Research Article

Newspaper Coverage of Healthcare: A Content Analysis of English and Hindi Dailies in Gurugram, India

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ABSTRACT

Aim: Health is a critical component of an individual's existence. In recent years, there has been an increased recognition of its severity. It has been steadily accepted that individuals with higher health information are better capable of making informed decisions regarding their health. The media has established a precedent in its reporting of COVID-19. The unique nature of the situation has played a vital role in persuading individuals to confront and address the pandemic. Nevertheless, some diseases are widespread and considerably harm the population. However, multiple studies have repeatedly demonstrated that individuals have a significant deficit in their capacity to manage this issue efficiently. Media, particularly newspapers, can fulfill a critical duty in distributing information regarding numerous health concerns to the larger population.

Methods: The paper conducted a content analysis of healthcare-related news published in four dailies, namely 'Times of India,' 'Hindustan Times', 'Dainik Jagran' and 'Navbharat Times'. Five hundred seven (507) news reports on health were collected and analyzed by subscribing to these four papers over six months, from August 2022 to January 2023.

Results: The coders recognized eleven categories for news report categorization: awareness campaign, disease prevention, disease diagnosis, disease outbreak, disease symptoms, disease treatment, COVID-related news, death update, vaccine update, expert views and government health scheme. Under this, COVID-related news, including the case upload, was 29.39%, whereas prevention was 1.78%, diagnosis was 1.97%, and treatment was 4.93%.

Conclusion: The research would provide insights into national daily trends in reporting on healthcare issues. The extent of coverage has become restricted. Furthermore, there is a persistent focus on updates of COVID-19, while other health concerns are not adequately prioritized.

INTRODUCTION

The mass media persist in maintaining their position as one of the primary information providers for the general population. They possess the ability to bring a change in people's attitudes towards health-related matters (Robinson *et al.*, 2013).

Health is an integral part of an individual's life. However, it remains latent for the dominant period, and mostly one's interest in knowing about the subject hits after getting stuck, or else the matter is poignantly sidelined. It's a generalized fact that for a commoner, reading or studying about health is not done keenly; in fact it is more of a subject to be taught. Herein, media plays an essential role because knowing about healthcare is not returning to the curriculum; awareness and information are utterly needed to live a disease-free life.

The mass media, encompassing many forms such as print, television, radio, and the internet, have an unprecedented capacity for communication. The ability to establish agendas, determine the topics of concern and action, and shape the perception of issues of how they are conceptualized, is a source of stimulus.

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Mass media can engage with huge audiences and significantly affect the general public's information, beliefs, perceptions, attitudes, and behaviors. This is because the mass media can reach so many people. The media can affect various aspects of an individual's life, including physical and mental abilities. Utilizing this potential, the mass media can effectively contribute to public health by disseminating information, fostering motivation, empowering individuals to modify their behaviors, and serving as a platform for promoting better policies and encouraging civic engagement. These are just some ways the mass media can make a difference (Maryon-Davis, 2012).

The utilization of mass media as a medium for conveying preventative health messages has gained increasing popularity, as evidenced by proven research findings. (Redman *et al.*, 1990). The dissemination of health-related information through mass media can influence the utilization of health services, whether through intentional promotional initiatives or unintentional media coverage (Grilli *et al.*, 2002).

Further, an alternative perspective has also been examined by researchers, suggesting that the mainstream media lacks comprehensive coverage of hardcore health-related matters.

The presence of awareness is one of the most critical factors in the prevention, early detection, and targeted therapy of many disorders, which ultimately contributes to the efficacy of treatment interventions. Individuals' inclination to engage in preventative actions, such as obtaining screenings, testing, and regular check-ups, is increased when they have a greater level of awareness about a disease and the symptoms that are connected with it. To achieve optimal health results, one of the significant obstacles that must be overcome is having an insufficient understanding of diseases or a restricted awareness regarding available screening and treatment options. The difference between life and death is frequently conditional on several different conditions, particularly when considering a disease like Cancer as an example *(Roche | Increasing Disease Awareness to Improve Access to Healthcare, n.d.).*

This study aims to analyze the newspaper coverage of healthcare-related news in two English and two Hindi National dailies. To find out that the newspapers are informing the population about disease awareness, prevention, diagnosis and accessible treatment of prevalent health issues that contribute to the nation's disease burden.

There is a lack of research conducted in Gurugram about the significance of newspapers on individual health. Therefore, this study aimed to ascertain the extent of coverage and categorize the healthcare-related articles published in nationally circulated newspapers in Gurugram.

There is a significant dearth of scholarly research examining the extent and substance of health-related news reports in national newspapers (Gupta & Sinha, 2010). However, the available research has indicated a primary emphasis on COVID-related news only through other health issues.

Objective

- To explore total coverage and prominence given to the stories related to healthcare by selected Indian English and Hindi dailies of Gurgaon
- To explore news reports on disease awareness, prevention, diagnosis and accessible treatment published by selected Indian English and Hindi dailies of Gurgaon

Literature Review

Communication is a multifaceted process that extends beyond the mere repeating of messages. It encompasses the creation of a conducive atmosphere that fosters community engagement and promotes humanity's shared ideals and principles (Ratzan, 2001). Communication plays a significant role in addressing society's increasingly intricate health concerns. The process of changing individuals' knowledge, attitudes, and behaviors can empower them to make informed decisions that contribute to preserving and enhancing their health and overall well-being. Communication is one of the foundations of healthcare. Ineffective communication may result in insufficient health literacy (HL) and poor health (Lopes & Araújo, 2017).

HL has garnered significant interest from academics and policymakers due to its association with crucial factors like health determinants, health outcomes, and health behavior. Inadequate HL is a substantial concern in global health (Özkan *et al.*, 2021). The media plays a significant role in shaping a crucial information resource of HL on both individual and public scales (Saei *et al.*, 2021).

Newspapers as a mass media medium serve a substantial function in the realm of health communication by providing individuals access to a diverse range of health-related information, including information on disease symptoms, risk factors, accessible treatments, and advice for behaviors that promote health (Teixeira *et al.*, 2012). This gives the foundation for the researcher to carry out the content analysis of newspaper coverage of healthcare. Secondly, as per the Kantar Study performed in 2020, print media remained the most trusted outlet for providing credible and trustworthy news. Across the world, newspapers rated the highest in the media category, with 37% of individuals stating they had convictions in print (Power, 2020).

In the study titled 'A content analysis of newspaper coverage of COVID-19 pandemic for developing a pandemic management framework', the researchers established that newspapers have been crucial in providing coverage of the

COVID-19 pandemic since its inception. The study aimed to construct a comprehensive framework for managing pandemics by utilizing automated content analysis of COVID-19 pandemic coverage in local newspapers in Bangladesh. A total of 7,209 newspaper articles were collected and analyzed. These articles were sourced from three prominent local newspapers, namely "bdnews24. com," "New Age," and "Prothom Alo English." The analysis encompassed the period from January 1, 2020, to October 31, 2020. Further, twelve primary areas of focus: the origins and initial spread of COVID-19, the healthcare system's response to the pandemic, the economic repercussions, the impact on individuals' lifestyles, governmental support during the crisis, the provision of regular updates, expert perspectives, pharmaceutical interventions, non-pharmaceutical interventions, updates on vaccine development, testing infrastructure, and any unique local activities occurring within the system were recognized. The study offered valuable insights into the sequential response to biological hazards and contributed novel strategies to mitigate future outbreaks (Zafri *et al.*, 2021).

In the study' Newspaper coverage of maternal health in Bangladesh, Rwanda and South Africa: a quantitative and qualitative content analysis'- researchers analyzed the primary English-language newspapers in three countries: The Daily Star in Bangladesh, The New Times/The Sunday Times in Rwanda, and Sunday Times/The Times in South Africa. A content analysis was performed on a subset of 190 articles that were published between October 1, 2010 and March 31, 2013, of articles that advocated for or brought attention to maternal health. Within the scope of this study, encompassing three distinct nations that exhibit varying trajectories towards achieving Millennium Development Goal 5 (MDG 5), discernible disparities emerged in terms of the frequency, tone, and substance characterizing their respective newspaper coverage pertaining to maternal health. Nonetheless, it is essential to note that no definitive causal inferences can be made regarding the relationship between advancements in achieving Millennium Development Goal 5 and the quantity and nature of media attention dedicated to maternal health (Gugsa *et al.*, 2016).

Another study titled 'The media and access issues: a content analysis of Canadian newspaper coverage of health policy decisions' revealed that news coverage frequently prioritizes and amplifies specific elements of prominent health topics. The researcher's hypothesis posits that the media would predominantly exhibit a sympathetic stance towards patients within Canadian media coverage about access to healthcare, explicitly concerning therapies and technologies for rare diseases. A content analysis was performed on 530 news stories about health medicines and technology availability. These articles were sourced from 15 prominent Canadian newspapers and spanned 10 years. The analysis focused on the perspectives and arguments offered in the stories, specifically examining the reasons and justifications put forward in support of or in opposition to the access issue depicted in the news pieces. The research revealed that the news media coverage exhibited a predominantly supportive stance towards the augmentation of healthcare funding and the facilitation of healthcare accessibility, accounting for 77.4% of the range. The prevalence of rare diseases and the availability of orphan medications were the primary concerns raised, accounting for 22.6% of the topics discussed. Most articles, namely 96.8%, focused on enhancing access to healthcare (Rachul & Caulfield, 2015).

Content analysis is a widely utilized research methodology, notably prevalent in communication and behavioral sciences, where it serves as a predominantly quantitative research instrument. In recent times, researchers in the field of health education have utilized this approach to analyze the prevalence and characteristics of media coverage and instructional materials pertaining to health issues. Additionally, they have delved into underlying themes and more nuanced aspects of these materials (Nandy and Sarvela, 1997).

Theoretical Framework

This study is based on the agenda-setting theory of mass communication. Agenda-setting refers to the systematic practice employed by mass media outlets wherein specific concerns are consistently and prominently presented to the public. This leads to a heightened perception of their importance relative to other issues among significant portions of the population. In essence, the level of importance attributed to a topic is directly proportional to the extent of its media coverage. The theory of agenda setting has demonstrated its extensive and profound nature, exhibiting applicability beyond the conventional lifespan of 30 years, which is typically considered indicative of a valuable theoretical framework. This notion is commonly called the "most worthy pursuit" of mass communication theory (Wahl-Jorgensen, 2009).

The concept of agenda-setting posits that the media directly influences their audiences, although this influence may not be instantaneous. However, it is essential to note that the specified force pertains not to individuals' attitudes but their cognitions (Shaw, 1979).

Further, according to the metaphorical language employed in this theory, the media's agenda plays a significant role in shaping the public agenda (Reese *et al.*, 2001).

Methods

Location of the Research Study

The district of Gurgaon was chosen for the convenience of its knowledge about the area. The district is the state's industrial and financial hub and one of the worst affected by air pollution, making people susceptible to acute respiratory infections, cardiovascular disease, COPD, lung cancer, and stroke.

Defining the Mass Media Channels

The study examined Gurgaon's four prominent English and Hindi newspapers.

Selection of a Sample (Newspapers)

Newspapers from Gurgaon were chosen using newspaper distribution agency data. I picked the city's most circulated newspapers. I emailed the Audit Bureau of Circulation to get all four newspapers' figures (Table 1). Readership reach was computed using the city population. We used the 2011 Gurgaon census data.

The study period lasted for six months, from August 2022 to January 2023. Health news, including healthcare, from 184 newspaper issues was collected, documented, and tabulated. However, healthcare infrastructure news such as hospital bed additions, new ward openings, and doctors strikes were ignored.

Content Analysis

The content analysis of newspapers aims to establish a reliable measure of news and information appearing in newspapers and proportions. The content analysis method includes topic selection, defining the sample, specifying the concepts or units to be counted, constructing categories, collecting the data, creating coding sheets, and assessing the collected data and the count results. In this study, content analysis was carried out on 184 issues in each of the selected newspapers of Gurgaon to investigate the significance of healthcare concerns and the prominence of these issues. A codebook was developed to measure all of these factors. The variables were each coded manually in Microsoft Excel. After that, the analysis was done in frequency and percentage.

Selecting a unit of analysis

In this research study, the smallest element of content analysis was every news report on healthcare published in the newspapers: The Times of India, Hindustan Times, Dainik Jagran, and Navbharat Times.

Frequency of healthcare news coverage

The frequency of coverage is the number of times the healthcare-related news stories are covered or reported in a specific newspaper over a given period. In the course of this study's investigation, each and every healthcare-related news item was tallied to determine the frequency.

Table 1: Circulation Figures of the Selected Newspapers of Gurgaon

English newspapers	Circulation figures	Issues
Times of India	62880	184
Hindustan Times	56931	184
Hindi Newspapers		
Dainik Jagran	35461	184
Navbharat Times	22360	184

Space of Healthcare News coverage

Space was measured to see how much healthcare-related news coverage was given by its length and breadth measured in square cm.

Placement of healthcare news coverage

The placement was classified as front page, inside pages and back page to study the importance of healthcare-related news stories in the four newspapers.

Origin healthcare news coverage

The origin or the source of the news story is the story from any news agency or wire news agency like PTI, Reuters, ANI, etc., or the byline is by the identified correspondent of the newspaper. Or the news story is by any guest writer.

Treatment of Healthcare News Coverage

The news items reported on healthcare were classified into news articles, feature articles, studies, editorials and advertisements.

Category-wise healthcare news coverage

The content method pertains to the categorization of diverse forms of media material. To explore which type of healthcare news is reported in the selected newspapers. Healthcare-related news was classified into the following varied categories-
- Awareness Campaign
- Disease Prevention
- Disease Diagnosis
- Disease Outbreak
- Disease Symptoms
- Disease Treatment
- COVID Related News
- Death Update
- Vaccine Update
- Expert Views
- Government Health Scheme

Data Collection and Coding

Concerning newspaper data collection, the four newspapers were subscribed for six months. Every day, the newspapers were thoroughly read, news reports related to healthcare were cut, and records were maintained in a file. After that, the details of the news reports were entered into the coding sheet, followed by standardized coding, which helped the researcher achieve the research objective. The coding sheets were utilised for the purpose of compiling the data obtained from all four newspapers that were included in the study. The utilization of coding sheets enabled the researcher to gather and organize the data efficiently. The healthcare-related news stories were manually analyzed by a sole coder, a researcher, utilizing coding sheets.

Moreover, a pilot was conducted on the same newspapers and news channels before initiating the actual process of data collection. The idea of running the pilot

was to study many categories of elements and to rule out the possibility of any duplication of news categorization. Also, during the pilot only, it was decided to go through the entire newspaper thoroughly so that no news gets missed.

Intercoder reliability

For the pilot, a sub-sample of 84 healthcare news stories were chosen randomly from the selected news dailies. Two independent coders coded these 84 news stories.

It can be calculated by Holst's (1969) way as below:

C.R. = 2M/N1 + N2

M is the number of coding decisions when two coders agree.

N1 is the coding decisions of the one coder

N2 is the coding decisions of the second coder

The intercoder reliability coefficient ranges from .00 (no agreement) to 1.00 (complete agreement). The intercoder reliability coefficient of .90 or greater is always acceptable, .80 or larger is satisfactory in most cases, and the intercoder reliability coefficient of .70 may be proper in some exploratory studies.

Here in this research study,

C.R. = 2(76)/ (84+84)

=.90

Using Holsti's (1969) formula, a reliability coefficient of .90 was realized, which was very high. Based on the pilot study, categories were amended, and eleven categories of healthcare news stories were identified.

Statistical Techniques

The statistical methods employed in this study included variables of frequency and percentage to facilitate comparative analysis.

Results

Coverage of Healthcare News by English and Hindi Newspapers

As per Figure 1, it is evident that during the reporting period under the Hindi Newspapers, Dainik Jagran has 69 (13.60%), and Navbharat Times published 126 (24.85%) healthcare-related news. Meanwhile, under the English dailies, Hindustan Times has 95 (18.75%), and Times of India has published 217 (42.80%) news related to healthcare. Maximum news on healthcare has been published by the Times of India.

Month-wise distribution of Newspaper Coverage of Healthcare News for sample study from August 2022 to January 2023

As shown in Figure 2, both Hindi and English newspapers published healthcare news mainly in September 2022. Dainik Jagran was 12.40%, Navbharat Times was 22.31%, Hindustan Times was 18.18%, and Times of India was 47.11%.
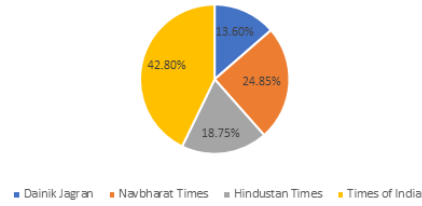
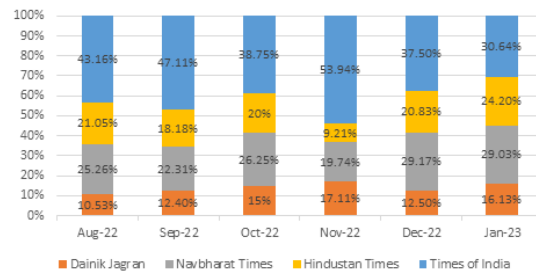**Figure 1:** The coverage of healthcare news by English and Hindi Newspapers

Space-wise distribution of Newspapers Coverage of Healthcare News

As per Figure 3, the total space given to healthcare news by four dailies is 121528.5 cm^2. Dainik Jagran has given 17867.25 cm^2, and Navbharat Times has given 17867.25 cm^2. Under the English dailies, the Hindustan Times has given 22642.75 cm^2, and the Times of India has given 40965.75 cm^2 space to healthcare news stories.

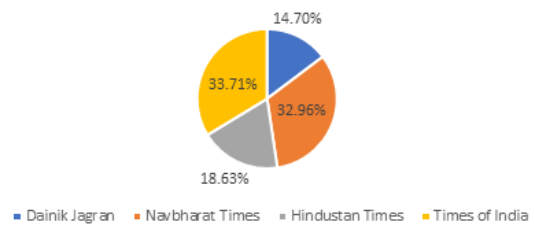### Page-wise distribution of Newspapers Coverage of Healthcare News

As per Figure 4, all four dailies regarding page-wise distribution have published 21.10% of healthcare news stories on the Front Page, 78.70% on the inside pages and only one story at 0.20% on the back page. Maximum preference is given by Navbharat Times in publishing healthcare stories on the Front page, as it published 50 during the period.

Figure 2: Month-wise distribution of Newspaper Coverage of Healthcare News for a sample of the study from August 2022 to January 2023

Figure 3: Space-wise distribution of Newspapers Coverage of Healthcare News

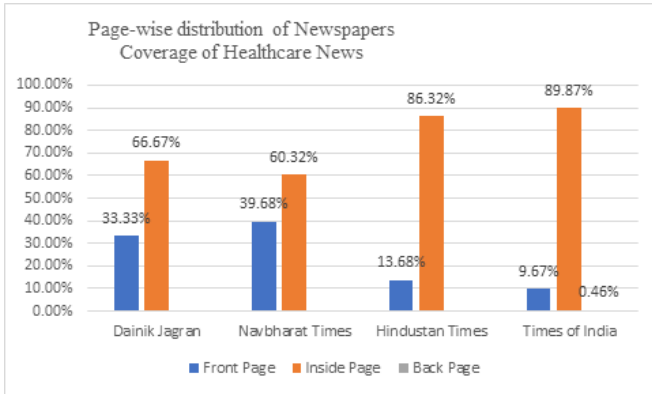**Figure 4:** Page-wise distribution of Newspapers Coverage of Healthcare News

Treatment-wise distribution of Newspapers Coverage of Healthcare News

As per Figure 5, all four dailies concerning the treatment-wise distribution of healthcare news have published 1.97% as adverts, 23.87% as feature articles, 63.71% as news articles, 2.56% as Oped and 7.89% as study. All four dailies have majorly published news articles at 63.71%, while the Times of India has published 323 healthcare-based news articles, and Navbharat has 87.

Origin-wise distribution of Newspapers Coverage of Healthcare News

As per Figure 6, origin-wise distribution of all four dailies includes the Govt publishes 1.58% as advisory or announcements, 3.94% bylines are by the guests, 25.05% are by the news agencies of the respective newspapers, 86.44%, which is the maximum bylines are by the staff and the remaining `0.99% are by the wire news agencies like PTI, Reuters, AFP etc.

Categorization-wise distribution of healthcare news

As per Figure 7, categorization-wise distribution represents that healthcare news stories related to awareness campaigns were published in four dailies at 5.72%, prevention at 1.78%, diagnosis at 1.97%, disease outbreak at 15.98%, disease symptoms at 0.79%, treatment at 4.93%, COVID related news at 29.39%, death update at 5.13%, vaccine update at 13.02%, expert news at 11.24% and govt. Health scheme at 10.06%. The COVID-related news stories were published at 29.29%, followed by disease outbreaks at 15.98%.

Keyword search of Healthcare News in four national dailies

Figure 8 highlights that all news stories carrying a headline were keyed in the Excel datasheet and keyword coding was done. The coders decided on eight keywords depending on the frequency of the news that appeared during the six months. These were Cancer, COVID, Dengue, Diabetes, Heart Disease (High blood pressure, hypertension, heart attack and so on, clubbed under one), Mental Health (Schizophrenia, Depression, Stress, etc., clubbed under
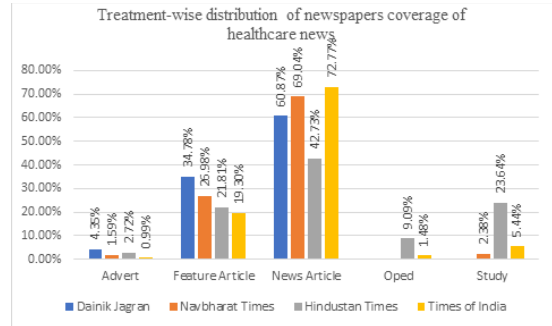

Figure 5: Treatment-wise distribution of newspaper coverage of Healthcare News
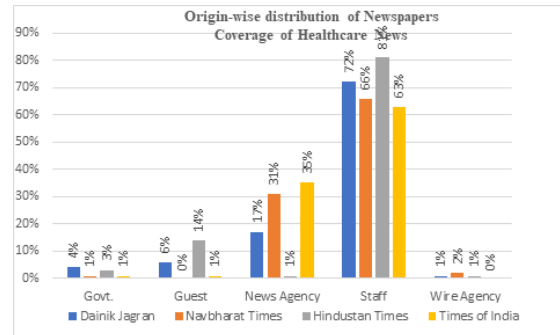

Figure 6: Origin-wise distribution of Newspapers Coverage of Healthcare News

one), Monkeypox and Tuberculosis. Under Other, news stories on health issues like HIV, Tomato fever, etc, were counted as their frequency was one or two only.

The above table shows that new stories carrying COVID in their headline were maximum. Dengue, a perennial disease, appeared 22 times. Cancer, a life-threatening disease was covered 12 times in six months. Heart disease, also a lifestyle disorder, got coverage only ten times, and so did mental health. Monkeypox, Tuberculosis and Diabetes were covered five times. Rest falls under the 'Other' category.

DISCUSSION

Our study highlighted that the selected newspapers had published all-together 507 news reports during six months. The total space given to healthcare news by four dailies is 121528.5 cm^2. Further, Navbharat Times prefers publishing the maximum number of healthcare stories on the front page, as it published 50 during the period. Regarding treatment-wise distribution, all four dailies have majorly published news articles at 63.71% and, in terms of origin, 86.44%, which is the maximum bylines by the staff.

Coming to categorization, all four newspapers continued publishing news on COVID at 29.39%, where most of this news was several cases reported with no value-added information. In most of these reports, the substance of the information remained the same, but only the figures were updated, with hardly any news on prevention, diagnosis, and treatment. Maybe because
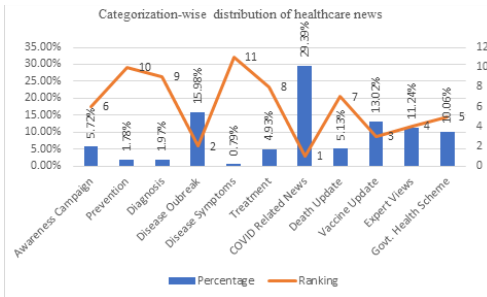
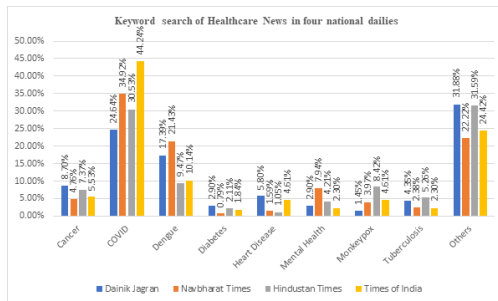**Figure 7:** Categorization-wise distribution of healthcare news

Figure 8: Keyword search of Healthcare News in four national dailies

India has seen considerable effects due to a substantial burden of COVID-19 cases, the media has already focussed on discussing it. However, in the study by Gupta *et al.*, 2021, the media coverage exhibited a lack of timeliness in aligning with the updates provided by the World Health Organisation (WHO). As per the researchers, the Indian media prioritizes practical and pertinent journalism that offers direction for individual reactions. The media should try to provide coverage of preventative and treatment alternatives supported by evidence to mitigate the dissemination of misinformation.

Therefore, it was observed that the prevalence of such derivative narratives in most articles contributes to a lack of diversity in both the selection of stories and the perspectives presented, thereby hindering the practice of critical journalism.

Our study found that the news reports covering prevention were 1.78%, diagnosis was 1.97%, disease symptoms were 0.79%, and treatment was 4.93%. This indicates the newspapers have not given importance to other prevalent health issues contributing to the country's disease burden. According to the India State-Level Disease Burden Initiative conducted in 2017 by the Indian Council of Medical Research (ICMR), there has been a notable rise in the percentage of deaths attributed to Non-Communicable Diseases (NCDs) in India. Specifically, the proportion of fatalities caused by NCDs has climbed from 37.9% in 1990 to 61.8% in 2016. The four primary non-communicable diseases (NCDs) encompass cardiovascular diseases (CVDs), malignancies, chronic respiratory diseases (CRDs), and diabetes (Status of Non-Communicable Diseases (NCDs) in India, n.d.). So, these diseases continue to be threats.

Moreover, the mass media plays an important role when it comes to disseminating information on the diagnosis, treatment, and prevention of illness. Also, it is an essential factor in the formation of public health policies as well as the exchange of personal experiences about diseases. Therefore, any laid-back approach to health coverage by the newspapers would lead to decreased health literacy.

As per the RNI, the total number of registered publications as of March 31, 2022, is 1,46,045, and the number of registered newspapers is 20,821. Newspapers in India continue to be regarded as the most reliable source of information among media consumers; this finding has come forth according to the India-wide study of media consumption behavior by the Lokniti programme of the Centre for the Study of Developing Societies ("Newspapers Most Trusted Info Source: Pan-India Study," 2022). Another finding of the CVOTER Media Consumption Survey 2020 says audiences attach higher credibility to stories published in print media (Jha, 2020).

Newspapers have played a significant role in fostering public awareness regarding numerous health-related issues, particularly in the areas of substance misuse, tobacco consumption, and preventive actions against various diseases. A significant demand and necessity for precise, pertinent, and indispensable information characterises the health sector. Many individuals make crucial health-related choices based on the information disseminated through newspapers (Shetty, 2020).

Additionally, the study revealed that the keyword search of healthcare news in four prominent national daily newspapers indicated that Cancer, a condition with potentially fatal consequences, was the subject of coverage on 12 occasions over six months. Heart disease, a condition associated with one's lifestyle, received media mention on only ten occasions, as did mental health, which is relatively low. Furthermore, our findings suggest that the prevalence of derivative narratives in most articles adds to homogeneity in both the selection of stories and the perspectives provided, which impedes the practice of critical journalism.

Conclusion

Analysing newspaper coverage of healthcare in Gurugram provided insights into health reporting. We found that newspapers continued reporting on COVID-19 maximumly in comparison to other health issues. Moreover, newspapers limitedly engaged in comprehensive discussions on healthcare, encompassing illness prevention, symptoms, and treatment. The media, particularly newspapers that employ the agenda-setting theory, significantly influence individuals' attitudes and cognitive processes. Hence, it is increasingly crucial to facilitate informed health-related decision-making. Both language newspapers have space for development regarding the quantity, placement, and dimensions of health-related articles.

Future Research and Limitation

Due to the fact that we had only subscribed to four nationals daily for six months, only those four were taken into consideration in the study. Two were in English, while the other two were in Hindi. This was necessary because of the limitations imposed by the budget and the schedule. The researcher did not look at online versions of the newspapers, despite the fact that these editions could have contained extra health news due to the absence of space constraints. Despite this, the four newspapers that were studied in this research are the leading source of print media in the English language. They also have a significant sway on those who shape public policy, at least to some level. It is therefore suggested that for future research, the researchers may include all printed newspapers in English and Hindi, presenting a detailed analysis of the healthcare coverage.

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