

## **Unraveling the Web of Health Misinformation: Exploring the Characteristics, Emotions, and Motivations of Misinformation During the COVID-19 Pandemic**

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### **Abstract**

The proliferation of health misinformation gained momentum amidst the outbreak of the novel coronavirus disease 2019 (COVID-19). People stuck in their homes, without work pressure, regardless of health concerns towards personal, family, or peer groups, consistently demanded information. People became engaged with misinformation while attempting to find health information content. This study used the content analysis method and analyzed 1,154 misinformation stories from four prominent signatories of the International Fact-Checking Network during the pandemic. The study finds the five main categories of misinformation related to the COVID-19 pandemic. These are 1) the severity of the virus, 2) cure, prevention, and treatment, 3) myths and rumors about vaccines, 4) health authorities' guidelines, and 5) personal and social impacts. Various sub-categories supported the content characteristics of these categories. The study also analyzed the emotional valence of health

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misinformation. It was found that misinformation containing negative sentiments got higher engagement during the pandemic. Positive and neutral sentiment misinformation has less reach. Surprise, fear, and anger/aggressive emotions highly affected people during the pandemic; in general, people and social media users warning people to safeguard themselves from COVID-19 and creating a confusing state were found as the primary motivation behind the propagation of misinformation. The present study offers valuable perspectives on the mechanisms underlying the spread of health-related misinformation amidst the COVID-19 outbreak. It highlights the significance of discerning the accuracy of information and the feelings it conveys in minimizing the adverse effects on the well-being of public health.

**Keywords:** health misinformation, fake news, fact-checking, infodemic, COVID-19

Current public discourse contains a lot of health misinformation, including rumors and speculations about conspiracies. People are more likely to believe myths, rumors, and conspiracies that have no scientific evidence due to their behavior of seeking information and their concerns about their health. When it comes to the reliability of content, consumers could be put in danger when misinformation is widely disseminated over social media platforms (Islam et al., 2021). During a pandemic, people ask about or need to enhance their knowledge of the disease, its causes, effects, impacts, prevention, and diagnosis mechanism in real-time, which was observed during the COVID-19 pandemic (WHO, 2020). This pandemic was challenging for everyone, with people feeling uncertain and anxious about the future. It quickly resulted in health misinformation about COVID-19, its origins, safety, prevention, and treatment techniques (Charquero-Ballester et al., 2022).

One of the most common forms of health misinformation during COVID-19 has been false information about the virus's origin. Some conspiracy theories have claimed that the virus was intentionally created in a laboratory. Another form of misinformation has been false claims about treatments and cures for COVID-19. Rumors, stigma, and conspiracy theories were observed regularly during the COVID-19 pandemic (Islam et al., 2020). Islam et al. (2020) found that misinformation about

the pandemic included claims about its origin, transmission, causes, cure, prevention, treatment, control measures, and miscellaneous. Such misinformation were fueled or encouraged by rumors, stigma, and conspiracy theories that have been reported with severe and intolerable behavior/activities with the individual and community, even with/by health care workers.

As noted above, misleading information about prevention has been a problem during the pandemic. Some people have claimed that certain supplements or natural remedies can prevent or cure COVID-19, despite a lack of scientific evidence to support these claims. False information about the severity of the virus also circulated during the pandemic. Social media has amplified misinformation without any regulation. Misinformation is always observed a step ahead compared to factual and accurate information (Wang et al., 2019). Some people have claimed that COVID-19 is no more dangerous than the flu or that it only affects certain groups, such as the elderly or those with pre-existing conditions (Ahmad et al., 2022; Ittefaq et al., 2020). With easy access through mobile phones and widespread Internet availability, people regularly consumed and produced content related to the pandemic. The prime intention behind the creation of untruthful content is to hide the facts (Ahmad et al., 2022). People shared unverified claims, myths, and propaganda unwillingly. It was found that altruism, instant news sharing, self-promotion, and socialization are predictors of sharing fake news (Awan et al., 2022). Unscientific claims and treatments not approved by the health agencies or experts led to potential danger (Ittefaq et al., 2020). Hate speech and racist activities towards a country, group, or community were observed (Lee, 2020).

Regular consumption of misinformation without scientific evidence or from unknown sources can be dangerous. It builds up beliefs in certain rumors and conspiracies that later turn into social movements, such as anti-vaccination, which results in further difficulties in dealing with a pandemic (Wang et al., 2019). This content has raised theories about the virus's origin, severity, and causes, as well as lockdowns, the migrant movement, 5G technology effect, and other global issues of interest to the public (Guarino et al., 2021). People then make decisions based on false and misleading information, which puts their health at risk. During the COVID-19

pandemic, infodemic was introduced as a new term for the abundance of false, fabricated, or manipulated content. The newly coined term infodemic elaborates on the risks and consequences of the unregulated and high transmission misinformation on various Internet-supported platforms (Zarocostas, 2020).

COVID-19-related scam incidents and cybercrime growing activities have been reported (Naidoo, 2020). Scammers typically tricked people to get their personal information, offering some kind of remedy or relief scheme from the government during the COVID-19 pandemic. People were highly concerned about their health and daily needs. High demand for hand sanitizer, oximeters, and other medical equipment increased its sale value. A rush was also observed in confectionary stores for daily-use items (Awan et al., 2022; Basch et al., 2020). These rumors and conspiracies resulted in a real shortage of daily-use items as people started stocking items, leading to a significant increase in demand and product price (O'Brien et al., 2020). Trust issues between healthcare workers and the affected community have also resulted in embarrassing behavior.

Emotional valence in misinformation supports propagation and increases transmission speed over various media platforms. The propagation speed of misinformation boomed (Shahi et al., 2021). Misrepresenting facts and manipulative and fabricated content affect user emotions (Ahmad et al., 2022). Extreme arousal of emotional valence makes people believe strongly enough to accept misinformation and reduces their ability to make a distinction between misinformation and factual information (Martel et al., 2020). Misinformation with negative valence transmits faster and stays longer than misinformation with positive or neutral valence (Kušen & Strembeck, 2018). Negative valence leads to increased despair, anxiety, and distress, making people more susceptible to misinformation and conspiracy theories. During the COVID-19 pandemic, rumors, stigma, anxieties, and misinformation also emerged on social media (Atlani-Duault et al., 2020). The Internet and social media also made it easier to spread misinformation quickly and widely, often without any fact-checking or verification. Misinformation spreads farther and faster than fact-based information, mainly due to the specific emotions (such as surprise and disgust) it elicits (Vosoughi

et al., 2018). This study also puts forward the content characteristics and emotional valence in health misinformation, especially COVID-19 misinformation.

The pandemic has highlighted the importance of accurate and timely information. Independent fact-checking initiatives and organizations collaborated under the International Fact-checking Network (IFCN) to counter misinformation collaboratively. A collaborative effort of 92 fact-checking organizations unearthed over 7,623 unique fact-checked articles regarding the pandemic as of July 2020 (Poynter, 2020). The IFCN reported fake news between January to April 2020 observed on various social media platforms categorized into five broad sections. These include: 1) content related to causes, symptoms, and cures for COVID-19, 2) spread of COVID-19, 3) government documents related to guidelines and law and order, 4) photos, videos, and comments of politicians/other influencers, and 5) conspiracy theories blaming a particular country, group, or community for the spread of COVID-19.

### **Theoretical Contribution**

The COVID-19 pandemic has presented a complex and multifaceted challenge that extends beyond its immediate health implications. The spread of health misinformation has reached unprecedented levels, with social media platforms serving as the primary vehicle for its dissemination. Theoretical frameworks that integrate insights from psychology, sociology, and communication studies can provide a comprehensive understanding of the factors contributing to the spread of health misinformation during the COVID-19 pandemic. The dynamics of social media algorithms have led to the creation of echo chambers that further reinforce preexisting beliefs and limit exposure to diverse perspectives (Nguyen, 2020). These echo chambers have facilitated the spread of misinformation, contributing to the formation of alternative realities that diverge from scientific consensus (Talamanca & Arfini, 2022).

Conspiracy theories surrounding COVID-19 have contributed significantly to the spread of misinformation, exploiting the public's fears and uncertainty. Also, these theories tend to lack powerful evidence or are based on prejudice, information is used as a weapon to manipulate the user. The same phenomenon was observed during the pandemic when conspiracies were not limited to a certain group, incident, event, issue,

etc. Confirmation bias, where individuals selectively interpret information that confirms their existing beliefs, plays a pivotal role in perpetuating these echo chambers and conspiracy theories (Douglas et al., 2019).

Confirmation bias is a cognitive bias that is particularly relevant in the context of health misinformation during the COVID-19 pandemic. It refers to the tendency of individuals to selectively search for, interpret, and recall information that confirms their preexisting beliefs or hypotheses, leading to the formation of echo chambers and the reinforcement of false beliefs (Nickerson, 1998). This bias can be particularly strong when individuals have a vested interest in maintaining their beliefs or when their beliefs are tied to their identity or self-esteem. Additionally, social media algorithms that present users with content that reinforces their existing beliefs can exacerbate confirmation bias. Cognitive biases came across when people sought information on social media platforms (Chou et al., 2021) with content that strong emotional valence transmits more easily (Alvi & Saraswat, 2020; Macfarlane et al., 2020). Promoting critical thinking and providing access to diverse perspectives can be effective strategies to address this bias. Public health campaigns that leverage social norms and highlight the importance of accurate information may also be effective in addressing the spread of health misinformation. This framework can inform the development of evidence-based interventions to combat health misinformation and promote public health literacy.

## **Objectives**

The aims of this research are as follows:

To discover the content characteristics of health misinformation during the COVID-19 pandemic

To observe different emotions, sentiments, and motivations involved in health misinformation during the COVID-19 pandemic.

## **Research Questions**

The study focuses on answering the following research questions to meet its objectives:

**RQ1:** What content characteristics were observed in health misinformation related to the COVID-19 pandemic?

**RQ2:** What sentiments and emotions were observed in health misinformation during the COVID-19 pandemic?

**RQ3:** What was the motivation/purpose behind spreading health misinformation related to the COVID-19 pandemic?

### **Research Methodology**

The current study used quantitative and qualitative methodologies. To understand the underexplored facets of misinformation during the COVID-19 health emergency, it is helpful to identify the primary components and conduct a qualitative analysis of their respective functions. The study objectives were achieved using the content analysis methodology. The application of content analysis facilitates the identification and examination of diverse forms of qualitative data. The data within a question may take the form of either verbal or visual information. It differentiates the data into various categories for better understanding (Harwood & Garry, 2003).

#### ***Inclusion/Exclusion Criteria***

For this study four fact-checking websites, (altnews.in, boomlive.in, fullfact.org, and logically.ai) were selected. All these websites are signatories of the International Fact-Checking Network (IFCN) and are easy to access, do good quality work, and are very popular in India. Content from these websites from the day the World Health Organization (WHO) declared COVID-19 as a global pandemic (i.e., March 11, 2020) to December 2020, was analyzed/observed.

#### ***Sample***

A total of 1,154 fact-checked stories were selected from the four websites and are the sample of the study. The first debunked story of each day from each website respectively was included in the analysis. If a fact-checked story had already been taken from one website and later found repeated on other websites, it was not considered in the

analysis. The fact-checked story taken from one website and later found repeated on other website was replaced by another story of same day or the following day.

## **Analysis**

### ***Tools***

A codebook (see Tables 1 and 2) of various variables was constructed through a data driven approach to help in the categorization of the content from the fact-checking websites. The codebook helped identify the characteristics of COVID-19-related misinformation. It includes content veracity, sentiments, emotions, and motivation for sharing misinformation.

### ***Procedure***

Secondary data (available in the archive section of website) was collected from already mapped fact-checking websites in accordance with the said inclusion and exclusion criteria. The data was classified and coded into different codes under the observed variables. The fact-checked stories were regularly observed from the websites in the following order: [altnews.in](http://altnews.in), [boomlive.in](http://boomlive.in), [fullfact.org](http://fullfact.org), and [logically.ai](http://logically.ai). Fewer articles were sampled from the latter two websites, because these websites sometimes did not publish any fact-checked stories for 3-4 days and then published only one story following day, resulting in a difference of 10-20 stories collected.

### ***Statistical Treatment of Data***

IBM SPSS Statistics 21 was used for the statistical treatment of data coded for content analysis. Variables with frequency and percentage were obtained through descriptive analysis.

## **Findings and Results**

The main findings and results of this study are as follows:

A total of 1,154 fact-check stories were considered for analysis. The availability of a similar number of articles from all four well-known fact-checking websites shows



they all worked during the pandemic. These fact-checking initiatives were devoted to providing factual information to the public. They busted misinformation that was aligned to spread rumors, myths, and conspiracies linked to the COVID-19 pandemic. While 296 (25.6%) of the analyzed articles came from altnews.in and boomlive.in each, slightly fewer articles were included from fullfact.org (276 stories, 23.9%) and logically.ai (286 stories, 24.8%).

### **Content Characteristics of Misinformation**

This study found five broad content characteristics in health misinformation during the COVID-19 pandemic (see Table 1). These are 1) the severity of the virus, 2) cure, prevention and treatment, 3) myths and rumors about vaccines, 4) health authorities' guidelines, and 5) personal and social impacts. Sub-categories follow these categories to classify COVID-19-related misinformation.

#### ***Severity of the Virus***

Various claims related to the origin and transmissions of COVID-19 were found in the primary phase of the COVID-19 pandemic. Table 1 shows that 7% of the total 1,154 fact-checked stories were linked to the origin and transmission of the virus.

#### ***Cure, Prevention, Treatment***

We found that misinformation about treatment and prevention was prevalent on social media during the COVID-19 pandemic, with 30% of misinformation regarding the COVID-19 pandemic falling into this category, including health tips, infection myths, tests, reports and treatment, cases and data, cure tips, precaution, medical equipment, clinical trials, mask issues, and death reports (see Table 1). This category included fact-checked stories related to home remedies, like eating garlic or drinking alcohol or gargling vinegar and rose water or vinegar and salt to kill the virus in the throat.

#### ***Myths and Rumors Regarding Vaccines***

We found some misinformation regarding vaccine discovery, vaccine effect and safety, and vaccine diplomacy. Table 1 shows that 5% of fact-checked stories were found to be related to vaccine issues.

**Table 1**

*Content Characteristics of Health Misinformation*

Categories	Sub-Categories	n	%
Severity of virus	Origin and transmission of disease	81	7
Cure, Prevention, Treatment	Health tips		
	Infection myths		
	Test, report, and treatment		
	Cases and data	345	30
	Cure tips		
	Precaution		
	Medical equipment		
	Clinical trials		
	Mask issues		
	Death reports		
Myths and rumors about vaccines	Quarantine		
	Vaccine discovery		
	Vaccine effect and safety	54	5
Health authorities' guidelines	Vaccine diplomacy		
	Government/WHO guidelines		
	Law and order issues	145	13
Personal and social impact	Action/schemes from the government		
	Shortage of daily items		
	Cybercrime	529	45
	Influencers' statements		
	Behavior with/by health workers		
	Migration of public		
	Miscellaneous		
		1154	100

### ***Health Authorities' Guidelines***

Misinformation about health authorities' guidelines were frequently shared during the COVID-19 pandemic. Several social media posts with the fake label of the World Health Organization (WHO) made some claims regarding COVID-19 severity, lockdown, vaccines, and others. It was not limited to the WHO, but several health agencies' fake reports and guidelines were circulated on social media. Law and order guidelines were also manipulated. Action/schemes from the government to help people of other states/cities, relief funds, etc., were also shared with false narratives/context or connections to misguide people during a pandemic. It was found that 13% of misinformation stories (see Table 1) were linked to these categories.

### ***Personal and Social Impact***

At the onset of the COVID-19 pandemic, misinformation about personal and social impacts was also spread. This category included the sub-categories related to a shortage of daily items, cybercrime, influencer's statements, behavior with/by health workers, migration of the public, and others. Our results show 45% of misinformation stories (see Table 1) found by the fact-checkers were included in this category.

### **Valence and Emotions in Health Misinformation**

Valence, particularly negative valence, in misinformation plays a vital role in spreading health misinformation. Misinformation from fact-checking websites was classified by valence, that is, as positive, negative, or neutral (see Table 2). The majority (67.5%) of fact-checked stories had a negative valence.

**Table 2**

*Emotional Valence in Health Misinformation*

<b>Variables</b>	<b>n</b>	<b>%</b>	
<b>Valence</b>	Positive	239	20.7
	Negative	779	67.5
	Neutral	136	11.8
	<b>Total</b>	1154	100.0
<b>Emotions</b>	Anger	235	20.4
	Surprise	349	30.2
	Fear	322	27.9
	Sadness	77	6.7
	Feel-good	106	9.2
	Provocation	65	5.6
	<b>Total</b>	1154	100.0
<b>Motivation</b>	To Warn	343	29.7
	To Care	144	12.5
	To Confuse	328	28.4
	To Clarify	83	7.2
	To Support claim	206	17.9
	To get a second opinion	45	3.9
	For entertainment	5	0.4
<b>Total</b>	1154	100.0	

We found six different emotions in COVID-19 misinformation (Table 2). These are anger, surprise, fear, sadness, feeling good, and provocation. Our results showed that misinformation stories were most often surprising (30.2%). Second, 27.9% of fact-checked stories elicited fear related to the pandemic. Anger was the emotion observed in 20.3% of fact-checked stories. While 9.2% of stories could be described as feel-good stories, 6.7% of fact-checked stories primarily elicited feelings of sadness, and 5.6% of fact-check stories result in provocation (see Table 2).

## **Motivations in Misinformation**

The study found the following motivations behind misinformation: to warn, to care, to confuse, to clarify, to support the claim, to get a second opinion, and for entertainment. During the pandemic, misinformation intended to warn was the most common (29.7%). Additionally, 28.4% of fact-checked stories were used to confuse (Table 2).

Whereas 17.9% of misinformation stories were spread to support claims already made in favor/against some personality/group/community, 12.5% of misinformation was shared with the motivation of caring for people during the pandemic, 7.2% of stories were to clarify some situation, 3.9% of stories were shared to get secondary opinions, and only 0.4% of misinformation for entertainment purposes (see Table 2).

## **Discussion**

### **Content Characteristics of Misinformation**

Our research revealed the prevalence of misinformation pertaining to the severity of the virus, encompassing conspiracy theories and unfounded assertions regarding its origin and transmission, which matched the findings of other researchers (Romer & Jamieson, 2020). Conspiracy theories and unsubstantiated claims about the severity of the virus suggest that misinformation is fueled by people's tendency to seek alternative explanations or minimize the actual threat, possibly as a psychological coping mechanism (Islam et. al, 2021; Shahsavari et. al, 2020). It was observed during the analysis there were a number of stories related to various issues, similar to ones identified by other research, such as "Pet animals or eating bat soup or poultry eggs are the sources of corona virus," and "Coronavirus from imported goods, novel coronavirus is a bioweapon funded for further vaccine sales" that were observed (Islam et al., 2020).

The prevalence of misinformation pertaining to the cure, prevention, and treatment of COVID-19 was noteworthy, encompassing a range of unverified

treatments, self-made claims, and home remedies. In their search for effective methods to combat the virus, individuals may be motivated by a desire for quick solutions and susceptible to deceptive claims due to the prevalence of misinformation regarding treatments and remedies (Awan et. al, 2022). Our categorizations of the results were also similar to others' findings. Hansson et al. (2021) also identified stories related to protective measures (such as the use of masks and sanitizer), messages promoting the use of potentially harmful self-made home remedies against the virus, misrepresentations of the origin and transmission process of the virus, severity of COVID-19, scammers exploitation, and hatred/racism activities. Charquero-Ballester et al. (2021) clustered misinformation into six types: cures, viruses, vaccines, politics, conspiracy theories, and others. Our findings regarding home remedies were similar to Gupta et al.'s (2020) who identified stories such as "Drinking cow urine and cow dung can cure corona virus" and "Vitamin C or avoiding cold or preserved food and drinks, such as ice cream and milkshakes may prevent infection," which were highly propagated in personal and peer groups.

Although accounting for only 5% of the fact-checked stories in our sample, vaccine-related misinformation constitutes a noteworthy category, because unfounded assertions regarding vaccine discovery, safety, and effects have been found to be a contributing factor to vaccine hesitancy (Sallam et. al, 2021). Claims similar to the ones we found have also been noted by others. These stories include "New coronavirus vaccines already exist," "Pneumonia vaccines are effective against the Wuhan coronavirus," "India has sent a vaccine to several countries," and had high user engagement. Supporting claims that individuals should avoid COVID-19 vaccines because they lead to infertility or are a bioweapon to control the growing population etc., received attention on social media (Romer & Jamieson, 2020). The reports related to the development, progress, policy, and challenges of a COVID-19 vaccine trial, phases and participants of trials were included under this category (Islam et al., 2021). Although more misinformation related to vaccines appeared as vaccines became available, these earlier stories still negatively impacted the general public's attitude towards vaccines in the fight against the novel pandemic (Shahsavari et al., 2020). This shows that misconceptions play a role in how people feel about vaccinations (Hansson et. al, 2021). Vaccine hesitancy resulted as a main harmful effect of misinformation

that regularly built up conspiracy theories. Social media dependency was the main culprit of misinformation about vaccines to control COVID-19, which was linked to vaccine hesitancy (Sallam et al., 2021).

The research brought to light false reports and manipulated data that can potentially lead to confusion and mistrust regarding the guidelines set forth by health authorities. False reports and altered statistics that mislead and mistrust of health authorities' standards suggest that specific individuals or groups purposefully spread misinformation to undermine institutional authority or promote alternative narratives, as suggested by others (Islam et. al, 2020; Sallam et. al, 2021).

The study revealed the presence of misinformation regarding the personal and social ramifications of the pandemic, which could lead to adverse outcomes such as panic, scarcity, and societal turmoil. Misinformation about the pandemic's personal and social effects could aggravate panic, scarcity, and turmoil in society by exploiting people's worries and anxieties (Basch et. Al, 2020). It is evident that the limited availability and reach of credible information results in an information vacuum creating an absence of sufficient high-quality data available to the public (Chou et al., 2021).

### **Valence and Emotions in Health Misinformation**

Stories with a negative valence were the majority of stories included in our study, highlighting the possibility of fearmongering and amplification of negative emotions in the context of health misinformation as suggested by others (Martel et al., 2020). Fear-mongering and the amplification of negative sentiments may attract attention, engage audiences, and spread incorrect information (Charquero-Ballester et al., 2021). Negative emotional valence in misinformation increases its stay time and user interaction on social media more than neutral or positive emotional valence (Kušen & Strembeck, 2018). Misinformation posts linked to cures, prevention, and treatments have a more positive emotional valence (Charquero-Ballester et al., 2021). The facts were deliberately misrepresented to play with user emotions (Ahmad et al., 2022). Positive and negative valences also make people more strongly believe in misinformation and reduce their ability to distinguish manipulated content from

factual content (Kanozia et al., 2021; Martel et al., 2020). People have aggressively reacted to posts claiming something related to particular communities or groups. Crises involve strong emotions such as fear, sadness, and anxiety that are included in information, and misinformation can make people feel more secure.

The dissemination of health misinformation can be attributed to various factors such as warning and confusion (Kušen & Streambank, 2018). This implies that individuals may share misinformation with the aim of alerting others or creating confusion. Health misinformation is spread for various reasons, including warning and confusion. This suggests that misinformation can serve different purposes for different people, like others have noted (Chou et. al, 2021). The stories that made claims against specific groups were likely bolstered by confirmation bias, which acts as a barrier to individuals accepting factual information (MacFarlane et al., 2020).

### **Conclusion**

The present study delved into the multifaced landscape of health misinformation amid COVID-19 pandemic. The study considered independent fact-checking initiatives fighting against misinformation. Fact-checkers regularly identified false information related to COVID-19 in 2020 and provided verified and authentic information to the public. These efforts were helpful in providing the truth about various issues, as well as developing self-awareness among social media users to encourage them to stay away from the trap of conspiracies and propaganda.

The study depicts that most of the health misinformation was based on severity of the virus, cure, prevention, treatment, vaccination, and health authorities' guidelines from unidentified and unreliable sources. Fake diagnosis, treatment claims, including self-made home remedies based on social media posts received high engagement and were liked, shared, followed, and got fast attention from users in the time of the pandemic. This study guides users to verify every piece of information by checking information from trusted, scientific, and verified official sources before incorporating advice from such stories in their daily lives.



A negative environment was developed through regular consumption of misinformation that eventually effects people personal and social lives. The anti-vaccination movement, shortage in clinical and medical equipment, the rush for daily items, cybercrime frauds, etc. took place on the grounds of unverified claims and conspiracies linked to the COVID-19 pandemic worldwide. Negativity can harm social media users as well as the general public. The rapidly increasing cases of COVID-19 and the number of death reports separating individuals from their family and peer groups elicited fear in many people, as well as anger. It also highlights the nuanced dynamics shaping public perception due to the interplay of positive, negative, and neutral valence, with emotions (anger, fear, and surprise) and motivations (such as warning, care, confusion, and entertainment). Further our findings show that there is a need for a comprehensive understanding of the psychological factors influencing the spread of misinformation.

This study emphasizes the importance of cultivating information literacy in society while recognizing the cognitive biases that surface during information consumption on social media platforms. Future studies can focus on a more qualitative approach that can be helpful to get deeper insights into factors shaping health misinformation. A more informed and discerning public aligned with the fact-checking community will help in building an information-literate society.

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