

Exploring the Relationship Between COVID-19 News and Anxiety Levels in India

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Abstract.

Within the context of the COVID-19 pandemic, the consumption of news emerges as a critical factor influencing anxiety levels among the Indian population. This research paper seeks to investigate the relationship between exposure to COVID-19 news and anxiety levels through regression analysis. Utilizing Google Trends data and relevant anxiety-related information, the study provides insights into the predictors of anxiety during a health crisis.

Keywords: COVID-19 News, Anxiety, Regression Analysis, Google Trends

1.Introduction

The COVID-19 pandemic, which began in late 2019 and extended well into 2020, posed a unique and unprecedented challenge for humanity. With its rapid global spread and severe health implications, it forced individuals, communities, and governments to respond swiftly and adapt to a new way of life. Social distancing, mask-wearing, and remote work became the new norm as countries-imposed lockdowns and restrictions to contain the virus. In such an environment, access to accurate information, guidance on personal health, strategies for coping with anxiety and stress, and education in an online format became crucial. Google, as one of the most widely used search engines globally, played a pivotal role in providing individuals with the resources they needed during these trying times.

Since the COVID-19 epidemic, news has spread widely and can significantly influence public opinion and sentiment. People's reactions to the virus were greatly influenced by the fast-moving information that was frequently accompanied by dread and confusion as it spread over the world. This study aims to clarify the complex relationship between COVID-19 news and anxiety levels in the diverse and populous country of India in the context of this unique environment.

India, with its wide range of culture, language and socioeconomic diversities, presents an extraordinary setting for this exploration. The country has also faced the complex interplay between public health measures, media communication, and the psychological well being of its citizens, not only in terms of the immediate health consequences of the pandemic, but also in terms of the complex interplay between public health measures, media communication, and the psychological well being of its citizens.

Utilizing Google Trends data is one important way we want to investigate this relationship. Analysing the trends of online searches offers a dynamic and real-time window into a society's collective consciousness in an era where digital platforms are the dominant information sources. A useful tool for tracking the popularity of search queries over time is Google Trends, which comes in handy for this project. We can determine the information-seeking behaviour of the public and possibly find correlations with changes in anxiety levels by analysing the ebbs and flows of COVID-19-related searches in India.

The widespread distribution of COVID-19 news across multiple media outlets, including internet platforms, has presented both opportunities and difficulties. The sheer volume and occasionally sensationalistic character of news reporting can lead to increased anxiety and tension, even while timely and reliable information is essential for public awareness and safety. Our goal is to find trends in the volume and frequency of searches connected to COVID-19 by thoroughly examining Google Trends data. We will then correlate these trends with important occasions, official declarations, and the general course of the epidemic in India.

Google Trends as a Window to the Pandemic

Google Trends stands as a valuable tool for gaining insights into the real-time interests and priorities of internet users. It provides access to data regarding search volumes for specific keywords and phrases, shedding light on the trends and fluctuations in people's inquiries and

requirements. Throughout the COVID-19 pandemic, Google Trends evolved into a vital resource for researchers and policymakers, enabling them to understand public concerns and adapt their strategies accordingly.

The world saw an extraordinary rise in information-seeking behavior as the pandemic progressed. People flocked to the internet to stay informed about the virus's progress and to learn how to stay safe, but also to help them make sense of the quickly evolving situation. With its capacity to monitor and evaluate search volume for terms and phrases, Google Trends evolved into a dynamic compass that pointed users toward the subjects that piqued their interest around the world. This platform turned out to be a data gold mine for researchers, providing insights into the shifting interests and priorities of the general public. The capacity to identify trends in search terms offered a sophisticated perspective on the changing issues facing the public. Google Trends provided a thorough picture of the pandemic's changing story, from early queries about symptoms and transmission to later queries about vaccinations, available treatments, and mental health. The abundance of data that Google Trends offered was comforting to policymakers as well. Authorities could adjust their public health treatments and communication methods in real time by measuring the worries of the public. For example, searches for certain symptoms or locations may result in more focused responses, focusing resources where they are most needed. The platform consequently turned into a crucial instrument for adaptive government, enabling authorities to maintain a pulse on public opinion and demands.

Google Trends emerged as a very important ally in the context of India, a nation battling the many facets of the pandemic. A distinct set of difficulties for public health communication was created by the diversity of languages, cultures, and socioeconomic situations. Google Trends provided a comprehensive picture of the country's issues by collecting data in a variety of languages and geographical areas. Google Trends became an invaluable tool for navigating the intricate tapestry of India's pandemic experience, whether it was tracking the spike in searches for COVID-19 testing centres, analysing regional variances in information demands, or assessing the impact of policy announcements.

Google Trends plays a major role as we examine the connection between COVID-19 news and anxiety levels in India. Through analyzing the patterns of pandemic-related search queries, we hope to provide light on the public's information requirements as well as the

emotional connotations associated with these questions. The platform acts as a link between data and human experience, enabling us to explore the subtleties of how the behavior of people seeking information influences and mirrors the mentality of a country facing a crisis. Furthermore, we go beyond the quantitative domain and investigate the qualitative facets of news consumption. Our goal is to comprehend not only the kind of information people look for, but also how they process and assimilate the news. Careful investigation is necessary to fully understand the emotional impact of news narratives, the significance of misinformation, and the impact of media tone on anxiety levels.

LITERATURE REVIEW

Amid the global distress caused by COVID-19, this research focused on understanding the psychological impact of India's lockdown. A survey of 403 participants revealed that those with limited lockdown resources experienced more distress, while family affluence correlated with reduced stress, anxiety, and depression. Students and healthcare workers were particularly affected, but mental health professionals showed resilience. The study suggests involving mental health experts in addressing COVID-19-related psychological issues. (Usama Rehman, 23 June 2020)

The COVID-19 pandemic originated in Wuhan, China, in December 2019 and was declared a global pandemic by the WHO on March 11, 2020. It is an acute respiratory illness with a significant global impact, resulting in millions of confirmed cases and fatalities. India, too, was affected, with lockdown measures initiated on March 23, 2020, causing disruptions in daily life. Such measures, aimed at curbing the virus's spread, also have profound psychological implications, as previous studies have noted in response to health threats. (Anirban Biswas, 2021)

Research indicates that lockdowns, isolation, and quarantine measures during pandemics have a detrimental impact on mental health. Studies during previous outbreaks like MERS and SARS revealed elevated rates of anxiety, posttraumatic stress disorder, and anger among affected individuals. Health care professionals, especially, experience severe mental health consequences during epidemics. Recent research on lockdowns also highlights high levels of depressive symptoms, anxiety, insomnia, and distress among healthcare professionals. (Shankey Verma, 2020)

COVID-19 has significantly impacted all age groups, with higher mortality and morbidity among the elderly, a vulnerable segment. This cross-sectional study aimed to assess psychological morbidity in the geriatric population during the pandemic through a telephonic survey. Geriatric Anxiety and Depression Scales were administered, along with the Everyday Abilities Scale for India, with verbal consent. (Das, 2021)

2. METHODOLOGY

To address the Research objective, we collected data related to COVID-19 news and anxiety levels. The study utilized regression analysis to examine the relationship between exposure to COVID-19 news and anxiety levels among Indians. Google Trends data, along with relevant anxiety-related data, was employed to perform this analysis.

The regression analysis performed to study the relationship between COVID-19 news and anxiety levels among Indians yielded significant findings. The multiple R-value of 0.537 indicated a moderate positive correlation between exposure to COVID-19 news and anxiety. The R-squared value of 0.288 suggested that approximately 28.8% of the variance in anxiety levels could be explained by exposure to COVID-19 news. This finding emphasized the significance of news consumption as a predictor of anxiety levels. The coefficients revealed that a one-unit increase in exposure to COVID-19 news was associated with a 0.990-unit increase in anxiety levels. The p-value (0.000881) associated with this coefficient was very low, indicating its statistical significance.

1.1 Regression Statistics:

Multiple R: The multiple R value (0.537) denotes the correlation coefficient between the independent variable ("COVID-19 news") and the dependent variable, signaling a moderate positive correlation between these two variables.

R Square: The R-squared value (0.288) stands for the coefficient of determination, offering insights into the portion of the variance in the dependent variable that can be clarified by the independent variable. In this specific scenario, "COVID-19 news" explains approximately 28.8% of the variance in the dependent variable.

Adjusted R Square: The adjusted R-squared value (0.267) adjusts the R-squared value for the number of predictors in the model. It provides a more conservative estimate of the model's goodness of fit.

Standard Error: The standard error (8.427) is a measure of the variability of the residuals (the differences between the observed and predicted values). Lower values indicate a better fit.

Observations: This indicates the number of data points used in the analysis, which is 35 in this case.

ANOVA (Analysis of Variance): The ANOVA table assesses the overall significance of the regression model.

"Regression" shows the sources of variation related to the regression model, and "Residual" shows the sources of variation not explained by the model (error).

The F-statistic (13.371) in the "Regression" row tests whether the regression model as a whole is statistically significant. In this case, the F-statistic is significant with a very low p-value (0.000881), indicating that the model is statistically significant.

Coefficients:

This section provides details regarding the coefficients within the regression model. - "Intercept" (20.239): The intercept signifies the value of the dependent variable when the independent variable, "COVID-19 news," is at zero. In this context, it represents the predicted value of the dependent variable when there is no exposure to "COVID-19 news."

"COVID-19 news" (0.990): This coefficient illustrates the alteration in the dependent variable for a one-unit change in "COVID-19 news." In this instance, it suggests that, on average, a one-unit increase in "COVID-19 news" is associated with a 0.990-unit increase in the dependent variable. Within this section, you will also find information related to "Standard Error," "t Stat," and "P-value" for each coefficient. Of particular significance, the "P-value" tests the statistical significance of each individual coefficient. Notably, in this case, the "COVID-19 news" coefficient possesses an exceptionally low p-value (0.000881), highlighting its statistical significance.

Table 1 Regression Analysis - Relationship between COVID-19 News and Anxiety

<i>Regression Statistics</i>	
Multiple R	0.5369800
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R Square	0.2883475
Adjusted R Square	0.2667823
Standard Error	8.4269607
Observations	35

ANOVA

	<i>df</i>	<i>S</i>	<i>S</i>	<i>F</i>	<i>Significance F</i>
Regression	1	949.5203811	949.5203811	13.37095247	0.000881386
Residual	33	2343.451048	71.01366811		
Total	34	3292.971429			

		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept		20.23948067	3.761973368	5.380017	6.00949E-06	12.58568831	27.89327304	12.58568831	27.89327304
COVID news	19	0.990262614	0.270812815	3.656631301	0.000881386	0.4392898	1.541235428	0.4392898	1.541235428

Figure 1 Regression Analysis - Relationship between COVID-19 News and Anxiety

3. Results and Discussion

The research findings offer valuable insights into how different regions in India responded to the COVID-19 pandemic in terms of information-seeking behavior. The variations in search

patterns reflect not only the impact of the pandemic but also the influence of regional factors, cultural differences, and government responses.

The regression analysis indicates that there is a statistically significant relationship between "COVID-19 news" and the dependent variable. The low p-value associated with the "COVID-19 news" coefficient (0.000881) suggests that "COVID-19 news" is a significant predictor of the dependent variable.

The R-squared value (0.288) signifies that approximately 28.8% of the variation in the dependent variable can be attributed to "COVID-19 news." While this represents a moderate level of explanation, it underscores that "COVID-19 news" indeed exerts a meaningful impact on the dependent variable.

The coefficient for "COVID-19 news" (0.990) reveals that, on average, a one-unit increase in "COVID-19 news" corresponds to a 0.990-unit increase in the dependent variable.

The analysis indicates that "COVID-19 news" stands as a statistically significant predictor of the dependent variable, and alterations in "COVID-19 news" are associated with changes in the dependent variable. Nevertheless, it's crucial to acknowledge that correlation doesn't imply causation. Further research is necessary to comprehend the nature of this relationship and any potential causal mechanisms.

4. Conclusions

Furthermore, this study underscores the importance of comprehending the link between COVID-19 news and anxiety. While causation cannot be definitively established through this analysis, the substantial positive correlation between these variables suggests that increased consumption of COVID-19 news can be connected to heightened anxiety levels among the Indian population. This discovery holds significant implications for media outlets and healthcare professionals in delivering information and support during public health crises.

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