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## Infodemic of the COVID-19 Pandemic and its impact on irritability

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### Abstract

The outbreak of the COVID-19 pandemic was followed by the continuous transmission of information via media channels. Here the “infodemic” brought on by the COVID-19 pandemic was examined, and its impact on people’s levels of irritability was quantified. It was hypothesized that the type of media consumed by individuals would cause a significant difference in the levels of irritability and that consuming more news would result in higher irritability levels. It was also hypothesized that there would be a considerable variation in irritability between males and females based on news intake. 307 participants, both male, and female, with ages ranging from 16 to 62 were surveyed for data. The participants’ usage of T.V., internet, and newspapers was assessed using the National Stock Exchange Media Consumption Behaviour Test. The Brief Irritability Test was used to determine the levels of irritability in individuals. Mean and Standard Deviation were calculated and one-way ANOVA was used to analyse the scores. The results concluded that T.V. consumers who spent more hours consuming news experienced higher levels of irritability. Females were more irritable than males while consuming news through all three media.

**Keywords:** COVID-19, pandemic, infodemic, news consumption, brief irritability test, BITE

### Introduction

Coronaviruses are viruses that have caused respiratory diseases in a wide range of animals, including mammals and birds. As the World Health Organization reported, COVID-19 is an infectious disease caused by the recently discovered coronavirus or, more specifically, the SARS-CoV-2 virus. Primary symptoms of the diseases include mild to moderate respiratory illness. In some cases, COVID-19 has also been shown to lead to respiratory failure, lasting lung and heart damage, even death. With the spread of the COVID-19 disease, evidently, the consumption of media went up drastically all around the world.

Media consumption can be defined as “the sum of information and entertainment media taken in by an individual or group.” Interacting with new media, reading newspapers, books, and magazines, watching television and film, and listening to the radio are all activities that constitute media consumption. “Infodemic,” as defined by the Cambridge Dictionary, is “a situation in which a lot of false information is being spread in a way that is harmful.” The word is a blend of “information” and “epidemic” and was coined in 2003. According to the WHO, the COVID-19-related infodemic is just as dangerous as the virus itself, and an infodemic causes confusion and risk-taking behaviours, which eventually has a harmful impact on health. The overabundance of information, some accurate and some not-so-accurate, brought in by the pandemic dramatically affects all aspects of people’s lives, specifically people’s mental health. As trustworthy sources and guidance are difficult to find, there is a negative impact on the decision-making process and decreased quality control on the published information. This can provoke irritability in patients, non-patients, caregivers, and healthcare professionals. Rathore, F. A., & Farooq, F. (2020) <sup>[7]</sup> commented on the Information Overload and Infodemic during the COVID-19 pandemic. There was an “infodemic” in which false news, conspiracy theories, magical cures, and racist news was being shared at an alarming rate, with the potential to increase anxiety, stress, irritation, increased intolerance, and even lead to loss of life.

The influence of new information may be shown in the instance of the COVID-19 pandemic. The flow of information has the potential to significantly impact people's behaviour and alter the efficacy of government's remedies. In this way, models that forecast viral propagation begin to take into account the public's behavioural reaction to public health initiatives as well as the transmission dynamics underlying content consumption. Furthermore, such extensive outbreaks have far-reaching repercussions on many parts of society and negative mental health implications. Irritability, according to the American Psychological Association is "a state of excessive, easily provoked anger, annoyance, or impatience." Irritability can be defined as an elevated proneness to anger relative to others exposed to the same/similar stimulus. Common signs of irritability are confusion, difficulty concentrating, oversensitivity and annoyance. Irritability, even though an everyday mood associated with many psychiatric and non-psychiatric conditions, has not received much attention from clinicians. Wang C., Pan R., Wan X., and co-authors conducted a study in which they stated that the Coronavirus disease is "a public health emergency of international concern and poses a challenge to psychological resilience." In the context of the COVID-19 outbreak, negative feelings - like irritability - were widespread, and seen as a common reaction to stress; many aspects of people's daily lives became more stressful due to the presence of the pandemic. Media is extremely important in not just disseminating information but also in shaping public opinion. On March 25, 2020, India adopted a complete lockdown. In addition, a poll done during the first week of the lockdown revealed that social media consumption had increased by over 75% compared to the week before the lockdown. Daily in India, five hours were spent on media usage across various media platforms in 2020 - digital or otherwise (Statista Research Department, 2021) [6]. Such hard times necessitate effective crisis communication methods via various mass communication channels. While good crisis communication and regulated media usage are critical for dispelling anxiety and uncertainty, ineffective crisis communication and excessive media consumption can have severe personal and economic effects. The findings of a study by Chao, M., Xue, D., Liu, T., Yang, H., J. Hall, B. (2020) to investigate Media use and acute psychological outcomes during the COVID-19 outbreak in China indicated that new media use and more media engagement was associated with negative psychological impact. In contrast, certain other types of media content were associated with positive psychological outcomes. It is critical for media organizations to uphold their positions as pillars of the fourth estate during COVID-19 (by directing resources toward topics that affect people's lives and livelihoods rather than sensational reporting). But, as users, it is equally crucial to choose the type and amount of information that one gathers in order to combat such a global catastrophe while also prioritizing one's mental health.

## Materials and Methods

### Objective

The purpose of this study is to assess the impact of media consumption during the COVID-19 pandemic on the level of irritability in individuals.

### Hypothesis

Hypothesis 1: There will be a significant difference in the levels of irritability between news and non-news consumers.

Hypothesis 2: More news consumption will lead to higher irritability levels (there is a significant difference in irritability based on the amount of news consumed).

Hypothesis 3: There is a significant difference between the level of irritability in males and females on the basis of news consumption.

### Sample

A sample of 307 individuals, working and studying in different organizations and institutions across India have participated in this study. All the participants were between the ages 16 and 62. Data was collected online through Google Forms. The total number of participants consisted of 175 females, 130 males and 2 others who preferred not to reveal their sex. The participants included students, homemakers, private sector employees, public sector employees, self-employed and others. Educational qualifications of the participants were UG/PG/grade XII. Random sampling was used to select the sample for study.

### Inclusion criteria

Individuals between the age 16 and 62  
Currently living in India

### Exclusion criteria

Individuals below 16 years of age  
Individuals above 62 years of age

### Variables

**Dependent variable - Irritability** is a condition in which an individual experiences excessive and easily provoked anger or annoyance. Irritability can also be defined as a disproportionate anger reaction relative to one's peers.

### Independent variables

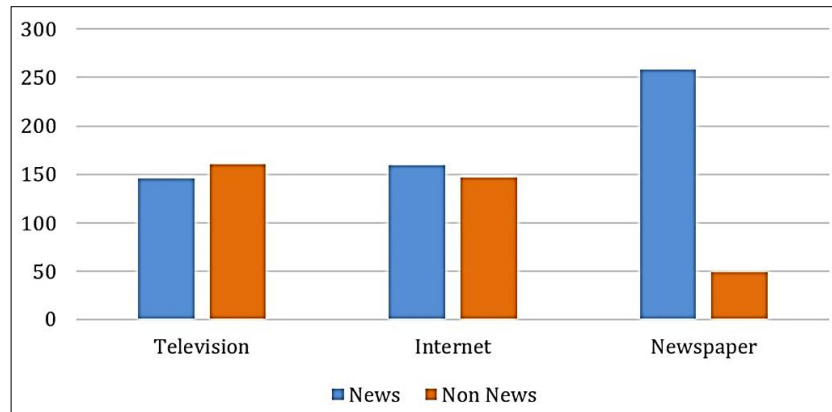
1. Media consumption - It is the nature of media an individual consumes on media platforms (news or non-news).
2. Consumption Time - It is the amount of time an individual spends on different media platforms (based on number of hours spent).
3. Sex of the individual

### Tools and Statistics used

The Brief Irritability Test (BITe) is a measure of Irritability given by Canadian researchers Holtzman *et al.*, 2015 [1]. It consists of 5 items to measure irritability reliably. The responses range from "Never" to "Always" on a 6-point Likert's type scale. In order to find out the correlation between the variables, statistical techniques adapted were Mean, ANOVA, and Standard Deviation. Computation of the data was completed by using SPSS 20 software.

### Results

According to the first hypothesis, the independent variable was the type of media consumed by the participants. Depending on the types of media consumed, it can be divided into two categories, news and non-news (entertainment, educational, sports, etc) which was measured across three platforms: television, the Internet, and newspapers. It was hypothesized that "There will be a significant difference in the levels of irritability between news and non-news consumers."



**Fig 1:** Type of media consumed by number of participants across three platforms.

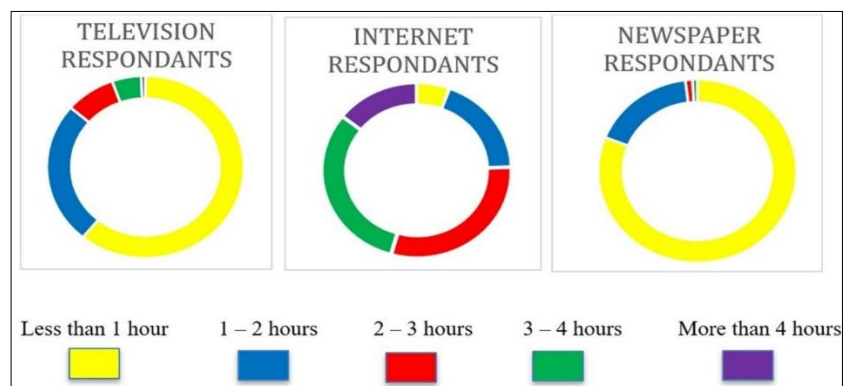
**Table 1:** Descriptive statistics on difference of irritability between news and non-news consumed on Television, Internet and through Newspapers

Irritability		N	Mean	Std. Deviation	Significant Difference
Television Consumption	News	146	13.36	5.18	0.393
	Non-News	161	12.88	4.65	
Internet Consumption	News	160	12.44	4.72	0.014
	Non-News	147	13.82	5.03	
Newspaper Consumption	News	258	13.27	5.04	0.182
	Non-News	49	12.24	4.04	

The first platform across which consumption was measured, was Television. Out of the 307 participants, 160 watched news and 147 watched other non-news content on the Internet. The significance value was found to be 0.014 which was lower than the p value of 0.05, and hence, this indicated significance. More people used the Internet and newspapers for news while TV was preferred equally for both news and non-news consumers. Although the platform through which media was consumed differed, the irritability level was found to be moderate in all three categories. The level of irritability was not necessarily determined by the type of media and the platform they consumed it from.

Therefore, the first hypothesis that states “There will be a significant difference in the level of irritability between news and non-news consumers” was rejected.

For the second hypothesis, the independent variable was the amount of time spent consuming news on the three platforms: television, the Internet and newspapers. The time spent was measured in 5 categories which are: less than 1 hour, 1-2 hours, 2-3 hours, 3-4 hours and more than 4 hours. It was hypothesized that “More news consumption will lead to higher irritability levels (there is a significant difference in irritability based on the amount of news consumed).”



**Fig 2:** Amount of time spent by participants consuming news across three platforms.

**Table 2:** Mean, SD, and results of ANOVA on difference between levels of irritability depending on the number of hours spent consuming news on Television, Internet, and Newspaper

Time Spent	Television Consumption			Internet Consumption			Newspaper Consumption		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation	N	Mean	Std. Deviation
Less than 1 hour	89	13.85	5.21	9	10.78	3.80	209	13.22	5.08
1-2 hours	37	12.37	4.65	30	10.97	3.20	44	13.23	4.76
2-3 hours	12	13.08	5.41	48	12.63	5.55	3	12.67	3.21
3-4 hours	7	12	4.39	50	13.30	4.64	2	20.50	7.77
More than 4 hours	1	27	-	23	12.78	4.71	-	-	-
Total	146	13.41	5.16	160	12.44	4.72	258	13.27	5.04
Significant Difference	0.045			0.207			0.244		

Table 2 shows that the number of respondents who viewed news on Television for less than 1 hour was 89 and 1-2 hours was 37. 12 respondents spent 2-3 hours consuming news on television with a mean of 13.08 and standard deviation of 5.41. Their values indicate a moderate level of irritability. The significance value for the 5 categories was found to be 0.045, hence significant in the consumption of news only through television. The mean for all 5 categories was 13.41 on TV, 12.44 on the Internet and 13.27 for Newspaper. Thus, the second hypothesis, "More time spent for news consumption will lead to higher irritability" stands true only for the number of hours spent viewing news on the

television and did not hold true for time spent consuming news on the Internet or via newspapers.

The third hypothesis was "There is a significant difference between the level of irritability in males and females on the basis of news consumption." The independent variable for the third hypothesis was the sex of the participant and the dependent variable was irritability. 307 participants identified themselves as belonging to one of the three categories which were: Prefer not to say, Male and Female. To investigate sex differences in levels of irritability, one-way ANOVA tests were computed with the probability level set at 0.05.

**Table 3:** Mean, SD, and results of ANOVA on difference between levels of irritability depending on the sex of the individual consuming news on Television, Internet, and Newspaper

Sex	Television Consumption			Internet Consumption			Newspaper Consumption		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Female	82	13.51	5.594	83	12.65	5.176	155	13.66	5.443
Male	63	13.10	4.339	76	12.04	3.910	101	12.50	4.158
Total*	146	13.42	5.165	160	12.44	4.721	258	13.27	5.049
Significant Difference	0.044			0.011			0.013		

\*Individuals who preferred not to reveal their sex, were very few in number and hence were excluded in this part of analysis.

Table 3 shows the number of male and female participants who consumed news via Television, Internet and Newspaper, along with mean irritability and standard deviation scores for both the sexes. The difference between the two groups for Television, Internet and Newspaper consumption was found using ANOVA with the significance level set at 0.05. The p value was found to be less than 0.05 in all cases and hence, significant. Thus, there was a significant difference in the levels of irritability based on news consumption via Television, Internet as well as Newspaper in the two sexes, and females experienced more irritability than their male counterparts in all three scenarios. Therefore, the third hypothesis, "There is a significant difference between the level of irritability in males and females on the basis of news consumption" was accepted.

## Discussion

In an article published on Livemint.com, it was noted that news consumption across languages had grown exponentially (298%) in the post-lockdown period compared to the one preceding it, as per data released by BARC (Broadcast Audience Research Council). The captivating nature of audio-visual mediums like television with the use of colours, eye-catching graphics, memorable jingles and engaging videos impacts the human mind and memory on a much larger scale as compared to the traditional print medium. Moreover, television runs in the background in many Indian households while performing other activities like cooking, cleaning or even working. On the other hand, reading a newspaper demands an individual's active engagement with the content. The fact that television runs in the background for a lot more time means that news has a greater chance of reiteration and rehearsal in the mind, instigating feelings of irritability in the consumer's mind. During the peak of COVID-19 in India, although the public needed information and constant updates from their trusted sources like mainstream TV news channels, it resulted in a cognitive overload. According to Bawden D and Robinson L, cognitive overload is when an individual's ability to make rational decisions is hampered by the amount of information available at hand. The fear of

losing out on potentially life-saving information or even simply keeping up with state of affairs globally urged more people to monitor media round-the-clock. And what changed even more drastically was the way in which facts were presented during this period. Political bias and ideological slant were more visible than ever. And such politically fuelled and channelled transmission of both information as well as misinformation revolving around COVID-19 elicited more negative emotions like irritability in the general public of India.

The pandemic exposed a whole new array of emotions for males and females to experience differently. The rising burden of pandemic-related mental health challenges fell on both the sexes, but the intensity and the extent to which it affected them differed on the basis of many factors like socio-economic status, marital status, employment opportunities, family background, children, etc. Former research suggests that more females viewed COVID-19 as a bigger threat than males with regard to its impact on society. As a result, females were more accepting of potentially stricter measures to flatten the curve. Surveys conducted across the world showed a higher share of females experiencing anxiety, sadness, irritability and difficulty sleeping. Having to stay updated with the rising number of COVID-19 cases and ever-changing restrictions and protocols could have aggravated mental health problems in females.

Another study that surveyed 6,200 females and 4,000 males in 38 countries across Asia, the Middle East and North and South America, found surprising differences between the experience of the pandemic. They found that about 27 percent of females had reported an increase in challenges in relation to mental illnesses while only 10 percent of males reported experiencing the same. Females were also almost twice as likely to report that accessing quality healthcare services at a critical time had become harder in the face of the pandemic. Digital media and the Internet have taken over the world. Despite that, consumers of both types of media believe that traditional or mass media like the Television is more credible than social media because of the originality of information and relatively stricter journalistic

standards. With the outbreak of COVID-19, mass media had a larger responsibility of presenting accurate news to the public. However, the frightening language of media coverage in India (especially on traditional audio-visual media like TV) and the dissemination of news heavily influenced by political propaganda only aggravated the fear and panic among individuals. This could be a possible reason to explain why consumers of Television and primarily news consumers of Television, have a direct and positive relationship with higher levels of Irritability.

### Conclusion

The coronavirus pandemic has undoubtedly completely turned around lives and has left long-lasting effects on our mental health. This has made individuals look back and build their coping skills and resilience to handle the situation in an efficient way. Among visible concerns like economic downfall and unemployment, we must not forget to look at invisible concerns like the nation's mental health. Results showed that, although the platform through which media was consumed differed, the irritability level was found to be moderate in all three categories - Newspaper, Television, and Internet. Results also showed that more time spent watching news on television led to more levels of irritability in individuals, but this did not stand true for news consumed through newspapers and the Internet. Finally research also concluded that females experienced more irritability as compared to their male counterparts regardless of the medium in which news was consumed.

One of the ways in which irritability can be managed is through social support. In a study conducted by Grey *et al.*, 2020<sup>[9]</sup> noted that individuals experiencing self-isolation had significantly higher rates of depression, irritability and loneliness compared to those who were not. The same study showed that the risk for elevated levels of depressive symptoms was 63% lower in individuals who mentioned having higher levels of social support compared to those with low perceived social support. The results contribute to our understanding of differential psychological outcomes for individuals with respect to social support. In order to decrease the harmful effects of the pandemic, stronger coordination, investment, and public engagement are required, as proven by the dire COVID-19 scenario affecting India. The health care system has been significantly affected by this epidemic, but we have also had possibilities to rebuild and re-establish its functioning, using the Fourth Estate of media to establish an earnest line of communication.

### Limitations of Study

1. The study included a smaller sample and adopted convenience sampling.
2. The data was collected during the most unprecedented time in the recent history of the world as the pandemic affected all aspects of human life, hence, the chances of impact of extraneous variables was very high.
3. The study could have been inclusive of other dependent variables such as anxiety and depression, as the pandemic was highly linked with developing anxiety.

### Implications

1. Providing mental health support to the adult population is the most important during the pandemic as all the

participants experienced moderate levels of irritability, regardless of their differences.

### Suggestions for further research

1. Further research can replicate the study after the pandemic in order to control the extraneous variable caused by uncertainty.
2. Future research can include other dependent variables such as anxiety and depression.

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### References

1. Holtzman S, O'Connor BP, Barata PC, Stewart DE. The Brief Irritability Test (BITe): A Measure of Irritability for Use Among Males and Females. *Assessment*. 2015;22(1):101-115.
2. CARE Rapid Gender Analysis. She told us so. Rapid Gender Analysis: Filling the Data Gap to Build Back Equal; c2020 September.
3. Abreu L, Koebach A, Díaz O, Carleial S, Hoeffler A, Stojetz W, *et al.* Life With Corona: Increased Gender Differences in Aggression and Depression Symptoms Due to the COVID-19 Pandemic Burden in Germany. *Frontiers in Psychology*. 2021;12:689396.
4. Jha L. COVID-19 impact: TV news viewership grows 298%. Mint. India cannot breathe. Is the media choking it further? | Media@LSE. (n.d.). Retrieved January 16, 2022; c2020 April 2.
5. Family TVI. of the Survey Finds Gender Gaps in COVID-19 Pandemic Experiences and Responses. The Vanier Institute of the Family / L'Institut Vanier de La Famille; c2020 April 16.
6. COVID-19 impact on media consumption India 2020 by type of media. Published by Statista Research Department; c2021 Mar 19.
7. Rathore FA, Farooq F. Information Overload and Infodemic in the COVID-19 Pandemic. *JPMA. The Journal of the Pakistan Medical Association*. 2020;70(Suppl 5):S162-S165.
8. Gao J, Zheng P, Jia Y, Chen H, Mao Y, Chen S, *et al.* Mental health problems and social media exposure during COVID-19 outbreak; c2020.
9. Grey I, Arora T, Thomas J, Saneh A, Tohme P, Abi-Habib R. The role of perceived social support on depression and sleep during the COVID-19 pandemic. *Psychiatry Research*. 2020;293:113452.