



MISINFORMATION IN CANADA

RESEARCH AND POLICY OPTIONS

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Misinformation in Canada

Research and Policy Options

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Executive Summary

Misinformation refers to false or misleading information. Disinformation, a subcategory of misinformation, is false information spread with intent to deceive. Both mis- and disinformation are ongoing problems that have been exacerbated by COVID-19. Evidence for Democracy completed a research project to characterize the research landscape in Canada and to provide options for addressing misinformation. This report outlines the results of the research project, which includes:

- » A review of existing academic literature to understand if Canada-specific misinformation research indicates that Canada has a unique context that influences how misinformation spreads and impacts its population.
- » An investigation of how individuals and organizations can help address misinformation, including an exploratory survey of academics at Canadian institutions to understand their perceptions around misinformation and identify their training needs.
- » A summary of policy options recommended or used in other jurisdictions that could be applied to reduce the presence of misinformation in Canada and enhance the public's resilience to its effects.



MAIN CONCLUSIONS

The literature review identified an emerging body of research on misinformation in the Canadian context. The body of research indicated that misinformation and disinformation may threaten the health and safety of the Canadian public, as well as the legitimacy of democratic processes in Canada. Additionally, there is evidence that the differing political, media, legal, and cultural landscapes in Canada, at the national, provincial, and community levels, shape the spread and impact of misinformation and disinformation. However, there needs to be substantially more research conducted to fully understand the complex nature of the impacts of these issues.

Further study, and potentially a strategic research strategy to identify the gaps in current knowledge and areas of focus, are needed to properly inform policy decisions in the Canadian context. We suggest collaborative initiatives focused specifically on misinformation in the Canadian context and continued funding opportunities as potential paths to a sustained body of research.

This research also demonstrated that individuals, organizations, and governments all have a role to play in addressing misinformation. By examining both the literature and the results of our survey, we have updated our training tools for effectively addressing misinformation, which can be used by individuals or at a larger scale by organizations.

As for government efforts, current policy approaches by the Canadian government include criminalizing aspects of the creation and dissemination of disinformation, specifically during election periods and with a focus on foreign interference. Additionally, government efforts have included funding for national and community-based literacy and research initiatives.

- » Further criminalization of the creation and dissemination of disinformation, although there are extensive concerns regarding constraints on freedom of expression and the press
 - Some existing laws, such as those governing criminal harassment or defamatory libel, could be applied to online disinformation
- » Regulation of social media and other digital platforms. These policies should avoid government-led oversight and moderation of content and could include:
 - Legislating algorithmic transparency: potentially by enabling regulators and researchers to audit algorithms
 - “Meta regulation”: regulatory oversight on platform moderation decisions (e.g., removing posts and banning users)
 - Requiring labels for content produced algorithmically and for paid advertisements
- » Funding for education and literacy programs, including dedicated initiatives in digital, health, media, and science literacy
- » Funding for research initiatives dedicated to studying the Canadian context

Employed together, a multifaceted policy approach, as well as actions from individuals and organizations, can reduce the spread and influence of misinformation on public discourse and democratic processes.

What is misinformation?

Broadly, misinformation is **“false or misleading information”**.

In practice, defining misinformation consistently and coherently has been an ongoing challenge, with competing definitions for misinformation used by scholars (Vraga and Bode, 2020). Recent emphasis has begun to define misinformation as information that contradicts expert consensus, or, when a consensus is not available, the “best available evidence” from experts at the time (Vraga and Bode, 2020). However, this presents difficulties around who is considered an expert, what constitutes an expert consensus, the subjectivity of what is “best available evidence”, and how that may change in different contexts or as new research or evidence is released (Vraga and Bode, 2020). Vraga and Bode (2020) highlight these concerns and call for transparency in how researchers determine what is misinformation in each context.

Some researchers have suggested that categorization can be useful in separating different types of misinformation. Wardle (2018) suggests the following categorization: satire or parody, misleading content, imposter content, fabricated content, false connection, false context, and manipulated content.

Other phrases, such as “fake news” (Weedon et al., 2017), have arisen to describe types of misinformation. However, they also fail to adequately capture the complex media ecosystem and can be used to undermine and erode trust in the media (McGonagle, 2017; Ross and Rivers, 2018; Wardle, 2018).

What is disinformation?

Disinformation is a subcategory of misinformation which includes an element of intentionality. Specifically, it refers to “false information that is purposely spread to deceive people” (Lazer et al., 2018).

Similar to misinformation, it can be helpful to define the types of disinformation, with one framework suggesting categories such as true disinformation, visual disinformation, side-effect disinformation, and adaptive disinformation (Fallis, 2015). In addition, sometimes disinformation that is spread intentionally can be amplified and disseminated unintentionally. Therefore, using a more precise analysis of disinformation can help efforts to develop techniques for detecting disinformation and to design policies to deter its spread (Fallis, 2015).

Disinformation has historically been linked to government and political actors, who have used it as a form of propaganda (Martin, 1982). Disinformation campaigns typically use a variety of tactics that deliberately target structural vulnerabilities in deliberative democratic systems (McKay and Tenove, 2020). This may include hacking attacks, large-scale disinformation campaigns, micro-targeted manipulations, and trolling operations during elections. These actions can undermine democratic participation, deliberation, and institutional action (Tenove and Tworek, 2019). Wardle (2018) suggests disinformation is created for four primary motivations: financial, political, social, and psychological.

Misinformation research in Canada

Over recent years, an extensive body of work has emerged with most studies focused on how misinformation spreads, who is susceptible, and how to address the issue. While the ongoing research advances the field of knowledge, misinformation research specific to the Canadian context may be limited. Out of 57 eligible studies in a 2012-2018 systematic review of health-related misinformation, only one study focused specifically on Canada, compared to 19 specifically focused on the United States (Wang et al., 2019). A review of studies investigating parental information seeking about vaccinations online (an area rife with misinformation) found few articles in the Canadian context, with the authors recommending more studies be carried out (Ashfield and Donelle, 2020). In addition, a previous collaborative Canadian initiative highlighted the need for more Canadian-specific research in the digital space (Dubois and Martin-Bariteau, 2020).

Any attempt to address misinformation at a national and regional scale through policy action requires an understanding of how misinformation spreads and impacts different areas of Canada. An examination of the effectiveness of different techniques to address these issues is also needed in the Canadian context. Canada's media and political landscape is considerably different than its counterpart in the United States, recently illustrated by the varied pandemic responses and factors of viral spread.

Methods

The goal of the review is to identify whether Canada-specific misinformation research indicates that the unique context may impact how misinformation spreads and impacts people in Canada.

We conducted a review of research articles published in peer-reviewed journals and relevant reports. Literature searches were undertaken for the terms “misinformation” and “disinformation”, in conjunction with “Canada” and “Canadians”. In addition, various locations (e.g., “Ontario”) were paired with the original search terms, as well as similar searches for the French expressions “*mésinformation*” and “*désinformation*”. Publications were included if they explicitly dealt with misinformation or disinformation in a Canadian context. Complete books or magazine articles were not included; however, book chapters and reports were included. From snowballing citations, further reports and academic papers were found. While the search for articles was extensive, it was not a systematic review and can therefore not be considered exhaustive. In addition, as we focused specifically on the terms misinformation and disinformation, the search did not include similar terms such as “misperception” or “incorrect knowledge”. Further research could incorporate these terms to improve the understanding of the Canadian research landscape. For the policy options recommendations, additional searching was done for reports, research articles in peer-reviewed journals, and government documents (e.g., proposed bills and white papers) from any jurisdiction to identify potential recommendations.

Who believes misinformation?

There are three broad schools of thought for why individuals believe misinformation (Scherer and Pennycook, 2020): **literacy deficit**, indicating a lack of knowledge about the topic; **motivated reasoning**, which refers to the “tendency to seek out, favorably evaluate, and preferentially remember information that is congruent with one’s attitudes and beliefs, while being distrustful of evidence that runs counter to one’s attitudes and beliefs” (Ecker and Ang, 2019); or a **lack of analytical thinking**, leading to a failure to critically think about the information presented. Individuals who overclaim their level of knowledge judge fake news to be more accurate (Pennycook and Rand, 2020). Prior exposure increases perceptions of accuracy, even when stories are labelled as contested by fact-checkers or if inconsistent with users ideology (Pennycook et al., 2018). Repeated exposure and preexisting beliefs are also linked to acceptance of health misinformation (Pan et al., 2021). There may be an element of trusting the person who is sharing the news (Duffy et al., 2020), including both individuals and public agencies.

Resilience to misinformation may also be influenced by politics, media, and economic factors. Humprecht et al. (2020) developed a global framework of resilience linking low resilience to disinformation to political factors, such as high polarization and high levels of populist communication; media factors, such as low trust in news, weak public service media and fragmented audiences; and economic factors, such as large ad market sizes and high social media use.

Who shares misinformation?

Misinformation can be both spread unintentionally or on purpose. People share misinformation by accident for many of the same reasons they share any other news stories. This may include emotional impact and relevance (Metzger et al., 2021), motivation to build or maintain relationships, express opinions, obtain others’ opinions, or to share information deemed interesting or fun (Chen et al., 2015). Some exploratory research has shown that different aspects of political belief may influence decisions to share misinformation on COVID-19 (Lobato et al., 2020).

Likewise, individuals who share misinformation on purpose do so for a variety of reasons. Online trust, self-disclosure, fear of missing out, and social media fatigue are all positively associated with intentionally sharing false news on WhatsApp (Talwar et al., 2019). Repeatedly running into false news headlines both correlates with perceived accuracy of the information and may reduce how unethical a person thinks sharing the misinformation will be, even if they know it to be false (Effron and Raj, 2019; Pennycook and Rand, 2020).

Overview of research in Canada

Canadian-specific research on misinformation spans a variety of topics and methods. From collating these studies, we found evidence that the unique Canadian and regional context may lead to different spread and impact of misinformation.

Misinformation and Canada's distinct media landscape

Any method of communication can become a vector for the spread of misinformation. As such, it becomes important to understand how people in Canada access their news and to characterize the different types of media sources used by the public.

Traditional media in Canada has a distinct landscape. During the 2019 federal election, polls indicated that the majority of Canadians use similar media sources, primarily accessing information via Canadian-based news organizations like CBC, CTV, and Global (DDP, 2020). Many Canadians also receive their news in French, with high trust in news organizations, such as TVA and ICI Radio-Canada (DDP, 2020; Newman et al., 2020). Polls also show that television is a primary source of news consumption and that trust in media was higher in Canada than in the United States (DDP, 2020; Gruzd and Mai, 2020a; Newman et al., 2020). Regardless, traditional media such as television, newspapers, and magazines, has been described as a factor in the spread of misinformation in Canada. This includes incidents where traditional media perpetuated myths on the Inuit seal hunt (Levy, 2020), ovarian cancer cures (Burles, 2018), and

the amount of Chinese international students attending Canadian universities (Jim, 2015). Interestingly, a 2020 report found that highly frequent news exposure in Canada is associated with being both more informed and more misinformed about public policy than those with low news exposure. The authors suggested this could potentially be due to selectively engaging with information to form incorrect conclusions that reinforce previous views (DDP, 2020). Canada is also not immune to the influence of the United States, as exposure to US-based media in Canada was correlated with increased beliefs in COVID-19 misperceptions (Bridgman et al., 2021). A recent study shows that Canadians have significantly lower beliefs in misinformation related to COVID-19, as well as conspiracy theories, than people in the United States (De Coninck et al., 2021).

Information received online can be a substantial source of misinformation. In the first few months of the pandemic, 90% of Canadians used online sources to find information about COVID-19 (Statistics Canada, 2021). Primary sources of online information during this period have been online newspapers or sites (63%), social media posts from news organizations or magazines (35%), and social media posts from other users or those they consider influencers (30%) (Statistics Canada, 2021). The most-used online news sources are similar to TV, with CBC and CTV having the largest reach in English, with TVA and ICI Radio-Canada leading for French speakers (Newman et al., 2020). Of people who used online sources, 96% claimed they saw COVID-19 information they suspected was misleading, false, or inaccurate, with 40% of respondents admitting to believing information that later turned out to be false (Statistics Canada, 2021). Beyond news, people

in Canada also use online sources as a resource for information, for example on certain health issues, such as laryngitis (Liu et al., 2020).

Future research should seek to further understand how misinformation is transmitted to people in Canada. While there is an understanding of where Canadians receive their news, there is a need to further understand exactly how misinformation spreads across the Canadian media ecosystem to individuals across different topics. This should also include considerations for offline methods of transmission, especially because a small, but substantial amount of people do not have or use the Internet for news. In addition, most polls have been conducted at a national level so further investigation into how regional and local concerns are disseminated would be helpful.

Social media is a source of misinformation, but not a trusted one

From a survey of online Canadians, 94% have a presence on social media, most commonly on Facebook (Gruzd and Mai, 2020b). However, only 22% strongly preferred social media as their source of news about COVID-19, compared to 60% for TV and 53% for online news sources (Gruzd and Mai, 2020a). All social media platforms were sources of misinformation during 2020; however, Canadians reported seeing misinformation more often on Facebook, Reddit, Twitter, TikTok, and YouTube (Gruzd and Mai, 2020a). Studies have identified specific cases where misinformation may have spread via social media, including misinformation during natural disasters circulating on Twitter (Silver and Andrey, 2019); flu vaccine misinformation showing up on websites and blogs shared via social media (Seeman and Rizo, 2010); and immunization misinformation circulating in Facebook comment sections (Tustin et al.,

2018). There is also evidence that exposure to US-based Twitter accounts is associated with increased likelihood to post misinformation on Canadian-based accounts (Bridgman et al., 2021). Studies have pointed to some potential differences in topics discussed and sentiments shared on Twitter between Americans and Canadians (Kawchuk et al., 2020; Martin et al., 2020), although other studies have identified situations where both sentiment and content are similar (Piedrahita-Valdés et al., 2021).

Despite the amount of misinformation and disinformation that circulates on social media, the impact this has on the beliefs of people in Canada remains unclear. In polls, Canadians report low levels of trust in social media as a source of information (22%) (Edelman, 2021), have low levels of trust in news they see on social media (19%) (Newman et al., 2020), and have low levels of belief of information they see solely on social media (31%) (Edelman, 2021). Surveyed Canadians also report posts from friends, influencers, or celebrities as less trustworthy than those from public health agencies (Leigh et al., 2020). Of those who saw misinformation on social media, 76% percent claim to have verified the information at a different source (Gruzd and Mai, 2020b). Most Canadians report that they checked the accuracy of information; with only 6 % reporting they never verify the accuracy of information (Stats Canada, 2020).

There is some evidence that social media may influence how news is reported in traditional media. For example, a 2015-16 case study of misinformation about vaccines found that topics discussed on Twitter could act as an agenda setter for news coverage in Canada (Jang et al., 2019). Additionally, online fringe communities in Canada can create false content that will then be perpetuated by online news and social media (Elmer et al., 2019), along with attempted media manipulation campaigns that aim for amplification of false information by mainstream news (Donovan et al., 2019).

The impact of Canadian legal and political contexts

The legal rights afforded to Canadians in the Constitution Act of 1982 and subsequent Supreme Court decisions shape how the government can address misinformation. The Charter of Rights of Canada Section 2b provides for the “freedom of thought, belief, opinion and expression, including freedom of the press and other media of communication”. A Supreme Court ruling in 1992 indicated that “false speech” fell under freedom of expression (*R. v. Zundel*, 1992; Dawood, 2021); however, further rulings have restricted some speech such as hate speech, obscenity, and commercial advertising (Dawood, 2021). Any attempt by the government to criminalize or restrict disinformation or misinformation will be subject to the Canadian legal system.

The political landscape in Canada is also distinct because its multi-party and parliamentary system create a unique version of partisanship and ideology. The response of Canadian MPs and the public early in the pandemic was broadly united across parties (Merkley et al., 2020). However, ideology not partisanship could play a role in the perception of COVID-19’s severity in the public (Merkley et al., 2020). This is in stark contrast to the responses in the United States, which had politicians and the public polarized on partisan lines (Merkley et al. 2020). Additionally, exposure to politicians in the United States was associated with belief in misinformation; however, the same relationship was not found in Canada (De Coninck et al., 2021). Interestingly, partisanship in Canada did impact how people judge the performance of government’s during COVID-19 at a similar level to the American context. At the same time, partisanship had a

smaller role in differences in whether people took precautionary actions during COVID-19 (Pickup et al., 2020). Additionally, views and opinions can also be impacted by local and provincial concerns (Leigh et al., 2020).

The Canadian health care system also has a distinct structure which may impact how health-based misinformation needs to be addressed in Canada. The system places family physicians as gatekeepers to health care, in turn leading to high levels of patient trust in personal primary care physicians (Damji et al., 2018). This positions primary care physicians as key assets in reducing the impact of misinformation.

Misinformation and disinformation threaten Canadian democracy

Misinformation threatens the ability of a democracy to function. Misinformation is not simply about being uninformed. It is about the overall intellectual well-being of a society (Lewandowsky et al., 2017). Specifically, online disinformation may damage the ability of a political entity to communicate using facts and logic, moral respect, and democratic inclusion (McKay and Tenove, 2020). Additionally, it may impact the ability of a state to self-determine, have accountable representation, and reduce the quality of public debate and deliberation (Tenove, 2020). Strategic online hacking, data leaks, and disinformation campaigns can be used for political purposes (Katz, 2018; Wilner, 2018). Despite several attempts, disinformation campaigns were not found to have substantially impacted the 2019 Canadian Election (DDP, 2020, Donovan et al., 2019). This could be due to preparation and resilience to disinformation within Canada (DDP, 2020).



Bots, trolls, and sockpuppets can be used to spread disinformation via social media about issues relevant to Canada, especially by foreign actors. Bots are “automated online agents that mimic human behaviour” (Dubois and McKelvey, 2019) and they broadly fit into four categories (Dubois and McKelvey, 2018):

- **Dampeners**, which suppress certain messages, channels, or voices
- **Amplifiers**, which increase the number of voices or attention paid to particular voices and messages
- **Transparency** bots which draw attention to the behavior of particular political actors;
- **Servant** bots which automate simple tasks, help maintain data, or simplify data analysis.

Not all bots spread misinformation, sometimes they are used for promoting health literacy or to share breaking news; however, they are sometimes driven by financial incentives (Al-Rawi and Shukla, 2020).

There are four problems associated with bots in Canadian politics (Dubois and McKelvey, 2019):

- **Identification:** bots are becoming more complex and harder to detect;
- **Evidence:** lack of archiving on social media makes forensic research difficult;
- **Attribution:** it is difficult to attribute creation or use of a bot to particular actors; and
- **Enforcement:** identifying bots does not relieve their effect (enforcement happens after the harm is done)

In Canada, Twitter has identified state sponsored trolling from both Russia and Iran aiming to perpetuate and amplify disinformation and misinformation about Canada over the last decade (Al-Rawi, 2021).

Impact of misinformation on beliefs and behaviour in Canada

In our review of the literature, we found exploratory studies revealing several contexts in Canada where misinformation has been identified. These studies focused on specific localized contexts and primarily covered health-related misinformation. Rarely did multiple studies focus on the same topic, indicating there is room for future research to investigate whether different contexts have misinformation about the same topics and to what extent localized factors have an impact. More research is also needed on the extent to which misinformation exists in Canada outside of health-related fields. Examples of studies identifying misinformation in Canadian contexts include:

- Patients in Toronto hospitals having misinformed beliefs about kidney treatments (Silver et al., 2018)
- Ontario medical students encountering misinformation in choices about their careers (Osborn et al., 2017)
- Female patients aged 10-24 at a pediatric gynecology clinic in a Toronto hospital believing misinformation about contraception (Sokkary et al., 2013)
- Women seeking abortions in Vancouver believing misinformation about the associated health risks (Wiebe et al., 2014)
- Asylum seekers in Montreal encountering misinformation about health care coverage (Chase et al., 2017)
- Undergraduates in Guelph being misinformed about the effects of aging (Matthews et al., 1984)

It is a challenge to pinpoint the exact extent to which misinformation can impact behaviour

in Canada. Exploratory and qualitative studies have identified actions or choices where misinformation may play a role, primarily related to health issues, including:

- Preventing smokers in Edmonton from switching to lower risk products (Heavner et al., 2009)
- Both over- and under-use of pit and fissure sealants by Ontario dentists (Main et al., 1997)
- HIV infected women in Vancouver not using highly active antiretroviral therapy (Shannon et al., 2005, p. 200)
- Use of breastfeeding in both rural communities in Nova Scotia and Vietnamese families in London Middlesex, Ontario (Newhook et al., 2013; Sutton et al., 2007)

These studies provide some evidence that cultural and community-level influences may need to be considered when addressing misinformation. Especially with health-related misinformation, unique health equity needs of different groups, as well as how systematic marginalization can lead to health and other inequities in certain communities, need to be considered (Nagi et al., 2020).

There may also be a link between media consumption and behaviour choices. 20% of Canadians meet four dimensions determined by the Edelman (2021) for good “information hygiene”: engaging with news from different sources regularly, engaging with opinions they disagree with, verifying information they read, and vetting information before sharing it. Those who follow these practices are also more willing to get vaccinated for COVID-19 (73%) within a year of eligibility than those who did not meet information hygiene criteria (59%). This metric is new and needs to be investigated further potentially needing fine-tuning and validating, however, it serves as an initial measure of information hygiene.

COVID-19 and Misinformation

Unsurprisingly, health-related misinformation has been in the spotlight since the beginning of the COVID-19 pandemic. Notably, the World Health Organization (WHO) called the existence of misinformation during COVID-19 to be part of an “infodemic” (Zarocostas, 2020).

While misinformation also circulated during previous pandemics and health crises (Krishna and Thompson, 2021), the volume and attention paid during the COVID-19 pandemic to health-based and scientific misinformation has been unprecedented.

COVID-19 misinformation has spanned a variety of subjects. Analysis of visual misinformation during the summer of 2020 showed that the most common misinformation revolved

around the actions of public health authorities, both over and under selling what was being accomplished. This was followed by claims on the severity of the virus (predominantly framing the virus as worse than it was), medical efficacy of prevention measures, and using misinformation to promote xenophobia or racism (Brennen et al., 2021; Gruzd and Mai, 2020a).

During the pandemic, pushback against the dominant scientific evidence has taken a variety of forms. This has included disinformation propagated by institutions and federal governments attempting to preserve power and undermine already marginalized groups (Jaiswal et al., 2020). Disinformation has also been used to amplify inequality-driven mistrust among communities that have been made vulnerable by historical and ongoing structural inequalities (Jaiswal et al., 2020). As the pandemic has progressed, more vaccine-related misinformation has emerged. Vaccine misinformation also existed before the COVID-19 pandemic, originally stemming from previous sources of misinformation, including scientifically flawed research about vaccines among other sources (Krishna and Thompson, 2021).



Misinformation can lead to discrimination of communities within Canada

Misinformation can also result in discrimination, stigma, and marginalization in some contexts. Studies focused on people within Canada found instances where misinformation has contributed to:

- Stigma, including self-stigma, and discrimination for Indigenous people with HIV in Manitoba (Woodgate et al., 2017)
- Stigma and discrimination, including by health care providers, in older adults in Ottawa with HIV (Furlotte and Schwartz, 2017)
- Disinformation and misinformation were used to justify RCMP surveillance of Indigenous pipeline protesters (Harb and Henne, 2019)
- High number of reported incidents of anti-Asian racism in 2020 and 2021 has been, in part, due to misinformation about the origins and spread of COVID-19 (Kong et al., 2021)

Recent efforts towards increasing Canadian-specific research

By completing this review, we hope to draw attention to the studies that have been conducted in the Canadian context and illustrate the need for continued support for research like this in the future. This review has highlighted the variable nature of research specific to the Canadian context, which emphasizes the diverse and varied needs of the many communities within Canada. Increasingly, the uneven response and spread of COVID-19 has shown the importance of smaller scale community-based understanding of different issues, often masked by national-level surveys.

Strategic funding and initiatives focused on misinformation in Canada could bolster the research landscape and identify knowledge gaps and areas of future focus. This could be modelled on recent initiatives and research directions focused on Canadian issues. Multiple research articles have been published in the last three years on the unique Canadian context to criminalizing disinformation and hate speech (e.g. Tenove, 2018; Dawood, 2021; Tenove et al. 2019). Two large-scale collaborative projects, the [Digital Democracy Project](#) and the [Digital Ecosystem Research Challenge](#), brought together numerous scholars to conduct research on the 2019 Canadian election, including on the threats of disinformation and misinformation (DDP, 2020; Dubois and Owen, 2020). The [Ryerson Social Media Lab](#) has ongoing reports of polling data directly focusing on Canadians and misinformation, with other firms carrying out similar polling.

Recent funding opportunities have incorporated this and, ideally, funding in this direction should continue, along with ways to enable knowledge transfer between groups to reduce redundancies (e.g. a centralized repository for relevant research).

Addressing Misinformation

This report has illustrated the complexity and multifaceted nature of how misinformation is created and spread and the ways it impacts our daily lives. Such a dynamic issue demands equally dynamic solutions which must include interventions from a variety of stakeholders. McKay and Tenove (2020) suggest a mix of “bottom up” interventions that build capacity for individuals to address misinformation and “top down” policy interventions by governments, and intermediary organizations, such as journalism organizations and social media companies.

Individual and organizational efforts

Addressing misinformation as an individual is complicated and requires a range of strategies. Research has focused on external fact-checking, inoculating the public against misinformation, science communication, improving individual literacy, and training to address emerging challenges. The research shows that proactively inoculating the public is the most effective way of reducing susceptibility to misinformation (Lewandowsky and Linden, 2021; Roozenbeek and Linden, 2019). Reactive techniques, such as “debunking” or correction, can be effective in certain situations; however, their effectiveness is limited by the “continued influence effect” where some people who have prior exposure to misinformation will continue to believe it even after it is corrected (Lewandowsky and Linden, 2021; Walter and Tukachinsky, 2020). As a supplement to this report, Evidence for Democracy conducted a larger review of the broader literature on misinformation to develop new training tools and an updated [toolkit](#) to help individuals address misinformation.

This body of research focuses on a mixture of controlled experiments and real-life interventions; however, few papers were found that tested these methods on the Canadian public. While the main conclusions may be applicable across national populations, further research on Canadian contexts could provide new insights. For example, Li et al. (2019) showed the usefulness of debunking to reduce misperceptions about Chinese foreign investment.

Improving various types of literacy can reduce the impacts of misinformation. This can include digital, media, scientific, and health literacies, which attempt to reduce information deficits and provide people with tools to identify and address misinformation.

At an organizational level, efforts can be made to use the above techniques at scale. This includes education to enhance various types of literacy, facilitating conversations, completing fact-checking and debunking, as well as actively inoculating people from misinformation. As trust plays an important role in the correction of misinformation, organizations with the trust of the community they are engaging with will have more success than those that do not. In Canada, recent surveys show trust in journalists is low (Edelman Trust, 2021), so initiatives should also focus on raising trust in the media at large, as seen in other jurisdictions such as the EU (LOC, 2020).

Role of academics

Evidence for Democracy (E4D) conducted an exploratory survey of academics at Canadian institutions (graduate students, post-doctoral researchers, and professors) in February and March of 2021. The survey was presented in English and French and was distributed via

E4D’s email and social media channels, as well as through university and grad student mailing lists. The survey sample (n= 180) was non-representative of academics across Canada and was intended to serve as an opportunity to understand how to best tailor our training suite for the most useful outcomes. As the sample was largely constructed from within E4D’s network, we assume that the respondents represent those that are already interested in evidence-based policy and would likely be the audience for future training sessions delivered by E4D. The survey sought to identify the difficulties faced by those who attempt to address misinformation in academic settings and the types of training they would like to receive.

Main conclusions included:

- Overwhelmingly, respondents reported having seen misinformation, primarily on social media or in their personal social circles (e.g., family and friends). The most common social media platforms that respondents saw misinformation were also the most used platforms: Facebook and Twitter.
- Broadly, respondents indicated they would like more training in misinformation with a substantial amount having no access to training at all. Those that did have training received it from universities and/or non-profit organizations.
- A substantial amount had attempted to address misinformation, primarily offline and on social media. Some had also conducted activities such as make plain language summaries of research or infographics in efforts to reduce misinformation
- Most commonly, attempting to address misinformation led to a conversation with the sharer; however, negative interactions often followed. Another common outcome reported by respondents was no response from those they tried to engage with.

- Respondents broadly indicated that they believed it was part of their role as academics to address misinformation within their field. Some indicated that they believed their role should also include addressing misinformation in fields outside of their own.
- Most responses indicated that COVID-19 had led to an increase in the amount of time spent countering misinformation and overwhelmingly respondents believed that misinformation would increase in volume in the future.

Of the sampled survey responses, we note that, there seems to be an appetite for training in countering misinformation and a low amount of previous training. In addition, training efforts should realistically frame the success rate of countering misinformation online and take into account the time, energy, and mental load of attempting to counter misinformation. The full survey results can be found [here](#).

Role of the government

Current government actions and legal context

Government-led removal of content on social media and criminalization of disinformation have been common responses to disinformation globally, over the past few years (Radu, 2020). These are accompanied by extensive concerns over the potential curtailing of freedom of expression, the press, or dissent. In some countries, such as Egypt, so-called “fake news” laws have been used to detain journalists (CPJ, 2020; Radu, 2020). As such, most recommendations discourage from government-directed removal of content, except in very specific situations. For example, Helm and Nasu (2021) argue that criminal sanctions against creating and disseminating disinformation can be effective when applied to very specific situations, pointing to a Texas election law outlawing “deepfakes” 30 days before an election, among others.

In Canada, existing laws may be able to be applied to reduce the amount of disinformation. Tenove et al. (2018) argues that the criminal code could be applied to disinformation, though it is not currently being enforced that way. Relevant aspects of the criminal code include provisions for “criminal harassment, defamatory libel, counselling suicide, uttering threats and intimidation” (Tenove et al., 2018). McKelvey and Dubois (2017) point out that current Anti-Spam laws could be expanded to address certain types of online bots.

Non-binding attempts to reduce misinformation have also been employed in Canada. Examples include a voluntary agreement signed by three major federal parties to not use false or stolen materials during the 2019 Election, a non-binding government-led Declaration of Integrity where social media platforms pledged to safeguard the election, and the development of a Digital Charter to help guide future regulatory approaches (Dawood, 2021). Beyond these voluntary actions, Judge and Korhani (2020) contend that “the federal government has demurred from imposing liability or otherwise mandating action by social media companies to redress non-advertising disinformation.”

The Modernization of Elections Act passed in 2018 had provisions to reduce disinformation. Three parts of the law were directly related to disinformation, the first created new transparency and disclosure requirements for paid political advertising during pre-election and election periods, including the creation of digital registries of advertising messages for online platforms (Dawood, 2021). The second part “creates an offense of distributing or publishing any material during an election period that purports to be from a candidate, political party, or the chief electoral officer where the material was published with the intent of misleading the public into believing that it was authorized” (Dawood, 2021). The third prohibited certain types of false statements to affect election results, for example, falsely claiming that a candidate or leader had committed a crime was prohibited. Prior to the change in 2018, this section “prohibited anyone from knowingly making or publishing false statements about the personal character or conduct of a candidate before or during an election”; however, in the update, the term “knowingly” was removed. Primarily due to the removal of “knowingly”, this part of the law was struck down by the Ontario Supreme Court in 2021, after a charter challenge (Dawood, 2021, Canadian Constitution Foundation v. Canada (Attorney General) 2021 ONSC 1224).





Funding for research and literacy initiatives

Various countries, including Canada, have invested in literacy initiatives (especially digital literacy, media literacy, and information literacy) as an attempt to reduce the public's susceptibility to misinformation. Literacy initiatives can be run by government organizations at all levels and could also include funding for initiatives by other organizations, such as non-profits and community centres.

Canada has provided funding for literacy initiatives specifically aimed at countering misinformation. Heritage Canada has funded 50 projects to address online misinformation and disinformation (GOC, 2021a), spending \$7.2 million dollars since January 2020 (GOC,

2021b), with similar initiatives proposed specifically to increase vaccine confidence (GOC, 2021c). Literacy and education initiatives also exist outside the government to help reduce information deficit. For example, a graduate level field class at Dalhousie University used digital storytelling to reduce information deficit about Indigenous culture, which contributed to transforming students' worldviews (Castleden et al., 2013).

Over the past few years, Canadian public health agencies and other organizations have been attempting to counter misinformation by posting relevant information online. Creating materials that provide the appropriate information in a format that is accessible to the general public has proven to be a challenge (Daraz et al., 2018; Marcinkow et al., 2019; Vivion et al., 2020; Worrall et al., 2020).

Future Policy Options

Continued criminalization of the creation of disinformation

Although the attempt to criminalize disinformation was partially overturned by the Ontario Supreme Court, the government can revisit this option by appealing or tabling a modified version of the law. Reports have also indicated that the federal government is considering new online hate speech laws, which may undergo a similar challenge, although these laws are broadly approved by the public (Ipsos, 2019). Any future attempt will have to balance the legitimate concerns about freedom of expression, the press, and ability to dissent freely.

Regulation of social media and other digital platforms

Social media platforms have taken a variety of steps to address misinformation, the lack of consistency across platforms and concerns about the transparency and effectiveness of the efforts have led to calls for policy-based solutions to misinformation on social media. Recommendations have largely avoided restricting what a user can post or any government-led content removal.

One possible solution is to legislate increased transparency from digital platforms, including social media platforms and search engines, regarding their algorithms. This would provide the public, regulators, and researchers with an understanding of how algorithms make choices

on what to amplify and to whom it is amplified it to (i.e. what is trending, who sees what, etc.) (Forum on Information and Democracy, 2020; House of Commons, 2020). Policy proposals are varied under this umbrella, with a range of suggestions on how to implement this increased transparency and what level of transparency is appropriate and understandable to different groups. Some ideas include the creation of an independent agency or regulatory body with the ability to audit social media algorithms (Koene et al., 2019; Standing Committee on Access to Information, Privacy and Ethics, 2018). Others include mandatory transparency disclosures, the ability for vetted researchers to audit algorithms, and implementing sanctions or enforcement powers for noncompliance (Department of Digital, Culture, Media & Sport and Home Department, 2019; Forum on Information and Democracy, 2020).

“Meta-regulation”- where oversight is applied to decisions made by platform moderators and decision-makers - is another possibility. Policy recommendations would guide moderation decisions (e.g., post removal, banning, etc.) in a transparent way, as well as provide recourse for those who feel their profile or post was removed erroneously (Department of Digital, Culture, Media & Sport and Home Department, 2019; Forum on Information and Democracy, 2020).

Another possibility is to require providers to label content produced algorithmically for the user, along with an explanation of why that content was targeted and what information was used to come to that decision. A corollary of this would be required labelling of paid advertisements online (Standing Committee on Access to Information, Privacy and Ethics, 2018; Forum on Information and Democracy, 2020).

Other related suggestions include the required creation and implementation of “circuit breakers”, which pause algorithmic amplification of unverified news stories, until they can be verified. For messaging platforms, one possibility is limiting the ability to easily message large groups, a policy already in place on the Facebook-owned WhatsApp messaging platform to reduce the spread of misinformation (Forum on Information and Democracy, 2020).

Suggestions also included creating a “National Social Media Council”, analogous to the current broadcasting standards council in Canada, to coordinate content moderation across social media platforms (Standing Committee on Access to Information, Privacy and Ethics, 2018). Specifically, Tenove et al. (2018) also argues for the creation of a Moderation Standards Council, “a multi-stakeholder body that would convene platforms, government representatives, and civil society organizations regularly to discuss content moderation, and pursue best practices when it comes to addressing issues including disinformation and harmful speech”. However, there are concerns a council could be ineffective as it is continued self-regulation by social media platforms (Standing Committee on Access to Information Privacy, and Ethics, 2020; Dawood, 2021; Wood and Ravel, 2018)

Related recommendations have been made regarding online service providers and privacy rights. Increased transparency around how data is stored and used could change how users interact with social media platforms, in turn changing how misinformation is spread. Specifically, increased encryption could reduce the ability of advertisers and other groups to micro-target information to certain groups, thereby changing how information spreads.

Algorithms and social media moderation

Algorithms are designed to determine how information is propagated on both search engines and social media platforms. Humans program algorithms to make choices about what information is amplified, propagated, and recommended to other users, therefore having the power to decide which values or goals their algorithms optimize, with little oversight (Helberger, 2020). As social media platforms profit from clicks and engagements, platforms have been criticized for profiting off of misinformation and disinformation, as well as creating areas of homogenous thinking and contributing to bias (House of Lords, 2019). Search engines like Google also use algorithms to prioritize certain sources of information over others, also without oversight or transparency. Adding to the transparency challenge that comes with algorithms is that they are not available to the public or to researchers, potentially due to commercial concerns (House of Lords, 2019).

Social media sites have their own usage policies and moderation, by which they are able to remove posts and accounts they determine to have broken their terms of service. This moderation is largely private and without oversight from independent bodies, standardized regulations, or codes of conduct from governing bodies. In addition, moderation is increasingly being automated using artificial intelligence or machine learning, potentially exacerbating current moderation concerns (Gorwa et al., 2020). There are concerns about possible biases in moderation (House of Lords, 2019), as well as a lack of transparency in decisions and a lack of recourse for when posts are removed (House of Lords, 2019).



Funding for literacy programs and research

The federal government can also continue or create funding for literacy programs and research on how best to address disinformation and misinformation (Tenove et al. 2018). These programs can target digital, media, science, and health literacy to reduce the impacts of misinformation. Partnerships with different organizations to act as independent fact checkers may also be appropriate.

Conclusion

Misinformation and disinformation are ongoing threats to the health and safety of the Canadian public, as well as the basis of democracy. A review of Canadian-specific research on misinformation indicated that Canada may have a distinct landscape by which misinformation is disseminated and shared, as well as specific contexts where misinformation can be harmful. We recommend future research and initiatives should be funded to continue this research, especially those that are community based. In addition, there are a variety of potential policy options that could reduce the presence of misinformation.

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