Framing the Social Reality of COVID-19

by

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ABSTRACT

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Beyond the health crisis itself, the COVID-19 pandemic has also given rise to a crisis of information, as public health authorities around the world scramble to control the flow of information about the evolving science of the disease, the interpretation of statistics on infections, hospitalizations and deaths, and the framing of restrictions on movements and gathering, often through the media. Unlike prior infectious disease outbreaks, COVID-19 provides a particularly intriguing area of research because it has affected virtually all parts of the globe. Drawing on a qualitative content analysis of 127 articles, this study explores how the misinformation problem and vaccine hesitancy was written in two national news media sources: The Globe and Mail (Canada) and The Hindu (India). While the two papers framed misinformation and vaccine hesitancy in similar ways, there were some key differences. Both focused on identifying the 'right' experts, understanding why people were not listening to the right experts, and what should be done to remedy the misinformation and vaccine hesitancy problem. In India disseminating reliable information to large remote and isolated populations were met with high rates of illiteracy while in Canada problems arose from increasing language barriers and the lack of culturally appropriate signage. The Hindu urged for transparency and accountability from public health authorities while there were no mentions of this in The Globe and Mail. By investigating how the media framed the misinformation and vaccine hesitancy problem, this thesis highlights how media attempt to inform and shape the behaviours and opinions of a population.

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INTRODUCTION: INVESTIGATING THE COVID-19 PANDEMIC

In December 2019, a novel pathogen emerged, and within weeks, this led to the biggest

global health crisis seen to date. Claiming over 4,927,723 lives as of October 22, 2021, the

Severe Acute Respiratory Syndrome Coronavirus (SARS-Cov-2) shares genetic similarities with

the coronavirus responsible for the 2003 SARS outbreak (WHO, October 23, 2021). Beyond the

health crisis itself, the COVID-19 pandemic has also given rise to a crisis of information, as

public health authorities around the world scramble to control the flow of information about the

evolving science of the disease, the interpretation of statistics on infections, hospitalizations and

deaths, and the framing of restrictions on movement and gatherings, often through the media.

Indeed, at the beginning of the pandemic, the World Health Organization (WHO) urged against

the potential dangers of media misrepresentation and misinformation (WHO, October 23, 2021).

Previous infectious disease outbreaks have led to a dynamic field of literature about

media representations and their role during public health crises. It includes past medical

anthropological studies that have examined the role of the media in framing pandemics.

However, COVID-19 provides a particularly intriguing area of research because, unlike the

previous SARS outbreaks or the 2014 Ebola outbreak, COVID-19 has affected virtually all parts

of the globe. Moreover, in modern times, no other infectious disease outbreak has overwhelmed

healthcare systems to the extent that COVID-19 has. With pandemics likely to continue to

increase in frequency and severity in a globalized world, it is of utmost importance that scholarly

literature guides further examination of the media's role in framing and shaping behaviours of a

population during a pandemic. To that end, in this thesis, I ask how do the media in Canada and

India frame, and play a role in addressing, the challenge of informing and shaping the behaviours

of a population during the pandemic? More specifically, how do they frame and play a role in addressing the misinformation problem and vaccine hesitancy?

In this research project, I start with establishing a theoretical framework. I first consider the role of the media, specifically, how the media shapes our worldview and the politics of knowledge and expert knowledge. The second section identifies agenda-setting and framing theory. The third section identifies the role of the media in public health, including Muzzatti (2005) and Smith (2006) on prior infectious disease outbreaks. Within this third section I also explore Sell et al. (2020) on the media's role in framing and addressing vaccine hesitancy and misinformation in prior infectious disease outbreaks. The fourth section explores the media's role in COVID-19 and refers to studies that have already been conducted on the media and COVID-19, specifically with regards to the problems of misinformation and vaccine hesitancy. I then move on to my method of qualitative content analysis and justifications for using this research method. Drawing on these research methods, I then present my findings and analysis. I argue that both media outlets similarly frame the misinformation problem and vaccine hesitancy as a matter of people not listening to the right experts, b) define the right experts, and c) use their knowledge to regulate and control people's conduct. Both outlets focus on identifying the 'right' experts, understanding why people were not listening to the right experts, and what should be done to remedy the misinformation and vaccine hesitancy problem. The last section, the conclusion, contextualizes the relevant literature by demonstrating its contribution to critical health studies, media studies and the sociology of public health.

Theoretical Framework

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The Role of The Media and the Politics of Knowledge

Media has continued to evolve in contemporary times, as globalization and its increasing communication have led to larger potential audiences, resulting in more national and international news media at the expense of smaller local news media networks. As ever, the language and messages communicated by media institutions shape our cultures, politics and social lives (Bell, 1991). Therefore, examining the role of the media in relaying information and knowledge to the public remains crucial, as media has a significant effect on how the broader public understands topics and issues (Humphries, 2015). With most people around the globe using news media as a primary access point into ongoing domestic and international affairs, there is a need to analyze the subsequent politics of media's knowledge and expert knowledge (Xue & Xu, 2021). This topic is best captured by Michel Foucault's work on knowledge and power, in which he claimed knowledge and power are constructed in sets of social practices (May, 2011).

In *Madness and Civilisation*, Foucault proposed that different periods throughout history make up different systems of knowledge (epistemes) (Hobbs, 2008, as cited in Hall, 1997). Essential to Foucault's work on representations of knowledge is his concept of discourse. Stuart Hall (1997) provides an important understanding of Foucault's notion of discourse:

> a group of statements which provide a language for talking about – a way of representing knowledge about – a particular topic at a particular historical moment… Discourse is about the production of knowledge through language. But … since all social practices entail *meaning*, and meanings shape and influence what we do - our conduct - all practices have a discursive aspect. (Hall, 1992, p. 291, as cited in Hall, 1997, p. 44)

For Foucault's conception of discourse, ways of thinking and practices are just as crucial as language, as the manner in which a meaning and meaningful actions are made significant is within the realm of a discourse (Hall, 1997). As Hall explains, just as discourse

> 'rules in' certain ways of talking about a topic, defining an acceptable and intelligible way to talk, write, or conduct oneself, so also, by definition, it 'rules out', limits and restricts other ways of talking, of conducting ourselves in relation to the topic or constructing knowledge about it. (Hall, 1997, p. 44)

What concerned Foucault was the "production of knowledge (rather than just meaning) through this discourse (rather than just simply language)" (Hall, 1997, p. 42). In later work, Foucault emphasized how knowledge was utilized through discourse and discursive practices in particular institutional settings/situations to regulate and control people's conduct (Hall, 1997). Specifically, Foucault maintained that knowledge is inextricably linked to power (Hall, 1997). This interdependent relationship between knowledge and power has a substantial influence on modern society. Once knowledge is employed to regulate the conduct of others, it contains regulatory and disciplinary practices (Hall, 1997). In other words, these bodies of knowledge are constructed, characterized and controlled through disciplinary practices. Understanding the connection of knowledge to power makes it possible to see how knowledge becomes legitimized and has the ability to make itself true. This social construction of knowledge and expert knowledge exposes the ways in which news "reports receive their validation when they contain authoritative sources" (Seale, 2002, p. 4). Using Foucault's discourse, helps explain the misinformation problem and vaccine hesitancy by understanding how media discourse rules in certain ways of talking about a topic, defining the acceptable and intelligible way to talk, write or conduct oneself, while at the same time rules out by restricting and limiting other ways (Hall, 1997). It allows us to uncover how the media validates certain knowledge while restricting validation of others, in other words how they produce this knowledge through discourse.

Framing theory and Agenda-setting theory

Framing theory "suggests that the way in which information is framed can have a significant impact on the way that people process information and on their subsequent actions" (Institute of Medicine, 2002). The ways the media direct the audience to interpret the information they communicate, is an essential component of framing theory.

de Vresse (2005) argues that the framing concept is rooted in communicative processes. Communication is not static but rather a fluid and dynamic process (de Vresse, 2005). This dynamic process involves "frame-building (how frames emerge) and frame-setting (the interplay between media frames and audience predispositions)" (de Vresse, 2005, p. 51). There are several locations for frames, such as "the communicator, the text, the receiver, and the culture" (de Vresse, 2005, p. 51), all of which are integral to a process of framing that include separate stages. These separate stages consist of: "frame-building, frame-setting and individual and societal level consequences of framing" (de Vresse, 2005, p. 52). Frame-building is the elements that influence the structural standards of news frames (de Vresse, 2005). This frame-building process occurs in a constant and ever-evolving relationship between journalists, elites and political elites (de Vresse, 2005). The results of this dynamic frame-building process are the frames manifested in the text (de Vresse, 2005). The frame-setting stage "refers to the interaction between media frames and individuals' prior knowledge and predispositions" (de Vresse, 2005, p. 52). In the news, these frames can impact understandings, interpretations and assessments of issues and events (de Vresse, 2005). With regards to this frame-setting stage, literature has examined the extent to which, and under what conditions/situations audiences reflect frames made available to them. That said, there are particular consequences of framing at individual and societal levels. Individually, implications may be the significant alteration of attitudes about an issue due to

exposure of specific frames. "At the societal level, frames may contribute to shaping social level processes, such as political socialization, decision-making and collection actions" (de Vresse, 2005, p. 52).

In other work, Entman (1993) suggests that selection and salience are two fundamental characteristics of framing (Poirier et al., 2020). He suggested that to "frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation and/or treatment recommendation" (Entman, 1993, p. 52 as cited in Poirier et al., 2020, p. 366).

Agenda-setting theory is a similar theoretical framework to framing theory but is more aggressive and forceful in its approach and societal impacts. Agenda setting theory asserts that the media's representation and role in framing specific priorities are built upon the ability of the media to set the agenda for public debate and discussion (Barnes et al., 2008). Barnes et al. (2008) called this: "media agenda-setting, which refers to the deliberate coverage of topics or events with the goal of influencing public opinion and public policy" (Barnes et al., 2008, p. 605). This is a concerning area of inquiry, in that, the media does not always or only reflect reality in a transparent manner, rather, they also continuously filter and shape it (Barnes et al., 2008). The media sways attention and focus to a select number of issues it sees as important, and as a result, steers the public to perceive these issues as a fundamental priority. The discourses created by the media, in other words, rule in and rule out.

Xue & Xu (2021) build on an agenda-setting perspective, arguing that the information which the media relay plays a critical role in the "construction of our pictures of reality" (McCombs, 2014, p. 72, as cited in, Xue & Xu, 2021, para 7). The public's agenda is impacted by the media's agenda, specifically with respect to the political salience of issues (McCombs et

al., 2014). Therefore, the information the media relays to the public is not impartial, but rather a

"specific reading of social events" (Humphries, 2015, p. 2). While media coverage does not

directly determine interpretations and perceptions of issues, it certainly has an agenda-setting

impact (Whelan, 2018). Key to this impact is understanding that media relays specific accounts

of reality to its audience, not reality in itself (Whelan, 2018). As a result, this shapes a particular

way of thinking within the populace.

It is crucial to distinguish between frames and agenda-setting, as the frame suggests the

controversial nucleus of the issue (de Vresse, 2005); while agenda-setting theory is concerned

with the "salience of issues, framing is concerned with the presentation of issues" (de Vresse,

2005, p. 53). Agenda-setting determines what to think about (agenda), while framing focuses on

what the audience thinks of events/issues, and how to think of these events/issues. Using agenda

setting theory we can understand how both media outlets set the agenda of misinformation and

vaccine hesitancy problem as a top priority. Using framing theory, we can understand how the

media frames what to think and how to think of the misinformation and vaccine hesitancy

problem. In other words, how Canadians and Indians interpret and understand the

misinformation and vaccine hesitancy problem.

The Role of the Media in Public Health

As the forgoing discussion showed, media plays a fundamental role in disseminating

information, and therefore is a chief actor in society. Lowrey et al. (2007) discuss the role of the

media in notifying the public through the analysis of prior public health emergencies. Examples

include the 2004 tsunami which killed over 300,000 (Lowrey et al., 2007) and the 2001 attacks

on the World Trade Center, which at first glance does not appear to be related to public health

emergencies, however, the aftermath and trauma exacerbated by the media constituted precisely that; a public health emergency. After convening with different health experts, advisors and officials, Lowrey et al. (2007) reported that "public health officials realize that the media can shape public opinion and influence decision making that can influence population health and welfare" (Lowrey et al., 2007, p. 2-3). The media can act as a significant conduit for providing information that the public needs during public health crises (Lowrey et al., 2007). This reliance on media must remain under constant critical scrutiny.

Representations and communication of key messages in the media present an essential tool for shaping and regulating individuals' behaviour in response to public health measures (Thomas et al., 2020). Seale (2002) explores the relationship between health and media, suggesting individuals' "behaviour may be formulated in large part from resources drawn from various media sources" (Seale, 2002, p. 514). A particular reading of public health events may be advanced and encouraged by certain interest groups seeking to exert influence over populations (Seale, 2002). Media representations during public health emergencies are not cemented truths, rather, they are partial truths. What this means is that as individuals living in society, "we must decide to trust or distrust media messages in much the same way as we decide to trust or distrust medical advice or other expertise" (Seale, 2002, p. 514).

There can be no doubt that media coverage has "direct effects on public attitudes, which in turn can influence health policies and practices" (Zhang et al., 2020, p. 119). For Zhang et al. (2020), "the media has the ability of defining problems, identifying causes, and suggesting remedies, thereby shaping public opinions about who should be held accountable for causing and solving problems" (Zhang et al., 2020, p. 119). This threefold typology – define-cause-remedy – will be returned to below.

During infectious disease outbreaks, media shape the agenda of public discourses by either strengthening or contrasting what is happening within different scientific realms (Crabu et al., 2021). In this respect, modern media are productive constituents occupied in the "exchange, reproduction and transformation of the (social) meaning of health-, medicine- and pandemic-related content" (Crabu et al., 2021, p. 2). Thus, we can see that news media certainly influences the governance of infectious disease outbreaks (Crabu et al., 2021).

In his work on responding to global infectious disease outbreaks and lessons to learn from SARS in 2003, Smith (2006) argues that the public's perception of risk is largely a result of the role that media and official organizations play in framing disease outbreaks. With SARS, mortality and morbidity rates were low, however, it exercised a profound mental and emotional toll on society (Smith, 2006). Two elements of information about the illness are responsible. First, the quick spread of information via contemporary forms of media and communication technologies preserved and prolonged focus on the growth and transmission of disease, but "also meant that conflicting and confusing information was disseminated in the urgency to report in 'real time'" (Smith, 2006, p. 3117). The second element concerns the lack of adequate medical information on SARS (Smith, 2006). Although information was rapidly dispatched, "often this was not robust scientific information" (Smith, 2006, p. 3117). Rather, much information generated by the media during infectious disease outbreaks is based on opinion and preliminary findings (Smith, 2006).

Similarly, Muzatti's (2005) study on the role of the American media during SARS asserts that sensationalistic and exploitative coverage is a hallmark of media. While the CDC claimed that the media was pivotal in reporting updated and reliable news to the public (Gerberding, 2003, as cited in Muzzatti, 2005), in actuality, "the media's coverage was often characterized by

little more than sensationalism and xenophobic fear-mongering" (Muzzatti, 2005, p. 124). The American media focused on singular incidents such as infected employees in a Chinese restaurant in Boston (Muzatti, 2005). When media coverage of issues fixates on specific individuals or groups, the backlash from the public tends to condemn these specific individuals or groups (Whelan, 2018).

Despite scientifically available evidence, past infectious disease outbreaks have shown that lapses in public trust, particularly with regards to vaccine hesitancy, often result from "the media messages one consumes which can present and continually reinforce false claims" (Dhanani & Franz, 2020, p. 3). Contemporary forms of media and communication technologies can preserve and prolong focus and fear of the disease (Muzatti, 2005). For example, the internet and social media have enabled the "potential to amplify the dissemination of misinformation by facilitating the easy and rapid release of non-credible information" (Dhanani & Franz, 2020, p. 3). As key channels of communication between health officials and the public (Lowrey et al., 2007), the SARS outbreak showed "how threats to public health can be manufactured" (Humphries, 2015, p. 6), with health experts and journalist often "each having their own agenda" (Humphries, 2015, p. 6). The urgency to report in real time in an increasingly digitized world, has aided a network of misinformed skepticism and distrust amongst populations, ranging from risks of the disease itself, to the effectiveness of vaccines (Humphries, 2015). Prior studies have well documented that misinformation plays an important role in fueling vaccine hesitancy (Sell et al., 2020).

Misinformation and Ebola

Misinformed distrust in vaccines and public health authorities is evident in Sell et al. (2020) study on the 2013-16 Ebola epidemic and American media frames. In examining the case

of Ebola and American media frames, Sell et al. (2020) provide insight into the significant problems of misinformation. In the 2013-16 West Africa Ebola epidemic, misinformation around Ebola was rife (Sell et al., 2020). Despite the significantly low case numbers within the U.S, widespread fear and media attention advanced dissemination of Ebola related misinformation (Sell et al., 2020). Misinformation distorts and "contradicts the best expert evidence available at the time and can lead to individual misperception or 'factual beliefs that are false or contradict the best available evidence in public domain" (Sell et al., 2020, p. 2). The increasing emergence of the digital age and new communication platforms and technologies have enabled networks of misinformation spreaders who "often share similar opinions and cultural beliefs" (Sell, 2020, p. 2). With Ebola misinformation common examples included "false treatments; misinformation about the intentions and motives of healthcare workers treating Ebola patients; and rumours about the Ebola epidemic being a hoax" (Sell, 2020, p. 2). Misinformation concerning the Ebola outbreak in the Western context found that "misperceptions about the disease transmission, or inaccurate information about experimental Ebola vaccines was common, potentially leading to fear, uncertainty, and confusion amongst the public" (Sell, 2020, p. 2).

The Media's Role in COVID-19

The WHO claims that we are in the midst of an 'infodemic', which they refer to as "too much information including false or misleading information in digital and physical environments during a disease outbreak" (WHO, 2021, p. 23). COVID-19 has presented us with an overabundance of conflicting information from different media sources, making it hard for the public to trust news media and make informed health decisions.

Bridgman et al. (2020) expand on the notion of 'infodemic' and analyze the social product of media and misinformation. They claim that the worldwide spread of misinformation

poses a significant issue for public health (Bridgman et al., 2020). Using a nationally representative survey that questioned individuals about "common misperceptions regarding Covid-19, risk perceptions and social distancing compliance" (Bridgman et al., 2020, p. 2), their study provided valuable insight into the media's role in 'infodemics', such as the ability of misinformation to change transmission rates (Bridgman et al., 2020).

Basch et al. (2020) analyze key terms and headlines in 5,285 articles from the Wall Street Journal and New York Times published between January and March 2020 to better understand the role of the media and the fluidity of information about COVID-19 they communicate (Basch et al., 2020). They studied particularly the key role that the media plays in "both breaking news stories and analyzing those stories from a variety of perspectives: social, economic, health, political, policy and environmental" (Basch et al., 2020, p. 1091). As COVID-19 rates rose around the world, so did an array of accurate and false information (Basch et al., 2020). Due to the rapidly evolving and ongoing nature of COVID-19, coupled with the plethora of unknowns, information communicated on COVID-19 "became rife with rumours and infiltrated consumers with confusion and information overload" (Basch et al., 2020, p. 1089).

Crabu et al. (2021) use mainstream media during the COVID-19 pandemic as a point of entry into the complex relationship between science, politics, and the public. Through datasets of all the COVID-19 articles published by eight major Italian newspapers, they identified and analyzed keywords based on a topic modelling technique (Crabu et al., 2021). The early media message about COVID-19 was that a concerning virus was emerging in Wuhan, China based on scientific evidence. However as time went on, the focus switched from the science of a new pathogen to one regarding the social and economic impacts of the virus (Crabu et al., 2021). COVID-19 makes it even more apparent that public health and narratives about medicine and life

sciences "in diverse media sources seem to have played a critical role in shaping the collective meaning of this emerging global health emergency" (Crabu et al., 2021, p. 2). The authors conclude that COVID-19 has uncovered the multiplicity of data and interpretations that mainstream media use to "promote diverse implicit or explicit interpretative frames about the health emergency" (Crabu et al., 2021, p. 2).

The speed with which the novel coronavirus (and public reports about it) emerged and spread around the world meant that rapidly evolving science (and expedited publications and trials) was exposed to public scrutiny and interpretation sooner than usual. The internet facilitated the simultaneous uncontrolled spread of unverified information from a wide variety of sources. Thus, the urgent pursuit of scientific knowledge and expert information contrast with "a cacophony of uninformed opinions on the same topic" ("The tightrope," 2020, p. 471). These two information sources have become framed and represented as expert knowledge versus opinion. The media, as a tool to disseminate reliable information to the public, thus confronts a question: what is considered trustworthy and reliable information?

To study this question about the evaluation of different kinds of information, my thesis zeroes in on vaccine hesitancy. One of the reasons I chose vaccine hesitancy was because vaccines have been framed as imperative to ending the pandemic (World Health Organization). In particular, the World Health Organization suggested that in order to change the pandemic's trajectory, and achieve "the fastest and fullest recovery possible, requires addressing SARS CoV-2 transmission as well as COVID-19 disease…This necessitates a broad scope of vaccination, beginning with at-risk populations, then adults and as a next step adolescents" (WHO, 2021, p. 5). The World Health Organization and other public health agencies around the world have highlighted the necessity of population immunity, which means vaccinating more

broadly, and "this requires fully vaccinating at least 70% of the world's population" (WHO, 2021, p. 3)

Another reason for focusing on vaccine hesitancy instead of all realms of misinformation was the result of the new development of vaccines for COVID-19, and the fact that it is unprecedented (Medina et al., 2020). With the media being a tool in educating the public regarding the efficacy of vaccines, their role in addressing the vaccine hesitancy problem is particularly intriguing. In an increasingly populated and globalized world, coupled with traditional and digital news media's ability of reaching people at the grassroots – as "2.5 billion read a newspaper in print regularly and 4.13 billion people have access to the internet" (Medina et al., 2021, p. 1) – the focus of agenda setting and framing theory as a framework demonstrates how media can be a key tool in "disseminating crucial information about COVID-19 vaccination program to build public trust" (Medina et al., 2021, p. 1). By focusing on the media and their role in shaping and addressing vaccine hesitancy, we can explore how "providing constant and repetitive reporting shapes public opinion and moves people to act based on the information accessible to them…Media directs the centrality of information, which, consequently, has a significant impact on their cognition, emotion and behaviour" (Medina et al., 2021, p. 1).

'Infodemics' have already occurred in one way or another in previous epidemics, "but what's happening right now is something of a global scale, where people are connected through different means and share information more quickly…this has created a new situation where we are rethinking and reshaping our approach to managing infodemics in emergencies" (WHO, 2020, para. 6). Therefore, even with the world laser-focused on distributing safe and effective vaccines, misinformation on COVID-19 continues to spread on all fronts, particularly

vaccination (WHO, 2020). The examination of 'infodemics' brings me to the very crux of this research paper.

I turn now to my research question: how do the media in Canada and India frame, and play a role in addressing the challenge of informing and shaping the behaviours of a population during the pandemic? More specifically, how do they frame and play a role in addressing misinformation and vaccine hesitancy?

METHODOLOGY

SELECTION OF SOURCES AND SAMPLING STRATEGY

This research process consisted of qualitative content analysis of newspaper articles sampled from two national media sources, comparable in terms of coverage and reliability and available online. The first *The Hindu,* one of India's national newspapers, which was published from close to the origins of the outbreak, and *The Globe and Mail*, which was published from much farther away in Canada. *The Hindu* was chosen over other Indian newspapers because it is published in English and is available on the Dow Jones Factiva Academic database. The Globe and Mail was chosen as it is one of Canada's national legacy newspapers and is also found on the Factiva news media database. Factiva is a credible online media source and newspaper publication database, therefore, in finding both on Factiva, I ensured consistent sampling. Moreover, both news media sources are privately owned, internationally recognized and reputable newspapers. They are also relatively comparable in age, with The Hindu 144 years old and The Globe and Mail 86 years old.

As the pandemic extended over multiple months, limiting the number of articles collected was crucial. The feasible and practical number of articles collected was a one-year time period: September 1st, 2020, to September 1st, 2021. During the first six months of the pandemic, researchers grappled with identifying the virus and its scientific terms with findings rapidly evolving. Starting my analysis in September 2020 ensured consistency when coding, as vaccines were being developed, administered and key terms were well established. With the COVID-19 pandemic presenting us with an ever-growing field of news media, it was necessary to limit the data collection to a specific time frame. This left me with 65 articles from the Globe and Mail and 63 articles for The Hindu.

Given the study's focus, I searched this corpus for the terms COVID-19 AND MISINFORMATION AND VACCINES. While I did not search vaccine hesitancy specifically, after combining misinformation and vaccines, vaccine hesitancy was a major theme. Misinformation is the most common word found to capture/depict the challenges associated with the 'infodemic,' and INFODEMIC itself as a keyword narrowed the results too substantially.

In the analysis I used a hybrid approach, combining emergent and deductive coding. First, I read the sources and coded them according to how I viewed and interpreted their content (at the time of reading). The codes that were used to categorize the data emerged from the data, as my initial research question was more broad and exploratory. Subsequently, drawing on Zhang et al. (2020), I analyzed the sources looking for how the articles in the Hindu and Globe and Mail, respectively, *defined* the problems of vaccine hesitancy and misinformation, *identified their causes,* and *suggested remedies.* I found that this threefold typology of definition, cause and remedy is a useful heuristic for organizing my more specific findings.

FINDINGS/ANALYSIS

Before delving into my findings on how the two media sources frame the misinformation and vaccine hesitancy problem, it must be noted that both news outlets had more similarities than differences in framing and playing a role in addressing the challenge of informing and shaping the behaviours of their populations during the pandemic.

Defining The Problem – Who are the 'right' experts?

In defining the problem of misinformation, both The Hindu and The Globe and Mail articulate it as a matter of people not listening to the right experts and refusing vaccines despite their availability. Thus, they framed events as a way of identifying the right experts and working to build trust in them.

In both media sources, scientific experts and knowledgeable health authorities, including but not limited to doctors, were framed as imperative to forming sound public health policies. The 'right' experts concerning COVID-19 related information were simultaneously labelled as the 'primary experts' of knowledge and consisted of scientists and doctors, followed by The World Health Organization and other national/local public health agencies. It must be stated, that although the World Health Organization did not serve as the central source of information in both media sources, they were undoubtedly key actors in contextualizing the outbreak. Whenever references to health experts arose, the World Health Organization was often right alongside them.

In The Hindu, scientists and doctors represented the 'right' experts in informing and shaping the behaviours of their population during the pandemic. While both media outlets shared

similarities on this front, The Hindu was more often explicitly concerned with building trust in the right experts, and which persons of authority should be informing the public on the pandemic. For instance, The Hindu detailed multiple surveys showing that in India "scientists and health experts are the most trusted sources of information on COVID-19, followed by the World Health Organization, television, newspapers, radio and local health workers" (Kumar, 2021, p. 1). In vociferously disseminating COVID-19 information to the public, The Hindu indicated that this information was backed by knowledgeable experts, such as the World Health Organization. Much attention was given to the manner in which scientific knowledge and facts outweigh un-founded opinions. For example, Delhi Chief Minister Arvind Kejriwal was quoted on the need to listen to the 'right' experts on COVID-19 information and vaccines, and urged the public "not to pay attention to rumours and misinformation" ("Don't believe," 2021, p. 1). Similarly, Health Minister Mr. Vardhan was quoted pleading for "people to seek correct information regarding the COVID-19 vaccines from credible and authentic sources such as the Health Ministry…" ("Coronavirus | Health Minister," 2021, p. 1).

Another 'right' expert was the Indian Council of Medical Research (ICMR), New Delhi. The ICMR is the "apex body in India for the formulation, coordination and promotion of biomedical research" (ICMR, 2019, para. 2) and is one of the oldest medical research bodies in the world. The ICMR has continuously attempted to "address itself to the growing demands of scientific advances in biomedical research on the one hand and to the need of finding practical solutions to the health problems of the country, on the other" (ICMR, 2019, para. 2). Similar to the World Health Organization and its large body of eminent experts across different biomedical disciplines, the "Governing Body of the Council is presided over by the Union Health Minister and is assisted by a Scientific Advisory Board, which is in turn assisted by a series of Scientific

Advisory Groups, Scientific Advisory Committees, Expert Groups, Task Forces, Steering

Committees, which evaluate and monitor different research tasks of the Council" (ICMR, 2019,

para. 4).

In defining the misinformation and thus, the vaccine hesitancy problem, The Hindu

repeatedly framed scientists, doctors, and other national health agencies, like the ICMR as the

'right' experts who should be informing and shaping the behaviours of India's populations

during the pandemic. When analyzing India's pattern of scientific advancement throughout

history, we see the media's role in promoting modern India's strong focus on science and

technology. As one of the topmost countries in the world in scientific research, India has the third

largest pharmaceutical sector (Invest India, 2022). Similarly, The Serum Institute of India Pvt.

Ltd. was founded in 1966, and as of 2020, "is now the world's largest vaccine manufacturer by

number of doses produced and sold globally (more than 1.5 billion doses), which includes Polio

vaccine as well as Diphtheria, Tetanus, Pertussis, Hib, BCG, r-Hepatitis B, Measles, Mumps and

Rubella vaccines" (Serum Institute of India Pvt. Ltd., 2022, para. 1). Vaccines manufactured by

the Institute are "accredited by the World Health Organization, Geneva and are being used in

around 170 countries across the globe in their national immunization programs" (Serum Institute

of India Pvt. Ltd., 2022, para. 1), saving millions of lives in the process.

Evidently, with the media's role being to relay and communicate knowledge and

information to the public in a transparent manner, the use of Foucault's work uncovers how these

'right' experts' knowledge becomes legitimized and has the ability to make itself true. In defining

the 'right' health experts across India, and the work they do in tandem with each other, we see

how the information they disseminate gains more power, credibility and legitimization. The

discourse of scientists, doctors and public health agencies is evidence of the way in which the

media uses the information relayed by the 'right' experts to govern "the way that a topic can be

meaningfully talked about and reasoned about…it also influences how ideas are put into practice and used to regulate the conduct of others" (Hall, 1997, p. 44). In other words, we can see how the media validates certain knowledge (rule 'in') while restricting validation of others (rule 'out') (Hall, 1997). Knowledge, in this case, scientific knowledge, is inextricably linked to power (Hall, 1997).

Similarly, in defining the misinformation problem, The Globe and Mail represented scientists, doctors, the World Health Organization, and other regional/provincial health authorities across Canada as the 'right' experts. There was a propensity to consult with public health authorities and experts, such as infectious disease specialists, microbiologists, and other health-related sciences. Much attention was given to scientists and doctors and their key role in providing scientific facts and trustworthy information ("COVID-19 News," 2020).

In weekly released COVID-19 news reports, The Globe and Mail urged the public to "stick to the facts as communicated by agencies like the World Health Organization, the Public Health Agency of Canada or your provincial health authority" ("COVID-19 News," 2020, p. 1). The Public Health Agency of Canada and its partners in provinces, territories, and municipalities across the country "play an essential role in preventing the spread of infectious diseases, promoting healthy environments, and leading efforts to gather and analyze data to guide decisions and develop programs" (Canadian Institutes of Health Research, 2022, para. 2). The Globe and Mail ensured that trust was being built in the 'right' experts, and to no surprise, reports repeatedly represented scientists, academics and health care providers as the 'right' experts to counter misinformation in the public sphere (Caulfield, 2021). In defining who the 'right' experts should be in disseminating reliable information to the public, there were also discussions of The Canadian Institute of Health Research (CIHR), which is similar to India's Institute of Health Research.

Similarly, in defining the misinformation and vaccine hesitancy problem, both The Hindu and The Globe and Mail repeatedly referred to scientists, doctors, the World Health Organization and other national public health agencies, as the 'right' experts and valid authoritative sources (Seale, 2002). It is scientists' responsibility to help inform and shape public opinion on the basis of valid and reliable knowledge. Scientists are increasingly called to "tread the delicate line of building public trust while providing sober assessments of data and managing expectations" ("The tightrope," 2020, p. 472). That being said, for some politicians and members of the press and public, scientists and doctors represent "the uncomfortable uncertainties that characterize this pandemic" ("The tightrope," 2020, p. 472).

When confronted with addressing the challenge of informing and shaping the behaviours of the population during the pandemic, more specifically misinformation and vaccine hesitancy, both news media sources a) frame the problem as a matter of people not listening to the right experts, b) define the right experts, and c) use their knowledge to regulate and control people's conduct (Hall, 1997). This repeated agenda setting and framing of the 'right' experts align with Foucault's discursive formation. Specifically, "whenever these discursive events' refer to the same object, share the same style and ... support a strategy ... a common institutional, administrative or political drift and pattern' (Cousins and Hussain, 1984. pp. 84-5, as cited in Hall, 1997, p. 44) then they are said by Foucault to belong to the same discursive formation" (Hall, 1997, p. 44).

Identifying Causes (Why are people not listening to the 'right' experts)

In identifying the causes of the misinformation and vaccine hesitancy problem, both media outlets shared similar but also slightly different causes. Both argued that equally important to combatting the virus was combatting misinformation. So, why are people not listening to these 'right' experts?

Too Much Information

Both media sources identify 'too much information' as a cause of the misinformation and vaccine hesitancy problem. Before discussing these findings, it is important to note that in line with literature examined earlier, identifying too much information as a cause appears to be self-serving, in the sense that the mainstream media is no longer able to control public discourses because of the rise of the internet and technology has opened up so many more avenues of information. Thus, pointing to other, non-mainstream news information as "extra" or "overload" implies that the mainstream news media offers the *right* amount of information.

In The Hindu, there were suggestions that the pandemic had presented us with an overabundance of conflicting information, making it hard for the public to trust particular sources of information and potentially leading to vaccine hesitancy. For example, quoting an interview with Dr. Jaggi, Chairperson of Lab services and Infection Control and Chief Education and Research, The Hindu reiterated that the "pandemic had been an infodemic with information thrust upon people from various sources, not fully researched or checked for authenticity" (Kumar, 2021, p. 2). In epitomizing the need to contain the spread of the virus and the spread of misinformation, one report coined the term 'twindemic':

> The world is struggling with a 'twindemic': the pandemic (the spread of the coronavirus) and 'infodemic' (the spread of the misinformation virus). As both are contagious and spread faster than anyone can imagine and pose a serious threat to public health by infecting lungs in the case of pandemic and infecting minds in the case of infodemic, there is an urgent need to contain the spread of both viruses. (P'Rayan, 2021, p. 1)

Other reports in The Hindu suggested that the digital age had exacerbated the misinformation and vaccine hesitancy problem, by providing too many new avenues of information. Mainstream news media sources like The Hindu no longer controls the public discourse because of the internet. While mainstream news media still have a substantial influence on shaping and regulating our behaviours, the digital age has brought new difficulties to combatting misinformation and vaccine hesitancy. The Hindu framed/described the situation as follows:

> In this age of surplus information, outbreaks of misinformation, spread through social and digital media channels, have the potential to significantly impact public health…India is particularly vulnerable to this challenge because we are increasingly moving towards consumption of news and information online and through social channels…This kind of misinformation, when directed towards public health programmes such as immunisation, can adversely impact public trust, especially through an 'echo chamber' effect. (Panda, 2021, p. 1)

The toxicity of this 'echo chamber' effect is of worthy note as non-expert individuals disseminating information will find their opinion continuously echoed back to them, reinforcing their individual belief systems as a result of limited exposure to other individuals' opinions – in this case, limited exposure to legitimate experts. The Hindu's repeated exposure to identifying causes and combatting misinformation is evidence of media agenda-setting and the way that the media "constructs our pictures of reality" (McCombs, 2014, p. 72, as cited in, Xue & Xu, 2021, para. 7). Along with the digital age comes too much information and a heightened risk of misinformation. As individuals living in this digital age society, we must make a choice to trust or distrust media messages, "in much the same way as we decide to trust or distrust medical

advice or other expertise" (Seale, 2002, p. 514). This in turn comes with potential adverse

impacts on public trust and likewise public health.

Similarly, The Globe and Mail identified too much information as one of the causes of

the misinformation and vaccine hesitancy problem in Canada. With myths spreading deeper and

faster than the truth (Bigham, 2021), reports prompted the need to do away with rumours,

suggesting that the "unprecedented amount of accessible information" (Bigham, 2021, p. 1) on

the pandemic and the rapid tempo at which that information spreads, as a result of the digital age,

is one of the biggest threats to human health (Bigham, 2021). One report specifically stated that:

> While access to accurate information is essential to ending any epidemic, it is often hard
> to discern what is accurate and what is not - facts get drowned out by falsehoods, turning
> an 'infodemic' into a 'misinfodemic', which helps diseases spread. (Bigham, 2021, p. 1)

Canadians were constantly reminded of the threats posed by misinformation and the digital age.

The same report likened the spread of misinformation and vaccine hesitancy to that of the way an

"influenza spreads in a crowded stadium – from a couple of hot points outwards" (Bigham, 2021,

p. 1) For example:

> Misinformation is much like microbes that spread not through aerosols or fomites, but by
> electronic contagion to which human nature is frighteningly susceptible. First, there is a
> dose-response – the more misinformation you are exposed to, the more likely you are to
> display symptoms. The echo chamber created by social media algorithms is partly to
> blame. (Bigham, 2021, p. 1)

In identifying why people are not listening to the 'right' experts, both The Hindu and The

Globe and Mail suggests that 'too much information' has been thrust upon people. Increasing

rates of misinformation and vaccine hesitancy have been spurred on by the digital age and its

increasing potential for an 'echo chamber' effect.

Remote and Isolated Communities

Both The Hindu and The Globe and Mail identified remote and isolated populations as a vulnerable area for misinformation and likely to refuse vaccines. At the same time, they also suggested that it is difficult to reach rural/isolated communities and deliver vaccines to those in these areas who want them. Not only are isolated and remote communities hard to reach for governments, but they are also where information and misinformation is easily manipulated. This is the first place where differences in the two news media sources start to arise.

In The Hindu, reports focused on the many villagers living in India's remote and isolated areas who were reluctant to receive the vaccine as a result of misinformation. In India, the dissemination of reliable and accurate information to remote/isolated communities was additionally met with high rates of illiteracy ("All those," 2020). For example, in one instance, India's low literacy rates coupled with an isolated and economically deprived group of students led to the reopening of a school in the state of Odisha, despite the backing of reliable information released by the World Health Organization, which warned of the worsening COVID-19 situations in many regions across the country, and the world "moving towards a third wave" ("Coronavirus live updates | Odisha schools," 2021, para. 3). The state government of Odisha validated their decision on July 26, 2021, following a slight drop in the number of COVID-19 cases in the state, however the choice to reopen schools "appears to have been prompted by the inability to reach a majority of students through online modes of education" ("Coronavirus live updates | Odisha schools," 2021, para. 5). The consequences of the inability to reach students through online modes of education clearly outmuscled the World Health Organization's recommendations.

Another example came at a vaccination drive in a remote panchayat in Odisha's Nuapada, where a "total of 2,593 persons were administered the first dose where people were very reluctant to receive it. They had a fear that they would die in three months following inoculation" ("All those," 2021, para. 4). Remote or isolated communities and high rates of illiteracy poses a major problem for Indian health officials, in that, not only are these areas largely inaccessible for the distribution of vaccines, but also where vaccine misinformation is easily manipulated.

When discussions of vaccine hesitancy arose, vaccine distribution was often right alongside. A large focus was put on delivering vaccines to rural areas. Throughout India's history vaccinations have been frequently offered through "major hospitals and largely restricted to the urban areas" (Lahariya, 2014, p. 500). When India established the National Smallpox Eradication Programme (NSEP) in 1962, with the aim of eradicating smallpox and successfully vaccinating the entire population in the following three years (Lahariya, 2014), they also met issues with distribution, "because the difficult to access populations was not being reached" (Lahariya, 2014, p. 499). In presenting the salience of the vaccine hesitancy problem, The Hindu repeatedly discussed the significantly lower uptake of COVID-19 vaccines among urban poor and rural populations. For instance:

> There is a low uptake of COVID-19 vaccine among groups such as slum dwellers and urban poor as well as in rural population...Some of these inequities have their origin in supply side aspects, as most vaccination centres are in urban settings, and the need for prior and, for some, mandatory, registration on the digital platform. (Lahariya, 2021, p. 1)

When access to digital platforms is needed to book COVID-19 vaccine appointments, then serious problems arise. With already high rates of social, economic and political inequality and poverty across India, accessing a digital platform is often unobtainable and unrealistic.

In identifying causes of the misinformation problem and vaccine hesitancy, challenges in disseminating accurate and reliable information to isolated and remote communities also

presented itself in Canada, but not to as great an extent. According to a Globe and Mail analysis

of provincial vaccination data, "Canada's high overall COVID-19 vaccination rates are

concealing pockets where less than half the population has received a first dose, most of them in

small towns and rural, remote parts of the country" (Grant et al., 2021, p. 3). It was reported that

the majority of these isolated communities were Indigenous, and placed along coastlines across

Canada (Grant et al., 2021).

Intrinsically linked to misinformation and vaccine hesitancy in these remote, hard to

access populations were issues associated with different languages and cultures. Remote and

isolated populations in Canada were additionally met with a lack of culturally appropriate

information, such as language barriers or lack of culturally appropriate signage. Despite having

twenty-two official languages and the fourth highest number of languages in the world, India and

the Hindu had little to say on providing culturally appropriate pandemic-related information and

healthcare. On the other hand, Canada has only two official languages and around two hundred

unofficial languages spoken across the country, as well as 60 Indigenous languages (EduCanada,

2022, para. 1).

Canada is a country considered to be very ethnically and linguistically diverse, so when

there is a lack of culturally appropriate information, there are significantly higher potentials for

misinformation and vaccine hesitancy. After all vaccine hesitancy can cut across ethnic lines

(Krugel, 2021). The Globe and Mail proposed that with many newcomers to Canada, "they may

be a little more susceptible to misinformation and following whatever trends they hear on social

media (Krugel, 2021, p. 2), whether that be with regards to vaccine hesitancy or COVID-19

related information in general.

Throughout Canada, there were barriers to accessing and understanding the information relayed by the right experts, particularly if "English isn't their first language or they're not comfortable using computers or phones or the internet" (Hunter, 2021, p. 2). For example, a South Asian community in Surrey, British Columbia, significantly struggled with translation issues (Hunter, 2021). When they tried to access provincial websites for information on COVID-19 or vaccines, they were met with a messaging system that they could not read or understand (Hunter, 2021). This in turn leaves many unable to get the correct information, and therefore more susceptible to misinformation.

Anti-Vaccine Culture/Movement

The Hindu and The Globe and Mail similarly framed the misinformation and vaccine hesitancy problem as part of a much larger anti-vaccine movement/culture that has evolved throughout the course of history.

In taking a historical approach, The Globe and Mail suggested that modern problems of vaccine hesitancy and misinformation are history repeating itself. The fear of putting a foreign material in our bodies, and the narrative of being manipulated and controlled by the government did not originate in the birth of COVID-19 (Berman, 2021). Rather:

> modern anti-public health protests are history repeating itself. A myth attributes near total responsibility for the existence of the modern anti-vaccine movement to a single disgraced former physician involved in research misconduct, who started a vaccine scare. These events played a role in exacerbating parental fears, and linking vaccines to autism in the popular consciousness – but these were reinventions of old fears, not the discovery of new ones. (Berman, 2021, p. 1).

Parallels were drawn from the past, where anti-vaccine supporters facilitated considerable violent marches and threatened vaccine supplies (Berman, 2021). Narratives and language used

by campaigners against smallpox vaccination were also found for framing COVID-19.

Fundamentally, "humans have not changed, and our anxieties are universal across time"

(Berman, 2021, p. 1). In The Globe and Mail, we also find the insistence on rights and freedoms

amongst the super spreaders of misinformation and vaccine hesitancy (Bigham, 2021). In

Canada, "super spreaders of misinformation will argue that freedom of expression is stifled when

their messages are censored" (Bigham, 2021, p. 2).

In The Hindu, reports similarly identified and attributed specific sources of

misinformation about vaccines as part of a larger anti-vaccine culture and movement. Reports

stressed that like many Western nations, vaccine hesitancy has been a cause for concern in India

throughout the course of history. For instance, one report stated that "after all vaccine hesitancy

is as old as the concept of vaccination itself" (Dubbudu & Kalidoss, 2021, p. 1). In also taking a

historical approach, The Hindu stated that with COVID-19, skepticism of vaccines included

"concerns over safety, efficacy, and side effects due to the record-breaking timelines of the

vaccines, competition among several companies, misinformation, and religious taboos"

(Dubbudu and Kalidoss, 2021, p. 1).

**Suggesting Remedies: Who Should be Responsible for addressing misinformation and
vaccine hesitancy, and how?**

In following Zhang et al.'s (2020) threefold typology, I now focus on where the news sources

suggested remedies. The Hindu and The Globe and Mail both discussed the necessity of

combating the misinformation and the vaccine hesitancy problem; suggesting that equally

important to combatting the virus was combatting misinformation. That said, media coverage in

The Hindu and Globe and Mail presented slightly different remedies, with The Hindu suggesting

the need for transparency and accountability from public health; Both The Hindu and The Globe and Mail suggesting that media has to interview experts for stories about vaccines; and culturally appropriate information for hard-to reach populations.

Transparency and Accountability from Public Health

In The Hindu, the need to combat misinformation was a top priority. Reports urged the need for health experts and agencies to implement an accountable, open and ground-up participative model (Mehra, 2021). In advising the government to do its job one report stated: "Science has done its job. Now it is time for the government's to do what is expected in a democracy – be accountable, build trust and counter misinformation with openness and communication and not obfuscation" (Mehra, 2021, p. 2).

The role of the vaccine in putting an end to the pandemic is critical, yet public trust in such vaccines is indispensable (Mehra, 2021). Vaccines will only be effective if vaccine hesitancy is addressed, and this can only be done by effectively gaining public confidence and support (Mehra, 2021). For instance:

> In short, a vaccine-led control effort will only be as effective as the public confidence and support it garners… However, as experts and politicians engage in public sparring, the general public's fear and skepticism around these vaccines is only growing. (Mehra, 2021, p. 1)

There needs to be transparency and accountability in public health agencies, and this can only be done by building public trust while providing sober assessments.

Media has to interview the 'right' experts for stories about Vaccines

Both The Hindu and The Globe and Mail argue that the media has to interview the 'right' experts for stories about vaccines. When confronted with addressing the challenge of informing and shaping the behaviours of the population during the pandemic, The Globe and Mail made repeated references to public health agencies and experts, and their validation as authoritative sources (Seale, 2002). There were frequent suggestions that any reports on vaccinations "must include interviews with experts" (Stead, 2021, p. 1), such as infectious disease specialists or microbiologists. Criticism aimed at The Globe and Mail for not properly showing both sides of vaccines, generated a reaction and response by them, where a report written by Mr. Stead, argued that there are not two sides to vaccines (Stead, 2021). Specifically, he wrote:

> The evolving science and the facts behind vaccines are informing the public health and economic decisions to get all of us vaccinated as quickly as possible… The 'other side' is misinformation like that online comment… The vaccines have been approved by Health Canada. (Stead, 2021, p.1)

By interviewing the 'right' experts, it was argued it was required to ensure that the right information was being communicated by the media to the public. Through discussions of cooperation between different health experts and agencies, such as scientists, doctors, the WHO, the PHAC and other national health agencies, The Globe and Mail demonstrated how different health experts and agencies work together, to ensure that their knowledge is informing and shaping the behaviours of the population. By working in tandem with each other, COVID-19 related information gained more power, credibility and legitimization. For instance, one article suggested that a "growing body of evidence tells us that experts play a vital role in the battle against bunk. In general, the public trusts academics, scientists and health care providers"

(Caulfield, 2021, p. 1). Reports urged the need for policies designed to support and encourage academics, health professionals and researchers to engage in public discourse.

By ensuring that media coverage interviews the 'right' experts, it enables the ability of prebunking falsehoods on vaccines, rather than debunking (Bigham, 2021). With accurate information needed to end any epidemic, and the difficulty of debunking falsehoods, "we can inoculate people against myths by prebunking…Prebunking involves warning people that misinformation is headed their way – similar to how vaccines warn the human immune system to be on the lookout for dangerous pathogens" (Bigham, 2021, p. 2). One of the ways prebunking was done in The Globe and Mail was through weekly released COVID-19 reports, which had a dedicated section to making sure the information the public is receiving is from knowledgeable health experts (Bigham, 2021). Moreover, there were direct links on the articles to the respective health agencies websites.

Similarly, The Hindu framed interviews with the 'right' health experts as necessary to remedy the misinformation and vaccine hesitancy problem. With an increasingly digitized age fostering a sea of unknowns, conversations "should be led by experts, local and community leaders, not political leaders" (Mehra, 2021, p. 2). Building trust in the right experts based on scientific facts outweighs un-founded opinions. The Hindu urged caution to the relentless attack on facts and truth. We need to be smart consumers of news and information (P'Rayan, 2021, p. 1). Other reports argued that the "infodemic around vaccines can be tackled by actively debunking myths, misinformation and fake news on COVID-19 vaccines" (Dubbudu and Kalidoss, 2021, p. 1). Similar to The Globe and Mail, The Hindu argued that the media has to interview the 'right' public health agencies and experts for stories on vaccines, as valid and authoritative sources (Seale, 2002).

Culturally appropriate information for hard-to-reach populations

In addressing the misinformation and vaccine hesitancy problem, The Globe and Mail

repeatedly discussed the need to reach racialized and at-risk groups. Although The Hindu also

identified rural areas and isolated populations, The Globe and Mail also informed the Canadian

public of the need to provide culturally appropriate care and reach racialized and at-risk

communities, in a country that is considered very ethnically diverse. With many racialized

groups working on the front lines throughout the pandemic, ensuring they receive the right

culturally appropriate reliable information in their respective languages, from the 'right' expert is

crucial. For instance:

> The This Is Our Shot campaign launched Wednesday April 25th, 2021, was driven
> largely by groups that have been reaching out to and advocating for racialized
> communities bearing the brunt of the pandemic. The goal is to dispel myths and to
> answer questions in more than two dozen languages. (Krugel, 2021, p. 1)

The Globe and Mail not only recognized the importance of disseminating culturally

appropriate information on COVID-19 vaccines but also represented it as a key responsibility of

the Canadian government.

In contrast, when identifying remedies to their 'isolated vulnerable populations, The

Hindu focused on addressing and delivering to rural areas, urging Indian leaders to take the

vaccine to every village. Health Minister Mr. Vardhan reminded the Indian population of India's

achievements of large-scale immunization, suggesting that "the elimination of polio and small

pox was made possible by large-scale immunisation" ("Coronavirus | Health Minister," 2021, p.

1). For instance:

> We must take the vaccine to every village, building on the experiences of the pulse polio
> programme and conducting elections. Community leaders should be empowered with
> information and tools to broadcast the message that the vaccine saves lives. The central
> government has centralised vaccine purchase but must revisit the private sector allocation

and cede distribution to the States, providing support when requested. The CoWIN app must not be a limit factor on access to the vaccine. (Kang et al., 2021, p. 2)

The pulse polio programme was a global initiative of eradicating polio and was launched in India in 1995. Its objective of achieving hundred percent coverage under Oral Polio Vaccine was successful - has not had a case of polio since January 13th, 2011 (Lahariya, 2014). The Hindu equates COVID-19 vaccinations to the successful experiences with polio immunization, to take the vaccine to every village, rural ones especially (Kang et al, 2021). They also suggest that digital technology and the CoWIN app must not be a limiting factor on access to the vaccine.

CONCLUSION

To situate my findings at the end of this study I once again return to my research question: how do the media in Canada and India frame, and play a role in addressing, the challenge of informing and shaping the behaviours of a population during the pandemic? More specifically, how do they frame and play a role in addressing the misinformation problem and vaccine hesitancy?

When confronted with addressing the challenge of informing and shaping the behaviours of the population during the pandemic, more specifically the misinformation problem and vaccine hesitancy, both The Hindu and The Globe and Mail define it as people not listening to the right experts and refusing COVID-19 vaccines despite their availability. More specifically, they a) frame the problem as a matter of people not listening to the right experts, b) define the right experts, and c) use their knowledge to regulate and control people's conduct (Hall, 1997). By defining the problem as people not listening to the right experts, and refusing vaccines despite

their availability, they selected some aspects of a perceived reality and made them more salient in their communicating reports, thereby promoting their own discourse.

Deciding how much misinformation and vaccine hesitancy should be emphasized as a top priority, both media outlets play a key role in influencing their populations behaviours, because they repeatedly framed events as a way of identifying the 'right' experts and working to build trust in them. In validating certain forms of knowledge, and using their status as authoritative sources, both produce discourses that rule in and frame scientists, doctors, the World Health Organization and other national/local health authorities as the 'right' expert knowledge to be informing the public. Concurrently, they restrict and rule out other information and present it as misinformation, thus dismissing it as invalid.

Both news outlets identified 'too much information' as a cause of why people are not listening to the right experts. More specifically, the overabundance of conflicting information, made it hard for the public to trust particular sources of information, potentially leading to vaccine hesitancy. This appears to be self-serving, in the sense that mainstream news media is no longer able to fully control public discourses because of the rise of internet and technology has opened so many more avenues of information. Thus, pointing to other, non-mainstream news information as 'extra', 'overload' implies that mainstream news media offers the 'right' amount of information.

Closely linked to the cause of 'too much information' was the broader anti-vaccine culture and movement. Both news outlets framed the misinformation problem and vaccine hesitancy as part of a larger anti-vaccine culture/movement that has evolved throughout the course of history. Similar to how the digital age caused too much information, it has also enabled a communications network of misinformation amongst the broader anti-vaccine culture/movement.

In addition to the geographical difficulties of reaching remote and isolated populations and delivering vaccines to those who want them, they are also vulnerable areas to misinformation and likely to refuse vaccines. The challenges posed in meeting the needs of these remote communities are also where information and misinformation is easily manipulated. This is where key differences between the two arose. In India disseminating 'right' reliable and accurate information to remote-isolated communities was additionally met with high rates of illiteracy. Some of the challenges as highlighted above were with the distribution of vaccines and also some mandatory registration was required on a digital platform to book a COVID-19 vaccine appointment. The social economic and political inequalities, coupled with high illiteracy rates and no access to the internet made India's hard-to-reach populations particularly prone to misinformation and thus vaccine hesitancy. Remote and isolated communities in Canada were similarly identified as vulnerable to misinformation and vaccine hesitancy. However, there were additional difficulties of reaching populations because of a lack of culturally appropriate information. In Canada, when trying to access provincial websites for COVID-19 related information and vaccines, parts of the population ran into language barriers and lack of culturally appropriate signage.

In suggesting remedies for who should be responsible and how, The Hindu and The Globe and Mail stressed that equally important to combatting the virus was combatting misinformation. Both outlets discussed the importance of vaccines to ending the pandemic however, in The Hindu, reports also stated the need for public health experts and agencies to implement transparent and accountable models. Both media outlets stressed that the media has to interview the 'right' experts for stories on vaccines, as they are valid authoritative sources. The final suggested remedy for addressing the misinformation and vaccine hesitancy was providing

culturally appropriate information for hard-to-reach populations. More specifically, they represented cultural and linguistic appropriate signage and information as a key responsibility of the Canadian government. On the other hand, The Hindu emphasized the need of reaching every isolated and rural village, equating COVID-19 vaccinations to successful large scale immunization campaigns like polio and smallpox. They also suggested that registration on digital apps must not be a limiting factor for vaccines.

The link between misinformation and vaccine hesitancy is particularly interesting and in need of further research, because in framing vaccine hesitancy as a matter of misinformation, both media sources downplay and restrict any legitimate or expert critiques about the pharmaceutical industry, and thus render vaccine hesitancy as irrational. As individuals who want the pandemic to end, we might listen and trust experts, by accepting the small risk of vaccines, and a pharmaceutical industry making money hand over fist. However, if we were detached observers, we might possibly concede that there a real and legitimate concerns about vaccines and the overall vaccination process that get silenced and ruled out when vaccine hesitancy is framed as a misinformation problem. In concluding that perhaps there really is a healthy skepticism of vaccines, this study provides valuable insight into understanding how news media creates and sustains public discourse and the resulting agenda-setting and framing of public health emergencies such as COVID-19. In turn this helps contextualize how audiences understand, interpret and act upon these frames and messages.

APPENDIX A

Newspaper_Author_Date_Article Title – Chart Informed by (Foster, 2022)

GM = *The Globe and Mail*

TH = *The Hindu*

(Newspaper, Name, Date)	Article Title
GM_Urback_December 5, 2020	Sloan is helping peddle vaccine misinformation
GM_Stead_August 28, 2020,	No both sides on COVID, many angles on election
GM_Bascaramurty_January 26, 2021,	Racialized Canadians need the COVID-19 Vaccine more than most. But who can allay their doubts?
GM_Cassidy_February 6, 2021,	Uncontrollable environment
GM_Picard_February 1, 2021	Should coronavirus vaccination be mandatory for health workers?
GM_Owen_May 12, 2021	B.C.'s doctors could face penalty for spreading COVID-19 misinformation
GM_Bigham_July 28, 2021	At this point in the pandemic, it's misinformation that's killing people
GM_Berman_August 14, 2021	We must face the anti-vax movement head on,
GM_Grant et al._ August 3, 2021	Unvaccinated Canada: Who's left behind, and why aren't they getting their COVID-19 shots?
GM_Gee_December 18, 2021	The antidote to fake facts: real ones
GM_Willms & Saikaly_ February 2, 2021	Coronavirus Update: Quebec government cancels plan to allow Christmas gatherings
GM_O'Hara_March 28, 2021	Life insurers hits out at online misinformation about COVID-19
GM_Cox & Keller_ August 4, 2021	Western Canada: Alberta and Manitoba are home to some of Canada's least-vaccinated areas
GM_Bielski_June 15, 2021	Families face off over COVID-19 vaccination status amid hopes of a more social summer
GM_Fiddler_February 1, 2021	COVID-19 vaccination campaign ramps up in Manitoba Indigenous communities
GM_Mahoney_April 21, 2021	Some front-line hospital workers still haven't been vaccinated for COVID-19
GM_Hunter & Dayal_May 11, 2021	In Surrey, B.C. COVID-19 hot spot, public-health campaign fights to get vaccine message out

GM_Bascaramurty & Stone_February 8, 2021	Why many long-term care workers initially passed on the COVID-19 vaccine.
GM_Caulfield_May 29, 2021	We must support experts as they step up to debunk misinformation
GM_Rossant & Larson_March 29, 2021	Trust in vaccines is essential in ensuring a safe postpandemic world
GM_NOAUTHOR_April 22, 2021,	COVID-19 news: Updates and essential resources about the pandemic
GM_NOAUTHOR_December 9, 2020	COVID-19 news: Updates and essential resources about the pandemic
GM_Krugel_April 29, 2021	Doctors team up with Ryan Reynolds, other Canadian celebrities to tackle vaccine hesitancy
GM_Wolfson_Decemeber 15, 2021	Only a national database will allow us to effectively track COVID-19 vaccinations
GM_Willms & Atalick_January 20, 2021	Coronavirus Update: Dangerous online misinformation could harm Canada's vaccine efforts, experts say
GM_Lawrie & Papadakos_May 6, 2021	Public-health language must be plain, simple
GM_Quadri_February 2, 2021	Morning Update: Trudeau open to more health care funding as premiers criticize fiscal update
GM_Berman_August 13, 2021	As the consequences of vaccine hesitancy ripple through the pandemic, trust in experts and institutions must be rebuilt
GM_Bein & Nguyen_February 3, 2021	Coronavirus Update: Ottawa weighs response to new COVID-19 variant amid call to ban travel from Britain
GM_Willms_May 14, 2021	Coronavirus Update: Current pace of COVID-19 vaccination could allow for "outdoor summer" that includes patios, outdoor sports
GM_Willms & Atalick_March 3, 2021	Coronavirus Update: Second dose can be four months after the first, experts say
GM_NOAUTHOR_February 26, 2021	COVID-19 news- Updates and essential resources about the pandemic
GM_Keller & Cryderman_April 27, 2021	Indigenous leaders near Fort McMurray call for strict COVID-19 measures from Alberta government
GM_Vohra-Miller et al._January 23, 2021	We can't ignore concerns about the vaccine rollout
GM_Atalick_March 28, 2021	Coronavirus Update: Medical care backlog is COVID-19's collateral damage

GM_Atalick_July 28, 2021	Coronavirus Update: Inside the cutthroat race to secure doses
GM_Mason_July 29, 2021	It's time to get tough with vaccine resisters
GM_Woo et al._May 31, 2021	Who in Canada hasn't been vaccinated against COVID-19 yet, and what's the plan going forward?
GM_Graveland_July 13, 2021	No vaccine passports in province: Kenney
GM_Balser_January 6, 2021	We get vaccinated for the good of others, not just for ourselves
GM_Bhatt_April 7, 2021	Is India's mammoth vaccine campaign fast enough to reach villages before COVID-19 does?
GM_Atalick_May 16, 2021	Coronavirus Update: How the pandemic spurred fierce competition among us
GM_Hager_March 15, 2021	British Columbia prioritizes workers in food processing plants and industrial camps for AstraZenecavaccine
GM_Fiddler_February 5, 2021	Northern Ontario First Nations leaders are rolling up their sleeves first to battle COVID-19 vaccine hesitancy
GM_Hager_July 27, 2021	B.C. begins a two-week COVID-19 vaccination blitz
GM_Gray & Stone_May 7, 2021	Ontario attacks Ottawa in ad campaign
GM_Willms & Montgomery_October 14, 2020	Coronavirus Update: WestJet cutting most flights to Eastern Canada, citing pandemic restrictions; Oct.14: France imposes night curfews to rein in social gatherings; White House embraces scientists' declaration that relies on 'herd immunity'
GM_Stone & Walsh_November 28, 2020	PMO releases account of call with O'Toole prematurely
GM_Weber_March 22, 2021	What every Canadian investor needs to know today
GM_Nestruck_July 18, 2021	Shaw vs. Shaw: Why the theatre festival isn't cancelling the anti-vaxxer playwright
GM_CANADIANPRESS_August 11, 2021	Alberta's Vaccine Hunters to Continue Work
GM_Lautens_June 21, 2021	Choosing a COVID-19 vaccine should not be like shopping for brands at the mall
GM_Reuger_September 26, 2021	We're tired, but the weight of COVID-19 grows ever heavier
GM_Hager_March 19, 2021	B.C. First Nation report critical of lack of support
GM_Hager_July 28, 2021	Dix, Henry announce a two-week walk-in immunization blitz

GM_Reeves_July 19, 2021	U.S. Surgeon-General sounds alarm as COVID-19 cases rise
GM_Mannie_July 30, 2021	Morning Update: Alberta's COVID-19 plan to drop almost all restrictions panned by medical experts
GM_Hannay_December 20, 2021	Politics Briefing: Liberals table UNDRIP bill
GM_Smart_August 16, 2021	To protect our kids from COVID-19, we have to be grown-ups
GM_Hannay_December 20, 2020	Politics Briefing: Trudeau demurs on possible Meng deal
GM_Khan_June 3, 2021	Now you're speaking my language: How one doctor who grew up in Brampton's L6P is helping get the South Asian community vaccinated
GM_Bennet_April 14, 2021	Doctors say trust must be rebuilt after proposed labour deal rejected
GM_Cryderman_March 19, 2021	For Jason Kenney, everything is interconnected now - even a Bigfoot movie
GM_Plumb_July 12, 2021	Raise the Rates
GM_Ibbitson_May 31, 2021	Questioning China policy is not fomenting racism
TH_Venkatesan & Yuvan_August 20, 2021	A jab of humour: Comics and COVID-19
TH_Ramasubra_August 19, 2021	Facebook calls report on few people spreading vaccine misinformation "faulty narrative"
TH_P'Rayan_August 21, 2021	Be smart consumers of information
TH_NOAUTHOR_November 9, 2021	India should build COVID-19 vaccine confidence, identify 'hesitancy hotspots': immunisation expert Heidi J. Larson
TH_NOAUTHOR_January 25, 2021	Take penal action against those circulating rumours on COVID-19 vaccine: MHA tells States
TH_NOAUTHOR_April 26, 2021	Coronavirus	Misinformation being spread on vaccination: Harsh Vardhan
TH_NOAUTHOR_May 13, 2021	Letters to the Editor — May 13, 2021
TH_NOAUTHOR_January 11, 2021	People shouldn't hesitate to get vaccinated, listen to scientists: Delhi's 1st COVID patient
TH_NOAUTHOR_March 7, 2021	Pinarayi seeks to allay fears
TH_NOAUTHOR_October 30, 2020	Coronavirus	Centre asks States to form committees for smooth COVID-19 vaccination drive
TH_Mehra_January 14, 2021	Building trust in vaccines

TH_Dubbudu & Kalidoss_February 17, 2021	Combating vaccine hesitancy
TH_Reuters_October 15, 2021	YouTube bans coronavirus vaccine misinformation
TH_Reuters_November 18, 2021	YouTube to add link on COVID-19 vaccines to combat misinformation
TH_NOAUTHOR_December 1, 2021	Coronavirus live updates | Adverse events related to Serum Institute trials will not affect vaccine roll-out timeline, says Health Secretary
TH_NOAUTHOR_September 10, 2020	COVID-19 could fuel more conflict, poverty, starvation, says UN
TH_Yasmeen_February 20, 2021	Vaccine acceptance low among well-informed people in Karnataka
TH_NOAUTHOR_January 16, 2021	Don't believe in rumours, experts say vaccines safe: Kejriwal
TH_NOAUTHOR_January 26, 2021	States told to prevent rumours, misinformaiton about vaccines
TH_Kumar_July 5, 2021	Fear of Vaccine lurks
TH_NOAUTHOR_September 4, 2021	Coronavirus India lockdown Day 163 updates | Violations of COVID-19 norms made compoundable offences in Tamil Nadu
TH_NOAUTHOR_August 3, 2021	'Telangana village first to become COVID-resilient'
TH_NOAUTHOR_July 30, 2021	All those above 18 receive vaccination in remote panchayat in Odisha
TH_NOAUTHOR_July 26, 2021	'6 cr. people will be covered in three months'
TH_NOAUTHOR_July 17, 2021	Coronavirus updates | July 17, 2021
TH_Perappadan_July 8, 2021	Vaccines will help prevent severe disease in pregnant women: expert
TH_NOAUTHOR_July 17, 2021	Coronavirus live updates | Govt to procure 66 crore more doses of Covishield, Covaxin at revised rates
TH_Lahariya_July 3, 2021	Time to tackle COVID-19 vaccine delivery bottlenecks
TH_NOAUTHOR_May 28, 2021	Coronavirus updates | May 28, 2021
TH_Kang et al._June 19, 2021	What needs to be done with vaccines
TH_NOAUTHOR_July 17, 2021	Coronavirus live updates | Odisha schools to reopen for Classes 10 and 12
TH_AP_October 14, 2020	Facebook bans anti-vaccination ads but not antivax posts

TH_NOAUTHOR_January 23, 2021	Coronavirus live updates | After initial hiccups, rising confidence for vaccination in Bihar
TH_NOAUTHOR_October 30, 2020	Coronavirus | Centre asks States to form committees for smooth COVID-19 vaccination drive
TH_AFP_December 29, 2020	South Africa imposes new virus curbs
TH_Bhavani_May 11, 2021	Conversational AI becomes the unlikely hero during the COVID-19 pandemic
TH_Karmakar_June 25, 2021	Jab status linked to resuming of businesses in northeast
TH_NOAUTHOR_June 6, 2021	Probe Punjab vaccine sale: Minister
TH_Vijayakumar & Kandavel_June 6, 2021	Vaccine hesitancy may pose hurdles in auto hub
TH_Ramdas & Swaminathan_February 17, 2021	In telehealth, scaling up the Indian advantage
TH_NOAUTHOR_June 14, 2021	Delhi HC declines to stay trial court directive to IMA chief
TH_NOAUTHOR_February 4, 2021	Morning digest: India to get 97 million vaccine doses from COVAX; no govt. jobs in Bihar for those who stage violent protests, and more
TH_NOAUTHOR_January 17, 2021	No case of hospitalisation so far: govt.
TH_NOAUTHOR_December 18, 2020	United Nations head stresses on need of virus vaccine for all nations
TH_NOAUTHOR_May 12, 2021	Coronavirus | Second dose of vaccine should be given priority, says Cabinet Secretary
TH_Reuters_December 18, 2020	Twitter planning to create label for automated 'bot' accounts
TH_Mathew_May 27, 2021	The designer helping artisans CoWIN
TH_NOAUTHOR_May 13, 2021	Letters to the Editor — May 13, 2021
TH_NOAUTHOR_January 16, 2021	Arrangements in place in Kollam
TH_NOAUTHOR_March 23, 2021	Return to normalcy not till 2022, KPMG cites 45% of CEOs
TH_NOAUTHOR_January 25, 2021	Take penal action against those circulating rumours on COVID-19 vaccine: MHA tells States
TH_NOAUTHOR_September 10, 2020	COVID-19 could fuel more conflict, poverty, starvation, says UN
TH_NOAUTHOR_June 15, 2021	Akali-BSP protest over 'vaccine scam' in Punjab

TH_NOAUTHOR_January 19, 2021	Covaxin not to be used in cases of allergy, fever
TH_NOAUTHOR_September 2, 2020	Coronavirus India lockdown Day 161 live updates | Centre announces SOPs for operating Metro rail
TH_NOAUTHOR_December 18, 2020	Risk Communication Cell to address rumours about vaccine
TH_Ashiq_January 16, 2021	J&K kicks off anti-COVID-19 drive with 4,000 doses
TH_NOAUTHOR_May 27, 2021	IMA demands action against Ramdev
TH_NOAUTHOR_December 5, 2020	WHO warns virus crisis not over as vaccine rollout approaches
TH_NOAUTHOR_January 11, 2021	People shouldn't hesitate to get vaccinated, listen to scientists: Delhi's 1st COVID patient
TH_NOAUTHOR_January 21, 2021	Coronavirus | Health Minister assures people on safety, efficacy of COVID-19 vaccines
TH_Panda_April 21, 2021	Tackling vaccine hesitancy

Source: Marcus Rao (2022)

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