of Pakistan.

The present study focuses on the government's role in addressing climate change issues and how the print media covers government policies related to climate change. The study examines whether the print media portrays these policies as positive, offering suggestions, or being critical. The study employed a combination of quantitative and qualitative methodologies to analyze the data and determine the extent of coverage on the issue of climate change in Pakistan's national newspapers. This study aims to examine the Pakistani government's perception of the subject of climate change. Portrayal studies are gaining immense appeal among media experts worldwide.

Research Questions

RQ1: What is the cumulative coverage the four newspapers provide on all study topics?

RQ2: What is the cumulative coverage provided by all four newspapers on research concerns during the designated period?

RQ: What are the similarities and differences among the newspapers Daily The Nation, Daily The News, Daily Nawa-i-Waqt, and Daily Jang regarding their coverage of climate change?

Methodology

The current research study encompassed both qualitative and quantitative methodologies. The content analysis technique is employed to assess the content of published images in four selected newspapers—a systematic process designed to analyze the content of recorded information (Walizer & Wiener, 1978). The study aims to quantify the number, size, spatial distribution, frequency, and precise measurements of editorials and images. The quality of the content was assessed using editorial and photographic textual analysis, whether provocative, critical, or appreciative. To conduct content analysis on the topic of "an analysis of media portrayal of climate change in Pakistan: 2010-2019", two national English daily newspapers, namely The Nation and The News, as well as two Urdu daily newspapers, Nawa-i-Waqt and Jang, were chosen. The influence of these four English and Urdu newspapers on Pakistan's general population and policymakers is significant. All of these national dailies are widely read, mainstream publications that purport to provide impartial and balanced coverage, according to Sharif and Medvecky (2018).

Coding

The classification sheet was created to assess the substance of specific publications. The content was evaluated both objectively and qualitatively. The study's scope encompassed all photographs published in particular newspapers and pertained to research topics such as climate change, global warming, water scarcity, the necessity of dams in Pakistan, agriculture, the food sector, floods in Pakistan, and droughts in Pakistan. The time frame for the study was from January 1, 2010, to December 31, 2019. The research focused on the ten years from 2010 to 2019 due to climate-related events such as droughts, earthquakes, water scarcity, global warming, temperature increase, and disease outbreaks. Pakistan experienced significant damage during these years, with consistent occurrences of droughts and floods, all of which can be attributed to climate change. In the 21st century, climatic disasters have occurred with a frequency of more than five times and have caused seventy times higher casualties or impacts. The time span from 2010 to 2019 has been chosen for research because of the average annual occurrence of 32 climatic disasters. Photographs are seen as the primary focus of the study, with words, sentences, or entire paragraphs dedicated to discussing research topics. The study population consisted of photographs depicting various topics related to environmental issues, such as climate change, global warming, water scarcity, and the construction of dams. It also included images of the warnings and preventive actions regarding environmental and climate change, natural disasters, and their effects on agriculture and food. Specific events like the flood in Pakistan, rehabilitation and reconstruction activities after natural disasters, drought, monsoon rain, disaster relief fund activities, food security, weather changes, temperature increase, global warming, and the impact of climate change on disease were also included in the population.

Quantitative Scale: Quantitative measurement can be expressed numerically, using figures and digits. The essay and photograph were quantitatively measured across five issues: climate change and global warming, water scarcity and the need for dams in Pakistan, agriculture and food sector, flood in Pakistan, and drought in Pakistan. These measurements specifically focused on climate change-related topics.

Qualitative Scale: Qualitative measurement refers to measuring and evaluating content based on its nature and relevance to a given category, as determined by researchers. The editorial and photograph were qualitatively assessed across five topics: climate change and global warming, water scarcity and the need for dams in Pakistan, agriculture and food sector, flood in Pakistan, and drought in Pakistan. The assessment evaluated the content regarding appreciation, suggestions, and criticism.

Table 1: Categorization

Variable	Event	Operational Definition
Issue #1	Preventive Actions	A photograph captures various manifestations of climate change, such as increased heatwaves resulting from global warming, rising average temperatures, extreme weather events, glacier melting, international agreements like the Kyoto Protocol and Paris Agreement aimed at addressing and managing climate change, implementation and enforcement of climate laws and acts, environmental protection legislation, efforts to adapt to and mitigate climate change, reduction of the ozone layer, and the reduction of CO ₂ and greenhouse gas emissions.
Issue #2	Water Storage/Dams	The photograph addresses the issue of water shortages in Pakistan, the impact of climate change on the water sector, water policy and management, the World Water Forum, water storage dams, the

		necessity of Kalabagh dams, and the requirement for a large water reservoir in Pakistan.
Issue #3	Agriculture Requirements	The photograph focuses on the impact of climate change on agricultural output and food security, including the irregularities in crop growth cycles, changes in seeding and harvesting dates, challenges in accessing and utilizing food, as well as the regulations related to agriculture and food management in Pakistan.
Issue #4	Floods Disaster	The photograph depicts a natural catastrophe flood in Pakistan caused by the monsoon rain. It highlights the need of the Flood Forecasting System and the flood warning system in alerting people about potential floods. It also emphasizes the need for a flood relief fund.
Issue #5	Drought	The photograph depicts the impact of a natural disaster, specifically a drought, in Pakistan. It highlights the scarcity of rainfall and serves as a warning for the potential occurrence of a drought. The photograph also emphasizes the importance of a drought relief fund and the role played by the Pakistan Metrological Department in addressing this issue. Additionally, it highlights the efforts taken for drought mitigation and precaution, as well as the existence of a drought Policy.

Coding Categories

In order to assess the data, the researchers devised a coding sheet. In addition, the researchers categorized the coding sheet into three distinct categories: suggestive, critic, or appreciative. Each photograph's tilt would be classified into one of three coding categories: suggestive, critic, or appreciative. This classification is based on the framing provided by the newspaper for these study topics, namely CC/GW, W/D, A/F, ND (F), and ND (D).

Suggestive Approach

A photograph would be considered suggestive if the frame was found as;

- If these specific newspapers propose precautionary measures and innovative approaches to address these climate-related challenges.
- These handpicked newspapers should effectively raise awareness and emphasize the importance of taking climate challenges seriously for the sake of our national survival.

Critic Approach

A photograph is considered critic if the frame was found:

- If these media take such a position on the problem, it indicates that the government is not demonstrating a serious attitude and its policies are insufficient for addressing climate change.
- If these selective newspapers portray, it indicates that the Pakistani leadership has not formulated any effective policies based on reality, and its governing body is merely making political statements.

Appreciative Approach

A photograph falls into category of appreciative if the frame was found as:

- If these discerning media assess that the Pakistani government's efforts and policies are adequate in addressing climate change.

- If these reputable media acknowledge that the government is making progress in addressing climate change challenges in accordance with international norms and criteria.

Coding Slant Criteria

The researchers conducted a comprehensive analysis of all images published in Daily The Nation, Daily The News, Daily Nawa-i-Waqt, and Daily Jang between 2010 and 2019. They categorized the slant of these photographs into three unique categories: Suggestive, Critic, and Appreciative. The parameters for determining the coding slant of images in Pakistani newspapers were as follows:

- If the number of paragraphs containing suggestions is greater than the number of paragraphs containing criticism or appreciation in the complete collection of images, then the photograph will be categorized as suggestive.
- If the number of critical paragraphs in the complete collection of images exceeds the number of suggestive or appreciating paragraphs, then the entire collection will be classified as belonging to the critic category.
- If the number of paragraphs expressing appreciation in images exceeds the number of paragraphs expressing suggestion or criticism, the entire photograph will be considered appreciative in relation to the subject of climate change.

Results

Table 2: Photographs Treatment of The Nation on all issues of research i.e. (CC/GW), (W/D), (A/F), ND (F), ND (D)

Daily The Nation (2010-2019)				
Issues	Total Photographs	Suggestive	Critics	Appreciative
Climate changes & global warming (CC/GW)	120 (32%)	84 (70%)	30 (27%)	6 (3%)
Water Scarcity and Needs of dam in Pakistan(W/D)	160 (42%)	89 (56%)	70 (44%)	1 (0%)
Agriculture & Food sector(A/F)	30 (8%)	18 (61%)	12 (39%)	0 (0%)
Flood in Pakistan ND(F)	50 (13%)	28 (55%)	20 (40%)	2 (5%)
Drought in Pakistan ND(D)	20 (5%)	7 (33%)	13 (67%)	0 (0%)
Total	380 (100%)	226 (60%)	145 (38%)	9 (2%)

The Table-2 above displays the frequency of photographs published in The Nation newspaper from 2010 to 2019, covering various topics such as climate change, global warming, water scarcity and the need for dams in Pakistan, agriculture and the food sector, floods in Pakistan, and drought in Pakistan. Based on the table results, over a span of 10 years, The Nation published a total of 380 (100%) photographs related to important matters. Out of these, 226 (60%) photographs were in support of the suggested viewpoint, 145 (38%) photographs were critical of Pakistani policies, and only 9 (2%) photographs were deemed as expressions of appreciation. Therefore, throughout the course of eight years from 2010 to 2109, the majority of images published by The Nation were categorized as offering suggestions for resolving concerns.

Table 3: Total Photographs Treatment of The News on all Issues of Research i.e. (CC/GW), (W/D), (A/F), ND (F), ND (D)

Daily The News (2010-2019)				
Issues	Total Photographs	Suggestive	Critics	Appreciative
Climate changes & global warming (CC/GW)	173 (50%)	104 (60%)	59 (34%)	10 (6%)
Water Scarcity and Needs of dam in Pakistan(W/D)	69 (20%)	39 (56%)	30 (44%)	0 (0%)
Agriculture & Food sector(A/F)	17 (5%)	10 (57%)	7 (43%)	0 (0%)
Flood in Pakistan ND(F)	69(20%)	37 (54%)	32 (46%)	0 (0%)
Drought in Pakistan ND(D)	17 (5%)	7 (42%)	10 (58%)	0 (0 %)
Total	345 (100%)	197 (57%)	138 (40%)	10 (3%)

The Table-3 displays the frequency of photographs published in The News from 2010 to 2019, covering various topics such as climate change and global warming, water scarcity and the need for dams in Pakistan, agriculture and the food sector, floods in Pakistan, and droughts in Pakistan. Based on the table results, over a span of 10 years, The News published a total of 345 (100%) photographs related to important matters. Out of these, 197 (57%) photographs supported the suggested viewpoint, 138 (40%) photographs criticized Pakistani policies, and only 10 (3%) photographs were published as a form of appreciation. Therefore, throughout the course of an eight-year period from 2010 to 2019, the majority of the images published by The News were categorized as providing suggestions for resolving various concerns.

Table 4: Total Photographs Treatment of Nawa-i-Waqt on all Issues of Research i.e. (CC/GW), (W/D), (A/F), ND (F), ND (D)

Daily Nawa-i-Waqt (2010-2019)				
Issues	Total Photographs	Suggestive	Critics	Appreciative
Climate changes & global warming (CC/GW)	70 (14%)	44 (63%)	26 (37%)	0 (0%)
Water Scarcity and Needs of dam in Pakistan(W/D)	186 (36%)	102 (55%)	84 (45%)	0 (0%)
Agriculture & Food sector(A/F)	50 (10%)	28 (55%)	22 (45%)	0 (0%)
Flood in Pakistan ND(F)	156 (31%)	58 (37%)	95 (61%)	3 (2%)
Drought in Pakistan ND(D)	48 (9%)	12 (24%)	35 (73%)	1 (3%)
Total	510 (100%)	244 (48%)	262 (51%)	4 (1%)

The Table-4 displays the frequency of photographs published in Nawa-i-Waqt from 2010 to 2019 throughout all five issues included in the study. Based on the results table, over a span of 10 years, Nawa-i-Waqt published a total of 408 (100%) photographs related to relevant issues. Out of these, 192 (47%) photographs were supportive of the suggested stance, 213 (52%) photographs were critical of Pakistani policies, and only 3 (1%) photographs were published as a form of appreciation. Therefore, over the course of eight years (2010-2019), the daily Nawa-i-Waqt predominantly featured images in the category of government criticism, specifically highlighting their inadequate policies towards various issues.

Table 5: Total Photographs Treatment of Jang on all Issues of Research i.e. (CC/GW), (W/D), (A/F), ND (F), ND (D)

Daily Jung (2010-2019)				
Issues	Total Photographs	Suggestive	Critics	Appreciative
Climate changes & global warming (CC/GW)	65 (32%)	36 (55%)	28 (43%)	1 (2%)
Water Scarcity and Needs of dam in Pakistan(W/D)	78 (39%)	47 (60%)	31 (40%)	0 (0%)
Agriculture & Food sector(A/F)	10 (5%)	6 (55%)	4 (45%)	0 (0%)
Flood in Pakistan ND(F)	42 (21%)	18 (42%)	22 (53%)	2 (5%)
Drought in Pakistan ND(D)	5 (3%)	0 (0%)	5 (100%)	0 (0%)
Total	200 (100%)	107 (53%)	90 (45%)	3 (2%)

The table above displays the frequency of photographs published in the daily newspaper Jang from 2010 to 2019, covering all five topics. Based on the table results, over a span of 10 years, the daily newspaper Jang published a total of 200 photographs related to various issues. Out of these, 107 photographs (53%) supported the suggested stance, 90 photographs (45%) were critical of Pakistani policies, and only 3 photographs (2%) were published as expressions of appreciation. During the ten-year period from 2010 to 2109, the daily Jang predominantly featured images in the category of ideas aimed at resolving various difficulties.

Table 6: Comparison of Photographs' treatment of The Nation, The News Nawa-i-Waqt and Jang on the Issues of Climate change in Pakistan 2010-2019.

Newspapers	Total Photographs	Suggestive	Critics	Appreciative
The Nation	380	226 (60%)	145 (38%)	9 (2%)
The News	345	197 (57%)	138 (40%)	10 (3%)
Nawa-i-Waqt	510	244 (48%)	262 (51%)	4 (1%)
Jung	200	107 (53%)	90 (45%)	3 (2%)
Total	1435	774 (54%)	635 (44%)	26 (2%)

The frequency distribution above illustrates the different ways in which four newspapers (The Nation, The News, Nawa-i-Waqt, and Jang) covered the topic of climate change in Pakistan from January 1, 2010, to December 31, 2019. This comparative research reveals that all four newspapers (The Nation, The News, Nawa-i-Waqt, and Jang) published images. The percentages of photographs published by each newspaper are as follows: The Nation - 380 (100%), The News - 345 (100%), Nawa-i-Waqt - 510 (100%), and Jang - 200 (100%). Based on the findings, Nawa-i-Waqt included a total of 244 images, which accounted for 48% of the total, in the category of proposing solutions to address the problem of climate change in Pakistan. Nawa-i-Waqt demonstrated a more prominent role by publishing a greater number of images, suggesting a higher level of effectiveness compared to the other three newspapers. However, the newspaper Nawa-i-Waqt also published 262 (51%) images that were biased towards criticizing the inadequate planning and mismanagement of the Government of Pakistan about the issue of climate change in Pakistan. The analysis table demonstrates that Nawa-i-Waqt published a greater number of images with a critical perspective compared to the other three newspapers (The Nation, The News, and Jang). Based on the findings, The News published 10 photographs, which accounted for 3% of the total, with a bias towards appreciation. During a 10-year period, The News published a greater number of images compared to The Nation, Nawa-e-Waqt, and daily Jang, indicating a more receptive stance. The findings indicate that

the four chosen newspapers collectively featured a total of 1435 photographs (100%) related to climate change in Pakistan. Out of these, 774 (54%) were categorized as suggestions, 635 (44%) conveyed criticism towards the poor management of Pakistani issues, and 26 (2%) were written from an appreciative standpoint. Therefore, the analysis of the photographic coverage in all four newspapers about climate change in Pakistan revealed that it was suggestive. This indicates that Pakistani newspapers played a crucial part in addressing the issues.

Findings

Research Questions#1: What is the cumulative coverage provided by the four newspapers on all study topics?

The researchers analysed all the images and determined that a total of 1435 photographs on research issues CC/GW, W/D, A/F, ND(F) & ND (D) were published by the four newspapers between 2010 and 2019. Out of a total of 1435 images, Daily The Nation published 380, Daily The News published 345, Daily Nawa-i-Waqt published 510, and Daily Jang published 200 photographs over a 10-year research period. Furthermore, the findings indicate that Daily Nawa-i-Waqt published a greater number of images than the other three publications from 2010 to 2019. Furthermore, the findings suggest that Daily Jang has published fewer images related to all research topics.

Research Questions#2: What is the cumulative amount of coverage provided by all four newspapers on research concerns during the designated time period?

After analysing the data, the researchers found that a total of 1435 images related to research topics CC/GW, W/D, A/F, ND (F), and ND (D) were published by all four publications between 2010 and 2019. Out of a total of 1435 images, 774 (54%) are slanted in a suggestive manner, 635 (44%) are framed with a critical approach, and 26 (2%) are slanted in an admiring manner.

Research Questions#3: What are the similarities and differences among the newspapers Daily The Nation, Daily The News, Daily Nawa-i-Waqt, and Daily Jang regarding their coverage of climate change?

Upon analysing photographs from four newspapers - Daily The Nation, Daily The News, Daily Nawa-i-Waqt, and Daily Jang - focusing on five specific issues of climate change in Pakistan between 2010 and 2019, the findings reveal that all four newspapers exhibit a significant inclination towards providing solutions for these climate change issues in Pakistan, with more than 50% of their photographs displaying suggestive behavior. There is compelling evidence that newspapers play a significant and positive role in addressing the issue. The study findings indicate that less than 40% of the editorials published in all media adopted a critical stance towards the subject of poor management of climate change in Pakistan. The researcher also discovered that all four newspapers allocated less than 5% of their publication to the perspective of appreciation. Additionally, it is worth noting that all four newspapers prioritized coverage of climate change/global warming, weather/disasters, and natural disasters (floods) in their photographic publications. Conversely, there was a lower emphasis on the categories of arts/fashion and natural disasters (droughts) in all newspapers' photographic publications. Furthermore, the findings indicate that Daily The Nation and Daily Nawa-i-Waqt newspapers had a higher number of published images compared to Daily The News and Daily Jang newspapers between 2010 and 2019. During the research period from 2010 to 2017, it was observed that the Daily The Nation and Daily Nawa-i-Waqt group provided greater coverage on the subject of W/D (water scarcity and drought), while the Daily The News focused more on the CC/GW (climate change/global warming) category. The Daily Jang placed more emphasis on the research issue ND(F) (not defined/mentioned) during this time. However, a significant disparity is observed in the extent of attention and priority given to the problem by Daily Nawa-i-Waqt, highlighting its value in comparison to the other three publications.

Furthermore, it specifies that Daily Jang has published a smaller number of photographs regarding to 5 specific research topics.

Conclusion

The study's findings indicate a discernible pattern and demonstrate the beneficial impact of newspapers in reporting on climate change in Pakistan. Climate change was not regarded as a significant and authentic concern at management levels until the country began to witness frequent occurrences of global warming, water scarcity, and natural disasters such as floods and droughts. This study also investigated the function of Pakistani newspapers in the context of natural calamities. Extensive research has examined the influential and beneficial impact of print media in various elements of disaster management, specifically in relation to floods and droughts. The primary function of newspapers is to educate victims and potential victims about their rehabilitation process. Additionally, newspapers have a crucial role in influencing and encouraging disaster management efforts, which in turn attract support from national and international donors. These successes highlight the remarkable capabilities of print media. The Pakistani economy and well-being of its people have been consistently ravaged by climate change, manifesting in the form of floods and droughts. Pakistan is experiencing severe water scarcity due to climate change, which has significant implications for the agriculture and food industries. Now, it is imperative to construct dams to address the water scarcity issues in Pakistan. Pakistani print media, particularly Daily Nation and Daily Nawa-i-Waqt, frequently include several images addressing the topic of water scarcity and the necessity of constructing dams in Pakistan. These recent climate disasters have heightened the need for effective planning and implementation of solutions in advance to mitigate their impact. The publication of climate change issues in print media has led to a greater awareness among policy makers now compared to the past. These newspaper studies have offered governments a roadmap for achieving tangible economic progress in Pakistan by prioritizing agriculture and food security, as well as improving water management and enhancing dam infrastructure. This study also examines the role of the press in increasing public awareness and establishing connections between climate change issues and socioeconomic problems, which in turn have an impact on the broader economy. Another significant contribution of this study is its enhancement of local media networks and improvement of media relations in the region regarding climate change reporting and coverage. This study also has value in enhancing public understanding and perception of climate change through the attention of the Pakistani major print media. This is due to the extensive media coverage and attention given to these concerns. It will also act as a source of inspiration for the people to develop greater awareness and attentiveness.

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