
Flashes of Invisibility: Analyzing Gaps in Lightning Incident Coverage in Indian Media

Sraya Banerjee¹ and Dr. Bandita Kumari Panda²

¹Research Scholar, ²Associate Professor

Dept. of Journalism & Mass Communication, Berhampur University, Odisha

Abstract: This study, “Flashes of Invisibility: Analyzing Gaps in Lightning Incident Coverage in Indian Media,” has identified some critical gaps in the reporting of lightning strikes by the media from news articles. This content analysis by using keywords “Lightning,” “Electrified (or struck by lightning),” and “Lightning strike” in Bengali shows that media headlines more often than not feature human-interest stories, almost as if the significance of lightning as a direct cause of death was of secondary importance. The saturation with stock photos and the scarcity of follow-up reports further reduce the chance of raising public awareness on the safety procedures involved. This research focusses on government measures or preventative steps that will reduce the number of deaths, therefore losing out on the majority of possibilities to educate and protect vulnerable people. The geographic bias in media reporting on the disaster also came out in this study, as some places were emphasized more than others. That is why more adequate and proactive reporting procedures were actually called for by these results. Highlighting an information distribution for prevention, display of actual photographs of happenings, and continuous coverage—most especially in rural areas where lightning strikes most frequently. This would really boost public awareness and may just save some lives. On top of teaching societies about the dangers it is facing, this will arm them with the knowledge to reduce the dangers presented by stormy weather.

Keywords: Lightning strikes, Indian media, media coverage gaps, public awareness, content analysis

OVERVIEW: Lightning strikes are leaving a heavy footprint on the communities, literally brightening up the sky for but a twinkling of an eye, as newspapers have taken to chronicling the perils of lightning strikes, the amount of damage they are causing, and stories of those affected by these freak accidents, creating safety warnings of news articles enlightening people about the power and unpredictability of this natural phenomenon. While lightning strikes all across the country, the most vulnerable regions occur in the Southeastern states. According to the National Center for Environmental Health (NCEH), Agency for Toxic Substances and Disease Registry (ATSDR), and National Centre for Injury Prevention and Control (NCIPC), states with lightning-related deaths and injuries include the following: Florida, Texas, Colorado, North Carolina, Alabama, Arizona, Georgia, New Jersey, and Pennsylvania. This most likely reflects an upsurge of extreme weather conditions and appears to go in tandem with the increased rate at which lightning strikes are recorded owing to the steady increase in global temperatures.

Scientists are sounding the alarm over unpredicted lightning activity as it has become a significant threat in India, Das (2023) reported, indicating that India is marking a 60% increase in cloud-to-ground lightning by reaching more than 20 million lightning strikes in 2022–23. With 68 people already dead, having lost their lives in different weather events, and 60 of them due to lightning strikes, the latest numbers through the IMD in March 2023 are setting a grim picture by Khan (2023). A large number of lightning strikes in West Bengal are thus testified by data from other sources, averaging 11 strikes per square kilometer. It receives 940,958 lightning strikes on the ground in a year, thereby indicating a tremendous frequency of lightning activity. Lightning strikes pose a danger to farmers and their sources of livelihood, leading to injuries and fatalities as well as destruction of property and livestock. It goes without saying that a large chunk of the Indian population remains dependent on agriculture as the primary source of income, and the need to secure the safety of farmers in the face of thunderstorms is turning out to be a growing concern. It is through the dissemination of information into rural areas that newspapers have filled the gap so far, reported lightning strike occurrences, and thereby made an immense difference in farmer awareness and preparedness.

OBJECTIVES:

- To evaluate how often lightning-related incidents, particularly deaths, are reported by Indian media.
- To assess whether certain regions (like West Bengal) or vulnerable communities (e.g., farmers) are overrepresented or underrepresented in lightning incident reports.
- To investigate the extent to which media reports on lightning deaths are accompanied by awareness or preventive campaigns aimed at educating the public on lightning safety.
- To identify and address reporting gaps in media coverage of lightning incidents.

LITERATURE REVIEW:

The cases and casualties occurring due to lightning strikes in various states are mainly geographically distributed in the central Indian states, like Madhya Pradesh, Maharashtra, and Odisha, which results in maximum deaths caused. In this regard, media attention for such regions is found to be less; this indicates a notable lack of awareness among the public (Yadava et al., 2020). Most of the farmers are from rural areas, which is a part of the most vulnerable group. Only a few safety measures and preventive mechanisms for lightning strikes have been undertaken at this rural and agricultural location (Selvi & Rajapandian, 2016). There is also a lack of quick and collective communication regarding the dangers in rural areas that have made them more vulnerable. Disaster management, in the past years, has emerged as one of the most vital integration tools that offer new opportunities to enhance communication, coordination, and response efforts to disasters. With real-time inputs in Twitter, Facebook, and Instagram, this aspect is instrumental in improving input for emergency response efforts as well as predictive modeling (Lam et al., 2023). In other words, these platforms do not only communicate information but also contribute to the process of linking concerned communities with emergency handlers, thus making disaster information dissemination fast and effective at the time of disaster incidents (Mavrodieva & Shaw, 2021).

Studies regarding the role media play in disaster management acknowledged that those media platforms have several benefits, above all, speed, reach, and public participation. For instance, one can post disaster-specific localized information on social media, which can benefit informing responses and rehabilitation practice (Fauzi, 2023). Yet, the use of social media is not without challenge. Challenges such as the spread of misinformation, limited accessibility in secluded areas, and dependence on digital literacy complicate their efficiency, particularly in rural disaster-prone areas (Mavrodieva & Shaw, 2021).

METHODOLOGY:

The methodology for this study involves conducting a content analysis of lightning news articles published on the Anandabazar Patrika Online website (www.anandabazar.com) throughout the year 2023. This approach will focus on identifying and categorizing articles related to lightning incidents. The study is **purposively gathering** articles Using keywords “Lightning,” “Electrified (or struck by lightning)” and “Lightning strike” in Bengali, relevant articles will be gathered. A coding scheme will be developed to assess the frequency and depth of coverage, awareness, regional focus, and Graphical Info, keywords In Headline (Except Lightning) that may contribute to gaps in public awareness. Both quantitative and qualitative analyses will be conducted to interpret the data, allowing for a comprehensive understanding of how media coverage influences public perception and awareness of these critical issues.

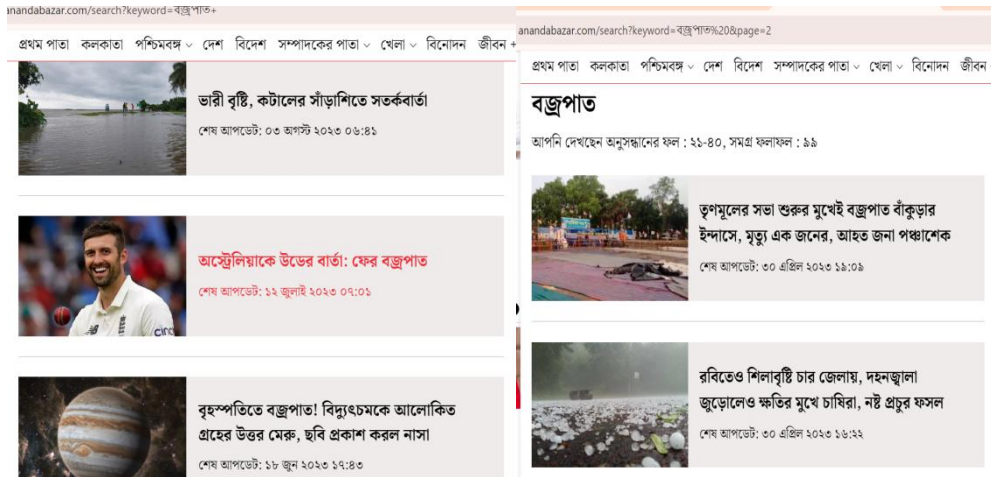
CONTENT ANALYSIS:

Keywords: “Lightning” “Electrified (or struck by lightning)” “Lightning strike” in Bengali.

Source: Anandabazar Patrika Online website (www.anandabazar.com)

SL No.	Date	Place	Content	Awareness	Graphical Info	Follow Up (Yes/No)	Keywords In Headline (Except Lightning)
1	12 Feb	Indonesia	Footballer Death	No	Stock Photo	No	Footballer Death
2	12 Mar	Brazil	General	Yes	Illustration	No	Raining Meteorological department
3	15 Mar	Kolkata	Awareness	Yes	Illustration	No	Raining, Meteorological department
4	29 Mar	Nituria	Damage to the Temple	No	Incident Photo	No	Pancharatna Temple
5	19 April	Kolkata	Awareness	Yes	Illustration	No	Raining
6	20 April	Kashmir	Army Death	No	Incident Photo	Yes	Vehicle Fire

7	20 April	Kashmir	Follow-up of Army Death (20 march)	No	Incident Photo	No	Terror Attack
8	24 April	New Delhi	Photography	No	Stock Photo	No	Scenic
9	26 April	North Kashi	Death Of Animal	No	Stock Photo	No	Death, Animal
10	27 Apr	Medinipur, Murshabad, Bardhaman	Farmer Death	No	Stock Photo	No	Farmer, Death
11	27 April	West Bengal	General Death List	Yes	Stock Photo	No	Awareness, West Bengal, death
12	30 April	Bankura	Tmc Meet Death	No	Incident Photo	No	Tmc, Death, Wb Govt.
13	30 April	Mathurapur	Farmer Death	No	Stock Photo	No	Farmer, Death
14	22 May	Kolkata	General Story	Yes	Stock Photo	No	Awareness, weather report
15	25 May	Kolkata	General Story	Yes	Illustration	No	Awareness, weather report
16	28 May	Jharkhand	Death	No	Stock Photo	No	Report
17	9 June	Kolkata	Death	No	Stock Photo	Yes	Death, school student
18	11 June	Kolkata	Follow up of 9 th june	Yes	Stock Photo	No	Awareness, weather report
19	16 June	Hoogly	Farmer Death	No	Stock Photo	No	Farmer, Death
20	18 June	Newyork	General story,	No	Stock Photo	No	Jupiter Lightening, NASA
21	21 June	Malda, Bardhaman	Death	No	Stock Photo	No	Death
22	24 June	Kolkata	General	Yes	Stock Photo	No	Awareness, weather report
23	26 June	Rajasthan	Death	No	Stock Photo	No	Death
24	30 June	West Medinipur, Jhargram	Farmer Death	No	Stock Photo	No	Farmer, Death
25	3 Aug	Tamluk	Death	Yes	Stock Photo	No	Death
26	22 Dec	Venezuela	General story	No	Stock Photo	No	Catatumbo Lightning Venezuela



*Screenshots of Anandabazar Patrika Online website (www.anandabazar.com) related lightning news.

1. BREAKDOWN AND EXPLANATION:

Date:

The period ranges from 12th February to 22th December. The dates allow placing the seasons or the weather conditions prevalent during those times that the activities occurred.

Reasoning: Deaths such as lightning deaths may follow a pattern associated with seasonal variations. For instance, March to June related deaths may be related to pre-monsoon and monsoon weather in India and maybe different for February or November.

Place

These places vary from international locations such as Indonesia, Brazil, Newyork, Venezuela to domestic locations located within India, especially within Kolkata, New Delhi, and West Bengal districts like Bankura, Medinipur, etc.

Reasoning: Location gives an insight into the regional presence of some of these events. For example, West Bengal appears quite often, probably indicating a high incidence of the event shown to have occurred within that state. Geographical references help the readers relate to the severity or frequency of such incidents.

Content:

The content falls primarily in:

- Deaths: Several of them talk of deaths; for instance, "Footballer Death," "Farmer Death," or "General Death List."
- Awareness Stories: These are general awareness columns like weather reports or any general information.
- Specific Incidents: Some are specific occasions, like "Photography" or "TMC Meet Death," which show that there has been a special occasion or accident.
- Two follow-up stories.

Reasoning: The type of content tells us what the story is about. Deaths, in particular repeated "Farmer Death," suggest a significant impact on a vulnerable population-farmers-and also points to likely cause being weather-related. Deaths v. general awareness stories also tell us how the media weighs it's imperative to report serious news against the need to share public information.

Awareness (Yes/No):

- Yes: It suggests that the article was for information awareness, probably weather conditions or general preventive information.
- No: 17 of the 26 entries are not awareness-driven entries but report events for reasons without an educational purpose.

Reasoning: Why the content is aware has a tendency to center on preventive and preparation ideas, such as the weather reports, but the unaware just reports what is happening. For instance, tales of deaths among farmers are normally unrelated to certain preventive measures, which might reflect how such deaths were treated as more of isolated cases rather than part of the wrong system.

Graphic Details

- Stock Photo: Appears in 19 references, denoting that the use of generic images instead of event-specific pictures.
- Illustration: 04 entries in each of these, illustrations add to explaining the information more vividly or descriptively.
- Photo of Incident: Only 04 entries featured a photo from the actual event.

Reasoning: The liberal usage of stock photos says much about the reporting: the reporting itself might emphasize more on text than visual documentation of the event itself. Stock photos are commonly available in cases where specific photos are not available or not required, which could indicate that the press reports these incidents as routine. Or, sketches or cartoons are likely to be used for awareness stories because, most of the time, they can illustrate better a scenario or a preventive measure than an ordinary stock photo.

Follow-up (Yes/No):

- Yes: Indicates that such follow-up report or research took place after the first story.
- No: Follow-up in only about half of the stories (24 out of 26)

Explanation: Absence of follow-up suggests that incidents are not of news value beyond the first report. Perhaps no other significant development occurred after the first occurrence. Existence of follow-ups shows significance at least up to, more than the first instance of the occurrence and maybe because the event was serious or whatever reason.

Keywords in Headline (Except Lightning):

- Frequent Terms: The terms in the headlines refer to death-mostly referring to death, whether the farmer, school student, or general death.
- Exclusion of "Lightning": Even though so many deaths might have resulted from lightning (inferred by the note to exclude the term), the headlines are interested in the aspect of human loss rather than cause.

This neglect could be used to focus on the emotional and personal aspects of the tragedies rather than the meteorological event itself. A good number of media houses write sensational headlines to grab a larger audience and readership. For instance, instead of saying "Farmer Death from Lightning Strike," writing it as "Farmer Death" gives more attention to the loss of one person which might increase readership but leaves out the cause of death.

Summary of Patterns:

- This data makes a point regarding an enormous level of deaths that have been involved. This shows that many of the incidents reported relate to deaths, particularly the death of farmers. The pattern is one of recurring nature that points towards a greater concern that might be linked to environmental factors related to weather, though there are no reasons why those deaths, for instance, lightning strikes occurred is not the focus of the concern.
- Events are showing seasonal and regional patterns, focusing geographically on West Bengal with concentration in the pre-monsoon and monsoon months, from March to June. This concentration is indicating a connection to weather conditions, especially thunderstorms and lightning, which hints at the inextricable influence of natural elements.
- Perhaps because of some reliance on generic photos and the lack of any real follow-up stories, the media is suggesting that the rarity at which these events occur is being overlooked. This again speaks to the problem of coverage in media, but this pattern may actually portend media exhaustion or the mundane routine of these stories.
- Lightning is considered one of the greatest causes, yet the media focuses on the victims of the disaster rather than the disaster itself to create a headline. In this manner, they ensure the human element is not too far from the headlines.

3. Drawbacks:

The data table reveals quite many notable drawbacks in presenting an in-depth overview of various events. The effectiveness of media reporting reduces significantly compared to what is anticipated:

- Noting Specific Causes in Headlines:* Most headlines do not indicate lightning as the cause. Instead, they point to the victims, such as "Farmer Death." This means fewer people know the danger and have fewer opportunities to make safety precautions known.
- Excessive Use of Stock Photos:* Stories become somewhat monotonous and lose their emotional and visual value if they don't have a particular photo that makes news reading monotonous and adds to news fatigue.
- Limited Follow-Up:* Where there are no follow-up articles, most of the serious questions remain unanswered, such as what steps were taken afterward from such incidents or what steps did the concerned communities take after receiving this news. It lessens responsibility and gives the reports a sense of incompleteness.
- Limited Geographical Reach:* The other region that is also prone to lightning strikes are not covered and instead only West Bengal and other local areas are targeted. This regionalism mars the geographical reach of media regarding the issue as a national concern.
- Lack of Preventive Information:* An important opportunity for public education is missed when reports do not include preventive actions or lightning safety advice. This undermines the ability of the media to prevent further deaths in the future.
- The news is sacrificed on public understanding of the risks, and an opportunity to promote preventative measures that may save lives is lost because "lightning" rarely appears in the media headlines.

- The articles of the news are also lost in their heavy dependence on stock photos, as this again makes them seem lifeless, thus adding into news fatigue.
- In most cases, nothing is done after the incidents occur that means that the viewers are left with less than enough information to explain why systemic issues occur such as agricultural hardship because of farmer deaths.

Media powers to effect change and force institutions accountable are hamstrung by failing to pin down awareness efforts or link fatalities to any great social or institutional shortcomings. Further, the bias of geography downplays the scope of the issue because the issues are not considered and deliberated upon what is happening in other places as well that are similarly vulnerable; rather, focus is mainly kept on West Bengal and a few more places. Generalized, in the absence of fresh perspectives, thorough research, and knowledge of public security, the potential of the media to build and sustain momentum for radical changes becomes diluted.

CONCLUSION:

On concluding the analysis, the breakdown points out several critical patterns in the reporting of incidents, mostly weather-related deaths, but which often go grossly under-emphasized in the headlines. By focusing on human-interest stories, the media is omitting specific causes like lightning and thereby diluting the chances of raising awareness over preventive measures. The organization of news will undermine the story with the overutilization of stock photos and the lack of follow-up reporting to give articles a cliché and shallow feel. Moreover, highlighting only regional bias and focusing more on the broad systemic factors, such as agricultural distress or changing weather conditions, lacks the ability to present a holistic outlook of the broader issues. More importantly, media organizations should focus on deeper investigation; allow clear connections of events to causes and more news coverage for follow-up reporting purposes in assessing long-term impacts and preventions in order to play the most effective role of reporting. Satisfying public interest better or creating real change may even become possible through information dissemination and holding accountable institutions for the solution of systemic issues. The reports shall become much more effective and solution-focused, enhancing the reader's engagement by incorporating real-life imagery and greater regional diversity of tales.

RECOMMENDATIONS:

Here are some tailored recommendations to improve media reporting on lightning-related incidents:

- *Causes in headlines:* Whenever death or injury is attributed to lightning, news sources should indicate this in the headline. That brings readers closer to discussing relevant safety precautions and increases public awareness of potential dangers of lightning.
- *Use event-related visuals:* Infographics and event-related photographs will give a flavorful element to reports by making them effective emotionally, rather than using regular stock photos. Personalized visuals that give lightning safety advice or affected areas would hold the point more strongly and the story better in memory.
- *Promote public safety campaigns:* Lightning-related death reporting in news should always include prevention and protective measures. The safety advice campaigns on lightning organized by media companies in collaboration with NGOs or government agencies would enhance the utility of such reports.

- *Greater geographical relevance:* Media must strive for broader geographic coverage and cover lightning events occurring outside the West Bengal region. That would consequently deal with issues on a national level and would hold regions equally at risk to receive the attention needed for prompt response.
- *Consider the consequences after disaster:* The impacts of the disaster must be further probed in detail to show how affected communities readjust themselves and the measures undertaken towards such tragedy to be avoided in the future. This would keep the accountability process open and propagate continuous public discourse over whether the preventive measures are effective or not.
- *Contextual reports:* Journalists might research seasonal trends of lightning strikes and connect with climatic factors or social vulnerabilities, like say, farmers working in exposed conditions and thereby improve the risk understanding for readers and nudging the system to induce systemic solutions.

REFERENCES:

- Bubalo, M. (2023, October 12). Lightning and hailstorms kill 24 in western India. BBC News. <https://www.bbc.com/news/world-asia-india-67543528.amp>
- Choubey, J. (2023, September 11). Climate change: Cases of lightning strikes across India up 53 percent in four years. <https://www.newindianexpress.com/nation/2023/aug/30/climate-change-cases-of-lightning-strikes-across-india-up-53-per-cent-in-four-years-2609956.html>
- Das, P. (2023, August 29). Madhya Pradesh emerges as India's lightning hub: Report. Mint. https://www.livemint.com/news/india/madhya-pradesh-emerges-as-india-s-lightning-hub-report-11693248802593.html#google_vignette
- Khan, N. (2023, July 28). Lightning deaths increase in India as compared to 2022. India Spend. <https://www.indiaspend.com/data-viz/lightning-deaths-increase-in-india-as-compared-to-2022-870988>
- Selvi, S., & Rajapandian, S. (2016). Analysis of lightning hazards in India. *International Journal of Disaster Risk Reduction*, 19, 22-24.
- Yadava, P. K., Soni, M., Verma, S., Kumar, H., Sharma, A., & Payra, S. (2020). The major lightning regions and associated casualties over India. *Natural hazards*, 101, 217-229.
- Houston, J. B., Hawthorne, J., Perreault, M. F., Park, E. H., Goldstein Hode, M., Halliwell, M. R., & Griffith, S. A. (2015). Social media and disasters: a functional framework for social media use in disaster planning, response, and research. *Disasters*, 39(1), 1-22.
- Alexander, D. E. (2014). Social media in disaster risk reduction and crisis management. *Science and engineering ethics*, 20, 717-733.
- Tierney, K., Bevc, C., & Kuligowski, E. (2006). Metaphors matter: Disaster myths, media frames, and their consequences in Hurricane Katrina. *The annals of the American academy of political and social science*, 604(1), 57-81.
- Mavrodieva, A. V., & Shaw, R. (2021). Social media in disaster management. *Media and Disaster Risk Reduction: Advances, Challenges and Potentials*, 55-73.
- Fauzi, M. A. (2023). Social media in disaster management: review of the literature and future trends through bibliometric analysis. *Natural Hazards*, 118(2), 953-975.