

Misinformation Across Social Media Platforms and Across Countries

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Acknowledgments

This project has been made possible in part by the Government of Canada. The 2021 survey was funded by Canadian Heritage. The 2019 survey was funded by an Insight Grant (435-2019-04-94) from the Social Sciences and Humanities Research Council (SSHRC) of Canada.

Funded by the Government of Canada Financé par le gouvernement du Canada



Methodology

From September to November 2019 and January to February 2021, Kantar administered a survey to an online panel (Appendix A). Respondents had to be at least 18 years old to participate. The 2019 sample is composed of 1,700 people from the United States, 1,542 from the United Kingdom, 1,510 from France, and 1,539 from Canada. The 2021 sample is composed of 1,500 from the United States, 1,500 from the United Kingdom, 1,500 from France, and 1,568 from Canada. Quotas were used to ensure the sample matched the age and sex representation of the population in each country (Appendix B).

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Executive Summary

Citizens' exposure and reaction to online misinformation are important concerns, particularly when intentionally false information can undermine faith in key democratic processes (e.g., elections) and disrupt public health efforts to manage the COVID-19 pandemic, resulting in unnecessary deaths. In 2019 and 2021, we collected survey data in four countries: Canada, France, the United Kingdom, and the United States.

- From 2019 to 2021, a 12 percentage point increase (from 58% to 70%) occurred with respect to seeing misinformation on social media during the past month. Canadians are similar to Americans in terms of seeing misinformation on social media. Misinformation exposure on social media is higher in these two countries than in the United Kingdom and France. (Section 1)
- In 2021, we asked about awareness of eight news stories identified as false by PolitiFact and the French organization, AFP Fact Check. Approximately 86% of respondents reported awareness of at least one of these stories. Survey respondents were asked about their perceived capacity to identify misinformation when they came across it online. On a five-point scale, respondents assessed themselves as "moderately" (3) able to identify misinformation. These results are fairly consistent across countries and social groups. (Section 1)
- Users of all platforms are more likely to report exposure to misinformation in 2021 compared to 2019. The biggest increase was among Facebook users (65%-80%). YouTube users report low levels of exposure to misinformation on this platform, whereas Facebook and Twitter users report high levels of exposure to misinformation on these platforms. Across all four countries, respondents agree about the seriousness of misinformation on Facebook. On a five-point scale, respondents reported, on average, that misinformation was a "moderately" (3) serious issue on Facebook. The results are fairly consistent across countries. (Section 2)
- We also examine which groups are more likely to report seeing misinformation. In terms of political ideology, we do not find differences for left- versus right-leaning citizens; we find those in the middle or moderate are distinctive in low exposure to misinformation on social media and awareness of false stories. Age is a consistent predictor of exposure and reaction to misinformation. The youngest age group (18 to 24 years) is the most likely to report seeing misinformation on social media during the past month. This group experienced a 15 percentage point increase in seeing misinformation from 2019 to 2021. (Section 3)

Age also predicts how people respond when they see misinformation posted on social media. The youngest age group (18 to 24 years) is the most likely to check information using other credible sources, use fact-checking websites, report misinformation to social media platforms, and correct other users' misinformation. Use of fact-checking websites dramatically increases the likelihood of correcting others' misinformation posts and reporting misinformation to platforms. (Section 4)

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Introduction

Misinformation is widely understood as "a claim that contradicts or distorts common understandings of verifiable facts" (Guess & Lyons, 2020, p. 10). This definition focuses on the content of the claim, rather than the intent of its author or propagator. Misinformation is thus frequently contrasted with "disinformation," which refers to false or deceptive claims that are advanced to pursue political or economic aims, or in an effort "to harm an individual, social group, country or organization" (Wardle & Derakhshan, 2017, p. 20). The focus on intent can be problematic, because intent is often hard to prove. Furthermore, the same claim might be understood as "misinformation" when advanced by some actors and "disinformation" when promoted by others. Without knowing the intent of falsifying, the conceptual boundaries are quite blurry. However, misinformation and disinformation are distinct from content that has been altered for comedy.

The issue of problematic or false information on social media rose to prominence in the United States (US) with its election in late 2016, and was put on the news media agenda in subsequent elections worldwide, including national elections in the United Kingdom (UK) (2017/2019), France (2017), Canada (2019), US (2020), and European Parliament (2019). Moreover, legislation to address fake news has been adopted in France (2018), introduced as part of new social media regulations in the UK, and investigated in the Canadian Parliament (Tenove, 2020).

We aim to understand Canada's risks as they pertain to misinformation, but also use cross-national research to understand factors that might lead to resilience. Humprecht et al. (2020) define resilience as "a structural context in which disinformation does not reach a large number of citizens" and, when it does reach citizens, "people will be less inclined to support or further distribute such low-quality information, and in some cases, they will be more able to counter that information" (p. 498). Canada is grouped with countries with higher resilience because of its media regulation and publicly funded broadcasting system (Benkler et al., 2018; Humprecht et al., 2020). These system-level factors may reduce exposure to this type of information and also may insulate a community from the dire effects of misinformation. Comparing Canada with these other countries also helps to identify what is unique about Canada. Canadians' media diets are filled with American content (Brin & Charlton, 2020), which means exposure to one of the worst countries in the world for misinformation (Benkler et al., 2018; Humprecht et al., 2020; Newman et al., 2018). Canada is a small media market, which reduces risks for disinformation campaigns, but has high social media use (Poushter et al., 2018), which increases risks for exposure to misinformation (Humprecht et al., 2020; Koc-Michalska et al., 2020).

Cross-national comparisons help us to understand the political, economic, and media environments that may increase or decrease exposure to misinformation (Humprecht et al., 2020). Such research can reveal the limitations of applying findings about the heavily-studied US system to other countries (Humprecht et al., 2020; Newman et al., 2018). Cross-national studies that include Canada are necessary to assess the dynamics of the misinformation problem in this country, and can help assess which policy responses might work here. Finally, cross-national research is important, because misinformation flows freely across borders and policy interventions require an international perspective.

Cross-national studies of misinformation are limited. In 2018, Reuters Institute conducted a cross-national study examining misinformation (Newman et al., 2018). Approximately 60% of Canadians expressed concerns about misinformation, similar to levels observed in the US (64%), France (62%), and the UK (58%) (Newman et al., 2018). In 2019, a CIGI-Ipsos poll across 25 countries found two-thirds (65%) of respondents believed they were exposed to "fake news" on social media; again, Canadians (65%) reported levels similar to citizens in the US (67%), with France (55%) and the UK (52%) having lower levels (CIGI-Ipsos, 2019).

Social media are key to the spread of misinformation, but platforms differ in terms of how this occurs. Not only is the platform focus important for interventions to address the flow of misinformation, but it also addresses a clear research gap. Misinformation research has focused on Facebook, Twitter, and YouTube, leaving many other platforms unexplored (Golovchenko et al., 2020; Guess & Lyons, 2020). Allcott et al. (2019) claim Facebook's efforts related to misinformation have effectively reduced user engagement with misinformation on their platform, whereas misinformation on Twitter has continued to rise. Comparing different platforms helps to evaluate the effectiveness of different interventions.

Exposure to misinformation is unevenly distributed across social groups. Understanding this uneven exposure to misinformation will help identify groups that are more vulnerable to being misled and can inform strategies to limit or counteract harms caused by misinformation. However, we do not wish to imply that exposure to misinformation will translate into belief in this information. We do not examine people's beliefs in misinformation; instead, we seek to examine the degree to which citizens challenge the misinformation they see on social media. In particular, we highlight differential exposure to misinformation but also how different social groups challenge misinformation by consulting fact-checking websites, checking information against other sources, reporting misinformation to social media platforms, and correcting other users who post misinformation. This report proceeds as follows: Section 1 looks at misinformation exposure across countries and across time. Section 2 examines misinformation on different social media platforms. Section 3 examines which social groups were more likely to see misinformation in 2019 and 2021. Finally, Section 4 examines citizens' engagement in activities that can challenge the misinformation they see on social media. Each section offers specific insights into Canada. In other words, the sections describe how the results may differ from or replicate cross-national findings. We also contextualize our findings in the existing research.

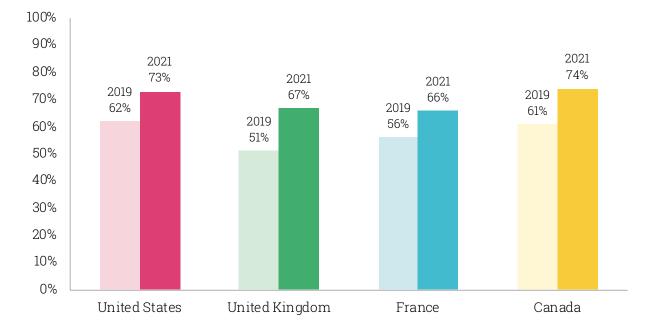
Section 1.

Exposure across time and country.

Introduction. In this section, we document the extent to which respondents report seeing misinformation on social media during the past month. We compare these exposure rates by country and by year of data collection. For 2021, we address some of the methodological challenges in trying to assess exposure to misinformation. In particular, misinformation is not intended to be a concept that defines information that you disagree with; rather, misinformation is information that can be verified as false or misleading (Guess & Lyons, 2020). To further clarify what people mean when they say they encounter misinformation, in our 2021 survey we asked about the topics of misinformation to which respondents were exposed and awareness of false stories as defined by fact-checking websites. In addition, we also asked about self-assessed ability to identify misinformation. We have also considered who spread this misinformation.

Looking across countries, 58% of respondents in the 2019 survey (n=6,291) and 70% of respondents in the 2021 survey (n=6,068) reported seeing misinformation on social media in the past month. As depicted in Graph 1-1, the US and Canada have similar rates of self-assessed exposure to misinformation; this rate of exposure is higher than rates observed in the UK and France (also see CIGI-Ipsos, 2019).

Highlight 1-1. When asked about the past month, 58% of respondents in 2019 and 70% of respondents in 2021 reported seeing misinformation on social media.



Graph 1-1: Reports of seeing misinformation on social media in the past month

Self-reported exposure to misinformation has increased over time in all countries. Data from American respondents indicate an 11 percentage point increase in exposure between 2019 and 2021. Responses from France also indicate greater exposure to misinformation, with numbers growing from 56% to 66% from 2019 to 2021. Data from the UK reveal a 16 percentage point increase from 2019 to 2021. The percentage of Canadians who reported seeing misinformation grew from 61% in 2019 to 74% in 2021.

For those who reported exposure to misinformation (n=4,254), we asked a series of follow-up questions about the topic of misinformation and who circulated the misinformation. As mentioned, the objective is to explore nuances in the types of misinformation flowing and sources of misinformation with the goal of understanding whether respondents are using our intended definition: information that can be verified as false.

To select the stories, we consulted two fact-checking websites: one in the US and one in Europe. We used stories from the Poynter Institute's PolitiFact and stories from the French organization, <u>AFP Fact Check</u>. AFP is one of the organizations involved in Facebook's third-party fact-checking program. AFP and PolitiFact are members of the <u>International Fact-Checking Network</u>. We chose two issues as critical topics that people would be aware of across all four countries (2020 US presidential election, COVID-19); but, more importantly, we chose stories that were circulating during the three months prior to survey data collection. We asked specifically about exposure to misinformation about these two topics (see Appendix A-6).

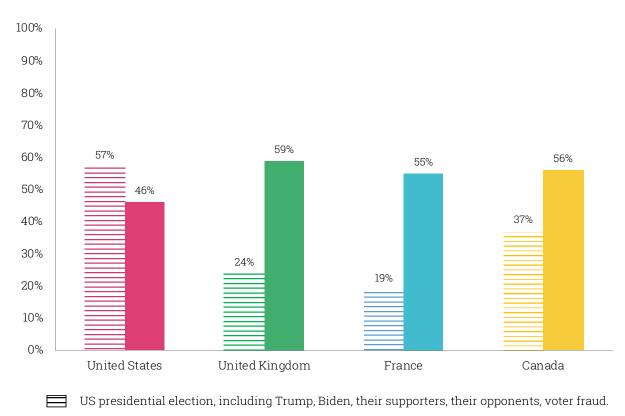
As displayed in Graph 1-2, 57% of respondents from the US reported the topic of misinformation as the presidential election. Other countries were also exposed to misinformation surrounding the US presidential election, but more than half of respondents identified the topic as COVID-19.

Drawing on focus groups in Finland, Spain, the UK, and the US, Nielsen and Graves (2017) find that respondents use a term such as "fake news" to identify problematic communication including low-quality journalism, political propaganda, and advertising. They conclude, "most people do not draw the line between fake news and other kinds of news in simple ways, and do not always draw it the way journalists, technology companies, and policymakers think" (p. 7). These public interpretations of terms such as "fake news" and "misinformation" pose serious challenges to research drawing on self-reporting of exposure.

On the other hand, research drawing on respondents' self-assessments of exposure to misinformation is crucial. Researchers do not have access to data for key platforms that people use (e.g., Facebook), let alone access to messaging apps, email, or other online sources of misinformation. Moreover, people's beliefs regarding their own exposure to misinformation are significant, even if their estimates are not entirely correct. For instance, the belief that one has been exposed to misinformation may be a stronger predictor of distrust in news media than actual exposure rates. We included a series of eight news stories that had been falsified by fact-checking websites (PolitiFact and AFP Factcheck). We asked respondents if they were aware of these stories (regardless of whether they believed the story). The methodology reflects an approach used by Valenzuela et al. (2019), but we did not follow up with questions about beliefs and sharing of these stories because our objective is only to assess the validity of claims to exposure to misinformation.

Highlight 1-2. Across the four countries, 86% of respondents were aware of at least one of the false news stories.

Overall, 86% of respondents (n=6,068) indicated they were aware of at least one of the eight false news stories. In contrast, 70% of respondents reported seeing misinformation on social media when we asked about exposure to misinformation on such platforms.



Graph 1-2: Topic of misinformation seen on social media

COVID-19, the vaccine or the public health measures related to the pandemic.

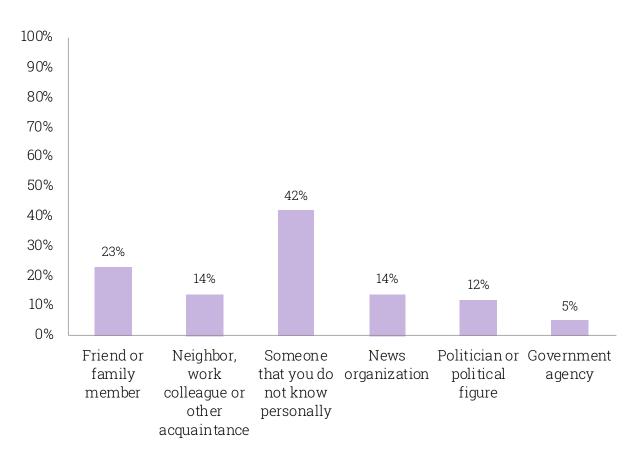
Of all of the fake news stories (Table 1-1), respondents in all countries are most aware of the false story that "voter fraud was high in the US election". Of all respondents (n=6,068), 62% are aware of this story. Specifically, 69% of US respondents are aware of this story; in each of the other countries, about 60% of respondents are aware of this story. Five of the eight falsified news stories (PolitiFact and AFP Factcheck) we included relate to COVID-19. Of these stories, respondents are most aware (46%) of the story about the Paris COVID-19 protest. Americans are the least aware of this story (38%) compared to other respondents.

	United States	United Kingdom	France	Canada	All
The riot at the U.S. Capitol Building on January 6 was staged by Antifa, not Trump supporters.	60%	34%	34%	40%	42%
Voter fraud was high in the US election.	69%	59%	60%	60%	62%
Trump invoked the Insurrection Act in January 2021.	44%	36%	42%	43%	41%
The COVID-19 vaccines contain toxic material.	31%	29%	32%	28%	30%
The COVID-19 vaccine causes female sterilization.	23%	19%	10%	13%	16%
US Medical Association changed its views on hydroxychloroquine as a COVID-19 treatment.	49%	27%	40%	43%	40%
Coca-Cola tested positive for COVID-19.	13%	10%	31%	8%	15%
In December 2020, there was a major protest in Paris about the COVID-19 restrictions.	38%	51%	49%	46%	46%
Yes to at least one	91%	82%	88%	85%	86%

 Table 1-1: Awareness of false news stories between November 2020 and January 2021

We asked respondents about who shared the misinformation they saw posted on social media. The purpose of this question was to help assess the validity of reports about misinformation. In particular, if respondents are using the definition intended, i.e., verified false information, then we should see low reported exposure from official/credible sources that tend to report factual information. In the survey, only 5% of respondents in these four Western democracies reported misinformation being spread on social media by a government agency.

For those who reported seeing misinformation on social media (n=4,254), we asked who circulated this misinformation. As shown in Graph 1-3, 42% of respondents answered it had been shared by someone they did not know personally. The results for Canada are similar, with 45% claiming they did not know the person who posted the message and 24% reporting a family member or friend posted the message. For Canadians (n=1,165), 13% identified their neighbor, colleague, or other acquaintance as the source, 13% identified a politician or political figure, 12% identified a news organization, and 5% identified a government agency.

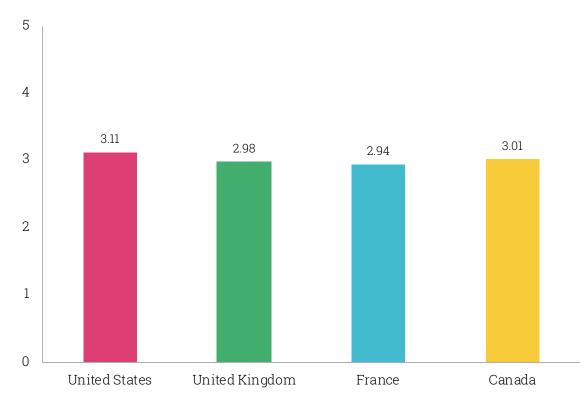


Graph 1-3: Who shared misinformation on social media?

All survey respondents (n=6,068) answered a question regarding their perceived capacity to identify misinformation when they came across it online. Results are fairly consistent across countries, as illustrated in Graph 1-4. The survey question helps understand people's confidence in relation to their responses about exposure to misinformation (Graph 1-1). On a 1 to 5 scale (not at all, a little, moderately, very, extremely), respondents assessed themselves as "moderately" (3.01) confident in their ability to identify misinformation.

Highlight 1-4. Respondents assessed themselves as "moderately" confident in their ability to identify misinformation.

Corbu et al. (2020) compare Romanian adults' self-assessed ability to detect fake news. They find education and political interest predicted self-assessed ability to detect fake news, but gender, age, and income did not. We find small differences across social groups. The largest differences are for gender and education. However, these differences are small – less than .3 on a five-point scale.



Graph 1-4: Ability to identify misinformation

Summary. Measuring citizens' exposure to misinformation is difficult. The concept is subject to debate with many using it to identify information with which they simply disagree. Our intended meaning was to identify false information. As such, we used a series of questions to understand exposure to misinformation. We defined the concept and asked about exposure in the past month, then we validated this measure against awareness of false news stories as identified by fact-checking organizations. Finally, we asked about sources of misinformation to further clarify whether respondents are using the intended definition. In summary, the responses to the combination of survey questions suggest exposure to misinformation is high. Respondents are aware of false news stories (86%) that circulated in the three months prior to the survey. This high level of awareness is matched with high self-assessed exposure on social media (70%) – a number that increased by 12 percentage points from 2019 to 2021. Respondents in different countries and in different social groups are quite consistent in their self-assessed ability to identify misinformation.

Section 2.

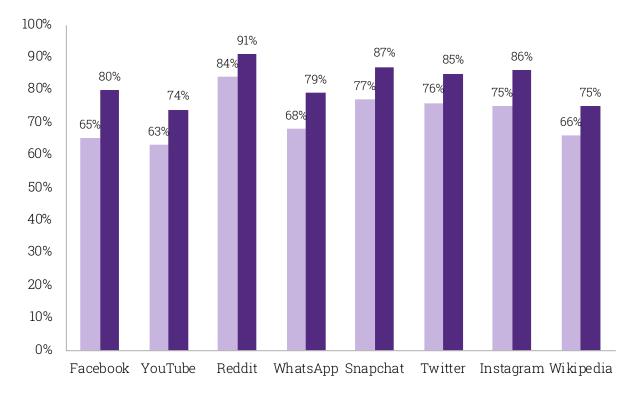
Exposure on social media platforms.

Introduction. Citizens use a variety of social media platforms. The most popular platforms in the 2021 survey are as follows: YouTube (86%), Wikipedia (81%), Facebook (80%), WhatsApp (50%), Instagram (49%), Twitter (41%), Snapchat (31%), and Reddit (25%). In Canada, the numbers are: YouTube (90%), Wikipedia (81%), Facebook (85%), WhatsApp (38%), Instagram (52%), Twitter (41%), Snapchat (28%), and Reddit (32%). The Canadian numbers indicate more YouTube, Facebook and Reddit users, but fewer WhatsApp users, in this country.

We asked respondents whether they used these platforms, then linked these answers to seeing misinformation on any social media platform (Graph 2-1). The linkage helps us to understand how exposure may differ by platform, but the graph does not display results about exposure on a specific platform. As such, in 2021, we also asked users of specific platforms whether they encountered misinformation on that platform (Graph 2-2). The large sample size for this cross-national survey allows us to explore these subgroups of platform users. In particular, all of our analyses are based on 1,000 users or more. Facebook is a widely used platform across the four countries and has been the focus of much research on misinformation. As such, in addition to asking about exposure to misinformation on Facebook, we asked users to assess their level of concern about misinformation on Facebook. We conclude this section with some exploratory analysis on other platforms (Facebook Messenger, LinkedIn, Pinterest, Twitch, TikTok).

> **Highlight 2-1.** Based on an analysis of Facebook users, a 15 percentage point increase in seeing misinformation on social media occurred between 2019 and 2021.

Comparing the numbers for 2019 and 2021, we see exposure to misinformation has increased (as observed in Graph 1-1). In Graph 2-1, we see the biggest change is among Facebook users. In 2019, 65% of Facebook users (compared to 35% of non-users) identified seeing misinformation on social media, whereas in 2021, 80% of Facebook users (compared to 32% of non-users) identified seeing misinformation on social media during the past month.



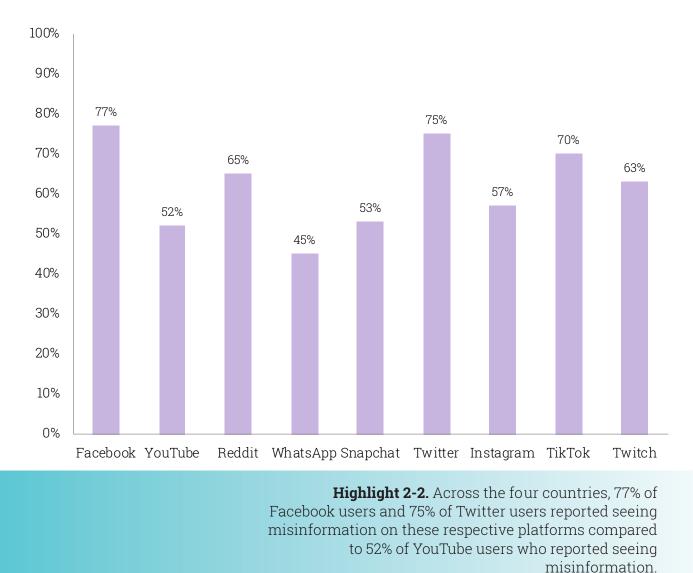
Graph 2-1: Platforms and seeing misinformation on social media in the past month

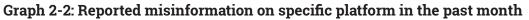
2019 2021

The pattern observed in Graph 2-1 is correlational; in Graph 2-2, we ask about exposure to misinformation on Facebook. Graph 2-2 is based on a subset of the entire sample. Respondents had to report seeing misinformation on any social media platform and had to report using the specific platform in question. If they met both conditions, then they were asked a follow-up question about exposure to misinformation on that specific platform. Graph 2-2 is based on sample sizes ranging from 992 (Twitch) to 3,881 (YouTube). Exposure varies by platform, which may be the result of platform-specific content policies and the extent of content moderation.

Only 52% of YouTube users (n=3,881) reported seeing misinformation on the video platform. In April 2020, YouTube banned any COVID-19-related content that contradicted official World Health Organization information (BBC News, 2020; Google, 2020a). On December 9, 2020, the platform enacted a "Presidential Election Integrity Policy" to combat falsehoods regarding the outcome of the 2020 US election (Google, 2020b).

Of the Twitter users in our sample (n=2,092), 75% reported seeing misinformation on this platform. In May 2020, this platform began adding labels on posts to flag misinformation (Roth & Pickles, 2020).

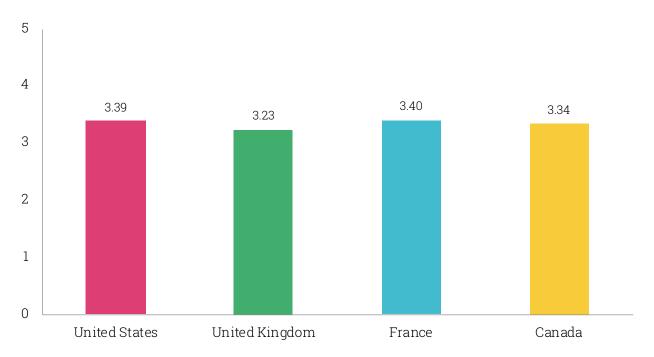




Approximately 77% of Facebook users reported seeing misinformation on this platform in the past month (Graph 2-2). In the 2021 survey, we asked a follow-up question of Facebook users. Using a 1 to 5 scale (not at all, a little, moderately, very, and extremely), we asked how serious a problem misinformation is on Facebook. On average, respondents rated the problem as "moderate" (3.34 on a five-point scale). Cross-national variations in these views are minimal (Graph 2-3).

Highlight 2-3. On average, respondents rated the misinformation on Facebook as a "moderately" serious problem.

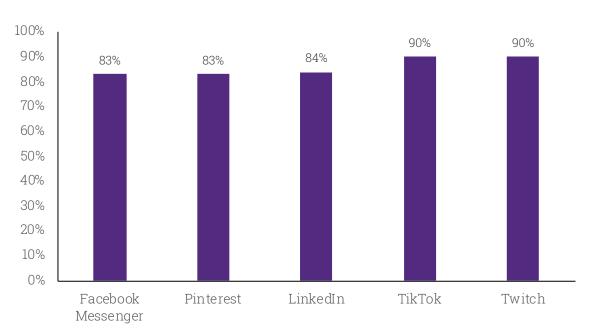
To address misinformation following the 2016 US election, Facebook created partnerships with third-party fact-checking organizations, mounted concerted efforts to combat election misinformation, and used policies to reduce the spread of misinformation, including removing it, reducing its discoverability, limiting users' ability to monetize the spread of false information, and banning some users who post it (Iosifidis & Nicoli, 2020). In June 2020, Facebook unveiled "a new campaign to help spot false news", which aimed to empower users to recognize misinformation on its platform (Facebook, 2020).



Graph 2-3: Seriousness of misinformation on Facebook

Beyond Facebook and Twitter, other platforms are relatively understudied. In 2021, we asked respondents if they used Facebook Messenger (57%), Pinterest (25%), LinkedIn (21%), TikTok (25%), and Twitch (18%). We asked about misinformation exposure on TikTok and Twitch (see Graph 2-2). Of the two platforms, TikTok users are more likely to report seeing misinformation on that platform (Graph 2-2). Across all countries, 70% of respondents who used TikTok reported seeing misinformation on that platform. Our results suggest TikTok users are more likely to report exposure to misinformation on any social media platform. Specifically, 90% of TikTok users (compared to 64% of non-users) reported seeing misinformation on any social media platform (Graph 2-4).

The adoption of these platforms in Canada differs from the other countries. These adoption numbers are important as they may signal the platforms that could have the greatest impact on exposure to misinformation because they have a larger user base. In particular, the numbers for Canada are: Facebook Messenger (64%), Pinterest (30%), LinkedIn (25%), TikTok (26%), and Twitch (17%). Specifically, this means that although TikTok and Twitch users are very likely to report exposure to misinformation on social media (Graph 2-4), these platforms are not used much by Canadians. In contrast, Facebook Messenger is used widely: 64% of Canadians use this platform, which makes it noteworthy because 83% of users report exposure to misinformation on social media. These findings are consistent with general patterns of Facebook use (see Graphs 2-1, 2-2).



Graph 2-4: Other platform users and seeing misinformation on social media in the past month

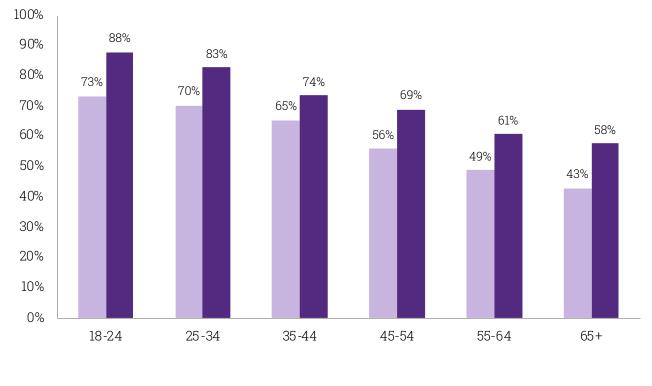
Summary. In summary, exposure to misinformation differs by platform. Users of all platforms are more likely to report exposure to misinformation in 2021 compared to 2019. The biggest increase was among Facebook users (65% to 80%). In 2021, we asked about exposure to misinformation on specific platforms. Facebook (77%) and Twitter (75%) users are very likely to report exposure to misinformation. Facebook use is popular in the four countries studied. We asked Facebook users if they were concerned about the misinformation appearing on Facebook. The average levels of concern are consistent across the four countries. On average, respondents rated the problem as "moderate" (3.34 on a five-point scale). While the number of TikTok users is small, they are highly likely to report misinformation on that platform (70%).

Section 3.

Vulnerable groups. **Introduction.** In this section, we investigate the relationship between misinformation exposure and people's age, gender, education, and political orientation. In choosing the groups to examine, we were guided by existing literature. However, Canadians are distinctive in relation to language. As such, we offer some nuances about different language groups in Canada and their exposure to misinformation. We focus on self-reported exposure as measured by seeing misinformation on social media in the past month, but we also offer observations about the reported awareness of false news stories to help understand and validate (in most cases) the patterns observed.

Young adults (18-24 years) are the most likely to report seeing misinformation on social media (Graph 3-1). Exposure to misinformation increased in all age groups from 2019 to 2021. The increase was 15 percentage points for the young adult group.

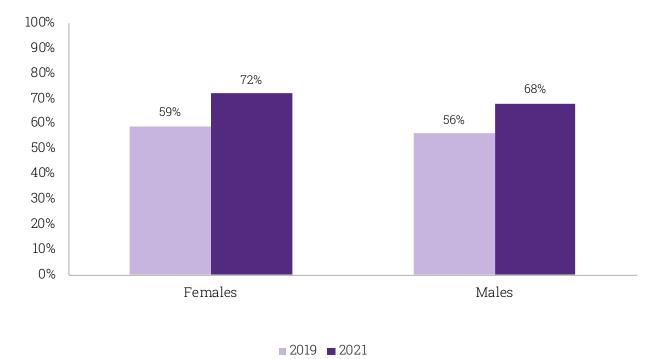
Research in the US did not find differences in exposure between age groups (Jones-Jang et al., 2020). However, we find the relationship between age and exposure to misinformation is complex. When assessing whether respondents were aware of at least one of the eight stories identified as false (see Table 1-1), seniors are more likely to report being aware of these stories. Approximately 92% of seniors are aware of at least one false story related to the 2020 US election or COVID-19 compared to 85% of young adults (18 to 24 years). The age patterns differ slightly depending on how exposure to misinformation is measured. Age differences are more strongly related to the 2020 US election or COVID-19.



Graph 3-1: Age differences in seeing misinformation on social media in the past month

2019 2021

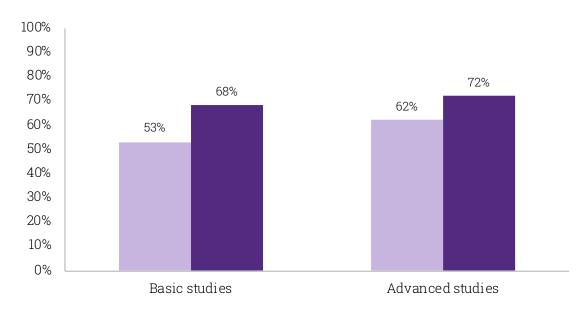
As shown in Graph 3-2, the survey responses indicate self-reported exposure to misinformation on social media does not vary significantly by gender. In addition, when measuring exposure to at least one false story (see Table 1-1), women and men experience similar levels of awareness. Approximately 86% of males and females are aware of at least one false story. In contrast, Jones-Jang et al. (2020) find that women, compared to men, reported more perceived exposure to false political information in a sample of Americans. Gender differences likely differ by country (see Table 3-1).

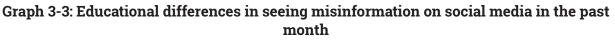


Graph 3-2: Gender differences in seeing misinformation on social media in the past month

Comparing 2019 and 2021 data shows the disparity between respondents with a basic versus advanced education with respect to exposure to misinformation has narrowed (Graph 3-3). In 2019, the difference based on education was nine percentage points; in 2021, the difference was four percentage points. In 2021, we asked about awareness of specific false stories (see Table 1-1). When exposure is assessed in this way, we show a similar pattern as noted above, with 84% of those with basic education and 89% of more educated people aware of at least one false story.

Jones-Jang et al. (2020) do not find educational differences in exposure to misinformation in a sample of Americans. Educational differences likely differ in size by country (see Table 3-1).



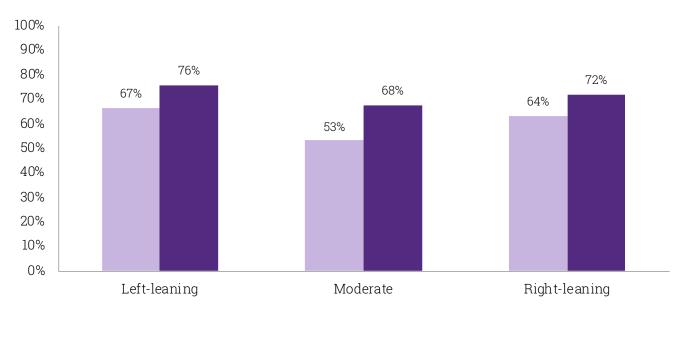




As shown in Graph 3-4, individuals in the middle of the political ideology scale report less exposure to misinformation compared to those who identify as left or right. We see a similar pattern when asking about awareness of fake new stories (Table 1-1). Approximately 90% of left-leaning, 84% of moderate, and 92% of right-leaning respondents report seeing misinformation. Moderates report lower levels of exposure for both measures of exposure to misinformation.

Jones-Jang et al. (2020) find strong ideological differences in exposure to misinformation; conservative Americans are more likely to report exposure to misinformation than others. In our surveys, ideological differences are smaller in 2021 compared to 2019. Similar to education, these differences may be diminishing over time.

Highlight 3-2. Ideological differences in seeing misinformation decreased from 2019 to 2021; those in the middle of the ideological scale are the least likely to see misinformation on social media.



Graph 3-4: Ideological differences in seeing misinformation on social media in the past month

2019 2021

Table 3-1 documents exposure to misinformation on social media among Canadians. The youngest two age cohorts (18 to 24 years, 25 to 34 years) have the highest rates of seeing misinformation on social media. The incidence rates for these groups based on the 2019 data are 72% and 74%, respectively; for 2021 data, it was 89% for both groups. Those aged 18 to 24 years experienced the biggest percentage point increase in exposure to misinformation from 2019 to 2021. Age differences have significantly expanded in 2021 compared to 2019 for Canadians.

In Canada, those with high school diploma (or less) also experienced a significant increase in exposure to misinformation from 2019 (56%) to 2021 (73%). The increase has closed the gap between those Canadians with a high school diploma (73%) compared to those with some post-secondary training (75%). The educational differences in exposure to misinformation observed in 2019 disappeared in 2021, replicating results from the cross-national survey.

In Canada, the ideological differences in reporting of misinformation on social media decreased in 2021 compared to 2019. Among left-leaning Canadian citizens, 81% had been exposed compared to 77% of right-leaning and 72% of moderates. These results mimic those observed for the cross-national survey.

English-speaking Canadians are more likely than French-speaking Canadians to report exposure to misinformation on social media (Table 3-1). This difference is larger in 2021 (nine percentage points) compared to 2019 (four percentage points).

In 2019, there are no differences between males and females in terms of reported exposure to misinformation. In 2021, the gap grew to six percentage points. Specifically, Canadian females are more likely to report exposure to misinformation (77%) compared to Canadian males (71%).

	Percentage reporting self-reported exposure 2019	Percentage reporting self-reported exposure 2021	Difference
Males	60%	71%	+11%
Females	62%	77%	+15%
Basic education (high school or less) Advanced education	56% 64%	73% 75%	+17% +11%
English-speaking	62%	76%	+14%
French-speaking	58%	67%	+9%
Left-leaning	70%	81%	+11%
Moderate	57%	72%	+15%
Right-leaning	71%	77%	+6%
18 to 24 years	72%	89%	+17%
25 to 34 years	74%	89%	+15%
35 to 44 years	67%	76%	+9%
45 to 54 years	62%	76%	+14%
55 to 64 years	52%	65%	+13%
65 +	48%	61%	+13%

Table 3-1: Demographic differences in seeing misinformation on social media in the past month (Canada only)

For gender, age, language, and educational differences, the patterns differ depending on how exposure to misinformation is assessed. The results for awareness of fake news stories reveal no gender or language differences among Canadians (Table 3-2), but the selfassessed exposure suggests small gender and language differences (Table 3-1).

For education, the pattern is the opposite. The survey results with respect to selfassessed exposure to misinformation on social media indicate no educational differences (Table 3-1), but educational differences are apparent for awareness of false news stories (Table 3-2). Those with higher levels of education (89%) are more likely to be aware of false news stories compared to those with less education (80%). As observed with the larger sample, age differences are complex. Canadian seniors are more likely to report awareness of false stories (92%) compared to young adults (85%). Middle-aged Canadians have the lowest awareness of false news stories (80% for 35 to 44 years). However, when considering self-assessed exposure on social media, the patterns suggest younger adults have higher exposure (Table 3-1). As mentioned, this is likely a difference in nuance. The age patterns differ slightly depending on how exposure to misinformation is measured. Age differences are more strongly related to seeing misinformation on social media compared to awareness of false stories related to the 2020 US election or COVID-19. The other measure is about awareness of stories that have circulated on social media as well as other places. This awareness of false stories is greater for seniors compared to youth.

We see similar patterns for political ideology and awareness of false stories as we observed when measuring exposure to misinformation on social media. Moderates are less likely to be aware of false news stories compared to left- or right-leaning Canadians (Table 3-2). They are also less likely to report seeing misinformation on social media (Table 3-1).

	Aware of at least one of the eight false stories related to COVID-19 or the 2020 US presidential election (2021 survey only)
Males	85%
Females	85%
Basic education (high school or less)	80%
Advanced education	89%
English-speaking	86%
French-speaking	84%
Left-leaning	90%
Moderate	83%
Right-leaning	92%
18 to 24 years	85%
25 to 34 years	84%
35 to 44 years	80%
45 to 54 years	83%
55 to 64 years	86%
65 +	92%

Table 3-2: Demographic differences in awareness of false news stories (Canada only)

Summary. In summary, exposure to misinformation differs by social group. Age is a factor shaping people's exposure to misinformation in the large survey of four countries. The youngest age group is more likely to report misinformation and this exposure increased by 15 percentage points from 2019 to 2021. Educational differences decreased from 2019 to 2021. In terms of political ideology, we do not find differences for left- versus right-leaning citizens; we find those in the middle or moderate are distinctive in low exposure to misinformation on social media and awareness of false stories. In Canada, we find language differences in seeing misinformation on social media, but not in awareness of false news stories. We find gender differences in seeing misinformation on social media, but not in awareness of false news stories. Section 4.

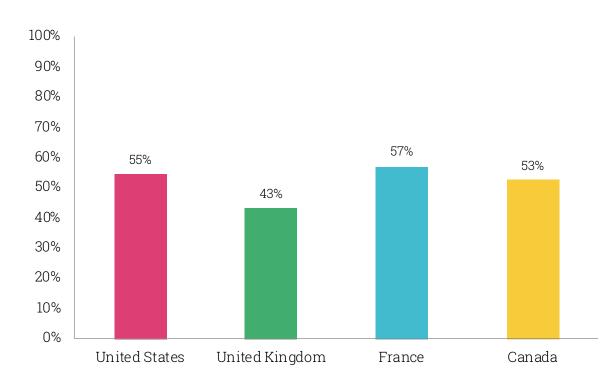
Challenging and spreading misinformation.

Introduction. Citizens are challenging the misinformation they see on social media. We study four types of activities used to challenge misinformation: 1) checking the information to compare it to other sources of information, 2) offering a correction of this misinformation, 3) reporting the misinformation to the social media platform, and 4) using fact-checking websites. We examine cross-national differences in challenging misinformation as well as differences by social groups using existing research to guide our analysis. We also document whether people observe others being corrected for spreading misinformation. These findings are important for documenting a cultural shift; spreading misinformation has social sanctions that may deter users from doing so (Chadwick & Vaccari, 2019). Following existing research, we explore social group differences in sharing misinformation, whether accidental or intentional. We then examine the use of fact-checking websites. We conclude by looking at Canadian data related to challenging and spreading misinformation.

For all respondents who reported seeing misinformation (n=4,254), 52% reported checking on the accuracy of this information using other sources. Over half of respondents from the US (55%), France (57%), and Canada (53%) answered they had checked the misinformation against another source (Graph 4-1). In the UK, this practice was much less common (43%). In a three-country survey in 2017, Koc-Michalska et al. (2020) find that checking "fake news" against other sources was more popular in the US compared to the UK and France. However, this pattern has changed in 2021. Americans and French respondents are similar in their likelihood to check or verify information they thought might be false.

Highlight 4-1. Of respondents who reported seeing misinformation, 52% reported checking on the accuracy of this information using other sources.

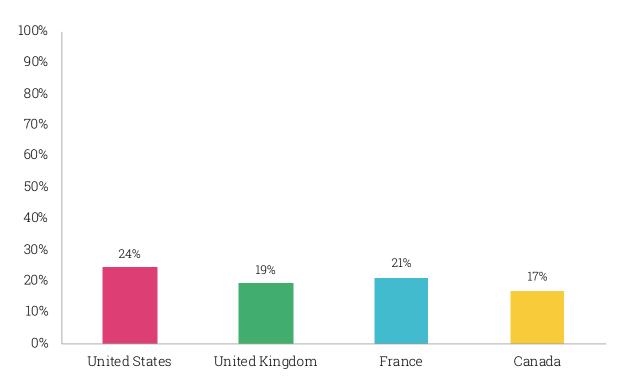
Small differences by gender and political ideology are apparent with respect to checking misinformation against other sources, but age has the strongest influence on whether or not the misinformation is checked. Approximately 63% of young adults (18 to 24 years) checked misinformation against another source compared to 43% of seniors (65 years or more).



Graph 4-1: Checking misinformation against other sources

Reporting and correcting misinformation are far less frequent among respondents in all countries than checking misinformation against other sources. Reporting misinformation is an option offered by most social media platforms; it allows users to convey to platform moderators if a piece of content appears to contain misleading or inaccurate statements. Social media platforms differ in their facilitation of users' reporting capacity. For those respondents exposed to misinformation (n=4,254), 20% reported it to social media platforms (Graph 4-2). Americans are the most likely (24%) and Canadians the least likely (17%) to do so. Again, we see small differences by gender and education, but age differences are significant. Approximately 34% of young adults (18 to 24 years) reported misinformation to social media platform companies compared to 6% of seniors (65 years or more). People who lean right (28%) are more likely to report the misinformation to platform companies compared to left-leaning (19%) or moderate (18%) respondents.

Highlight 4-2. For respondents who reported seeing misinformation, 20% reported it to social media platforms.

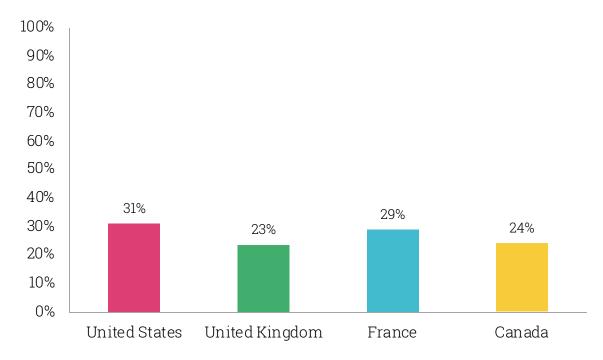


Graph 4-2: Reporting misinformation to social media platforms

Our survey data show users in all countries are slightly more likely to correct others' misinformation than to report the misinformation to the social media platform/ company. For those exposed to misinformation (n=4,254), 27% corrected other users' misinformation posts on social media (Graph 4-3). This practice is most frequent with Americans (31%) and least likely with UK respondents (23%). Rossini et al. (2020) find 32% of Brazilian respondents had corrected someone who spread misinformation on Facebook. These numbers are consistent with the American results reported here. Chadwick and Vaccari (2019) find 21% of British respondents corrected other social media users' misinformation, which is similar to our finding (23%).

Highlight 4-3. For those exposed to misinformation (n=4,254), 27% corrected other users' misinformation posts on social media.

As noted with other activities to challenge misinformation, young people are more likely than older people to correct other people's misinformation posts. Approximately 37% of young adults corrected a post compared to 18% of seniors. In terms of political ideology, right-leaning respondents (35%) are more likely to report correcting others' misinformation on social media compared to left-leaning (29%) or moderates (23%). Compared to those with less education (23%), those with higher education reported a greater likelihood (30%) of correcting others' misinformation. Finally, males (29%) are more likely to correct others' misinformation compared to females (24%).

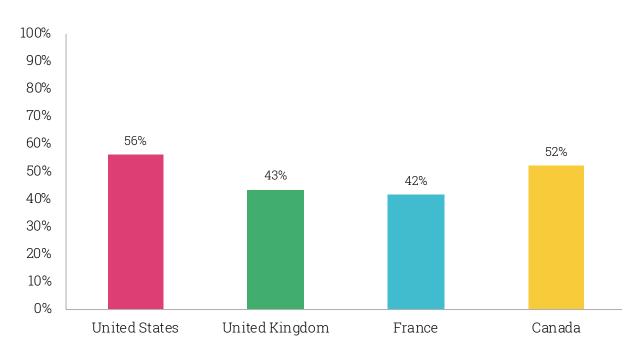


Graph 4-3: Correcting other users' misinformation

Social media is about social networks; seeing members of one's network being corrected can have an impact on sharing misinformation. Overall, 49% of respondents said they saw someone else being told they shared misinformation. American (56%) and Canadian (52%) respondents are the most likely to report they had seen someone else being told they had shared misinformation on social media (Graph 4-4). Respondents from France (42%) and the UK (43%) are less likely to report seeing this activity. Rossini et al. (2020) find 42% of Brazilian respondents had witnessed someone being corrected on Facebook. These results are similar to those observed in the UK and France.

Highlight 4-4. About half of respondents said they saw someone else being told they had shared misinformation.

Our sample shows no evidence of gender differences in seeing someone being corrected for posting misinformation. However, educated people (53%) are more likely to see these corrections happen compared to less educated people (44%). Moderates (44%) are less likely to see these corrections compared to left-leaning citizens (55%) and right-leaning citizens (52%). Age also predicts whether or not one sees these corrections. Approximately 64% of young adults witnessed a correction to misinformation shared on social media compared to 39% of seniors.



Graph 4-4: Saw someone be told they shared misinformation

Many argue that online misinformation is primarily driven by its "organic" spread, because "average" social media users frequently share false content, both intentionally and unintentionally (Chadwick & Vaccari, 2019; Vosoughi et al., 2018). Researchers find ordinary users are a major source of the spread of misinformation, leading some to refer to their "participatory" role in disinformation campaigns (Starbird et al., 2019; Wanless & Berk, 2017). Along these lines, misinformation is more likely to be distributed by people in an effort to signal their beliefs or group allegiance, rather than because they sincerely believe the claims to be true (Del Vicario et al., 2016; Marwick, 2018; Wardle & Derakhshan, 2017).

We asked respondents (n=6,068) to consider all of the information they have shared on social media. Then we asked if they have ever, "even by accident," shared misinformation. The qualification is important, as we know a social desirability bias is relevant here, albeit this concern is reduced in online as opposed to face-to-face surveys (Chadwick & Vaccari, 2019). Very few respondents (18%) admitted to sharing misinformation on social media (Graph 4-5). British respondents are least likely (12%) and American respondents are most likely (22%) to do so.

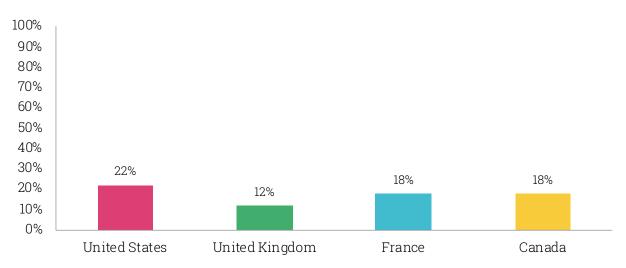
Highlight 4-5. Across the four countries, 18% of respondents reported sharing misinformation on social media.

Using data from 2016, Guess et al. (2019) find 10% of American respondents shared fake news. Using data from 2018, Chadwick and Vaccari (2019) find 25% of British respondents had accidentally shared misinformation. In both cases, our estimates differ from their estimates – our American estimate is higher, but our British estimate is lower.

Our American findings are similar to those described in Rossini et al. (2020), who report 26% of Brazilian respondents had accidentally shared misinformation on Facebook. Respondents with higher education and greater political knowledge are less likely to accidentally share misinformation in this Brazilian sample (Rossini et al., 2020). We do not find gender and educational differences in sharing misinformation on social media. This finding is consistent with American studies using survey and trace data (Guess et al., 2019) and British studies using survey data (Chadwick & Vaccari, 2019).

However, we find slight differences by ideology. Right-leaning citizens are more likely (23%) to share misinformation compared to moderates (15%) and left-leaning citizens (18%). Chadwick and Vaccari (2019) find partisan and ideological differences in unintentionally and intentionally sharing misinformation in their survey of the UK. They also find those who identify as right-wing are more likely to report sharing misinformation compared to moderates/centre or left-leaning citizens. Studies using trace data with survey data also suggest conservatives/right-wing Americans are more likely to share fake news stories (Guess et al., 2019). As such, across studies, the findings indicate those who identify as right-wing are more likely to share misinformation.

Again, age offers an interesting story about sharing misinformation. Young people are more likely to report sharing misinformation on social media compared to other age groups. The numbers in this regard are 32% of those aged 18 to 24 years and 29% of those aged 25 to 34 years compared to 19% of those aged 35 to 44 years, 14% of those aged 45 to 54 years, 10% of those aged 55 to 64 years, and 9% of those aged 65 years or more. Chadwick and Vaccari (2019) also find age differences in unintentionally and intentionally sharing misinformation in their survey of the UK. Specifically, they also find this activity is more common among their two youngest cohorts, but that seniors have high rates as well. We do not find seniors in our sample across four countries have high rates of sharing misinformation. This finding is in contrast to American studies that suggest seniors are more likely to share fake news stories (Guess et al., 2019).



Graph 4-5: Shared misinformation on social media

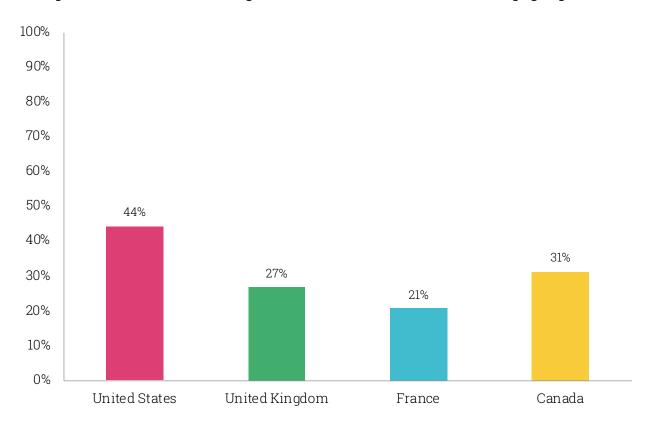
As illustrated in Graph 4-6, Americans (44%) are more likely to use fact-checking websites compared to respondents from the UK (27%), France (21%), and Canada (31%). Pooling respondents in all four countries (n=6,068), we find 31% of respondents used a fact-checking website or viewed the social media pages of these types of organizations.

Highlight 4-6. Across the four countries, 31% of respondents used a fact-checking website or consulted their social media page.

Lyons et al. (2020) examine familiarity with fact-checking in France and five other countries. In France and the other countries, familiarity with these sites depends on age, sex, and political interest. Females and older people are less familiar with fact-checking, whereas those with higher political interest are more aware of fact-checking sites (Lyons et al., 2020).

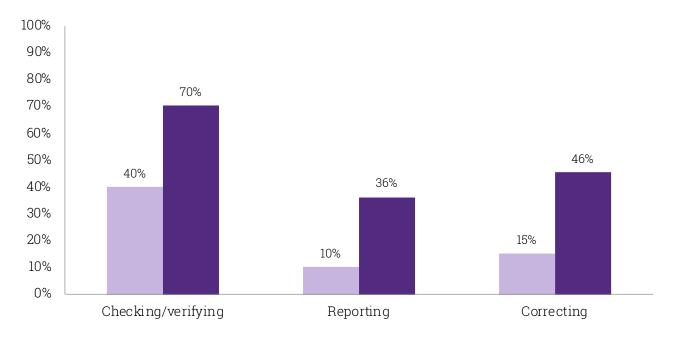
We assess use of fact-checking websites, rather than familiarity with fact-checking. We find small gender differences (34% of males, 28% of females) in use of these websites. Those with advanced education are more likely to use these websites compared to those with less education (37% versus 25%). Moderates are less likely to use these websites (27%) compared to left-leaning (37%) and right-leaning (38%) citizens.

Age differences in the use of fact-checking websites are quite pronounced. Approximately 51% of those aged 18 to 24 years and 50% of those aged 25 to 34 years used these fact-checking websites compared to 36% of those aged 35 to 44 years, 27% of those aged 45 to 54 years, 16% of those aged 55 to 64 years, and 18% of those aged 65 years or more.



Graph 4-6: Used a fact-checking website or viewed their social media pages/profiles

In Graph 4-7 (n=6,068), we see those who use fact-checking websites are more likely to check information against other sources, report misinformation to social media platforms, and offer corrections to others' misinformation. About 36% of those who use fact-checking websites (compared to 10% of non-users) reported misinformation to social media platforms; 46% of these website users (compared to 15% of non-users) corrected other users' misinformation posts.



Graph 4-7: Fact-checking site users and challenging misinformation

Percentage who do not use fact-checking websites

Percentage who use fact-checking websites

Among Canadians, language differences in challenging and spreading misinformation are small (Table 4-1). Indeed, the only significant language difference is related to the use of fact-checking websites, which is less common among French-speaking Canadians (21%) compared to English-speaking Canadians (34%).

The differences are also small with respect to gender. The largest difference relates to sharing misinformation, with 21% of Canadian females sharing misinformation compared to 15% of Canadian males. In the larger survey, we do not find gender differences in sharing misinformation on social media.

Educational differences in sharing misinformation and checking misinformation against other sources are not apparent. However, small differences (ranging from a five to eight percentage point difference) are seen in the other activities listed in Table 4-1. The largest difference is related to seeing others' being corrected on social media, with 48% of less educated Canadians versus 56% of more educated Canadians seeing this happen. Ideological differences are small with respect to sharing misinformation, which is in contrast to other research and our cross-national survey. Approximately 16% of moderates shared misinformation compared to 21% of left-leaning and 19% of rightleaning Canadians. Across the measures, moderates report lower engagement in all activities. At least 10 percentage points separate moderates from their left- or right-leaning counterparts. The most dramatic differences relate to the use of fact-checking websites, where 44% of right-wing Canadians use these websites compared to 26% of moderates and 39% of left-leaning Canadians.

Continuing the theme noted throughout this report, significant age differences are evident for all of the activities reported in Table 4-1. The findings can be summarized as follows: while young Canadians are more likely to share misinformation compared to their older counterparts, they are also more likely to engage in activities to challenge misinformation, including checking misinformation against other sources, reporting misinformation to platforms, correcting others, and using fact-checking websites. This pattern is similar to that observed for the larger sample.

Table 4-1: Demographic differences in challenging and spreading misinformation(Canada only)

	Checking against other sources n=1168	Reporting to platforms n=1168	Correcting others n=1168	Seeing others corrected n=1168	Sharing misinf- ormation n=1568	Using fact- checking websites n=1568
Males Females	53% 53%	16% 18%	22% 26%	49% 55%	15% 21%	32% 31%
Basic education (high school or less)	52%	14%	20%	48%	16%	28%
Advanced education	54%	19%	27%	56%	19%	34%
English- speaking	54%	17%	25%	53%	19%	34%
French- speaking	49%	18%	21%	48%	14%	21%
Left- leaning	58%	19%	30%	62%	21%	39%
Moderate Right- leaning	50% 59%	15% 22%	20% 33%	48% 52%	16% 19%	26% 44%
18 to 24 years	62%	33%	33%	70%	32%	57%
25 to 34 years	58%	24%	28%	59%	29%	48%
35 to 44	51%	18%	23%	50%	14%	33%
years 45 to 54	55%	14%	24%	49%	18%	32%
years 55 to 64	45%	10%	20%	49%	9%	15%
years 65 +	46%	5%	18%	40%	12%	18%

Summary. In summary, we find about half of respondents checked on misinformation they saw posted on social media. While few respondents (27%) reported correcting other users' misinformation posts, almost half of respondents reporting seeing others being corrected for sharing misinformation. Few respondents (20%) reported misinformation to social media companies. Americans are more likely to use fact-checking websites compared to respondents from the UK, France, and Canada. We find use of fact-checking websites increases the likelihood of respondents correcting others' misinformation posts and reporting misinformation to social media platforms. Compared to older people, young people are more likely to use fact-checking sites, report misinformation to social media platforms, and correct other users' misinformation. We continue to see a distinct pattern related to moderates or those in the middle of the ideological spectrum; they are less likely to challenge and share misinformation. As for Canadian findings, the most noteworthy is that English-speaking Canadians are more likely to use fact-checking websites than French-speaking Canadians.

Conclusion

- Measuring people's exposure to misinformation is a challenge for researchers. This study assesses exposure in several ways: asking about false or misleading information on social media in the past month and about awareness of false stories circulating in the past three months. Across the four countries and various social groups, respondents assessed themselves as "moderately" able to identify misinformation. The combination of results suggests exposure to misinformation is high. (Section 1)
- While exposure may be high, the survey results also suggest respondents are
 not passive in their responses to misinformation on social media. About half of
 respondents indicated they checked this information against other sources. Factchecking websites are one method of checking on false stories; using these websites
 is associated with capacity-building in terms of challenging misinformation. People
 who used fact-checking websites are much more likely to correct other users'
 misinformation and report misinformation to social media platforms. However, use of
 fact-checking websites differs by country and by social group. (Section 4)
- While Americans' higher exposure and awareness of false news stories is alarming, they are also more likely to challenge misinformation. Americans are more likely to report misinformation to social media platforms, correct others' misinformation on social media, and use fact-checking websites compared to respondents in other countries. These distinct patterns suggest we cannot use American samples to generalize about the scale of misinformation as a policy issue. In terms of self-assessed exposure on social media, Canadians follow patterns observed in the US. (Sections 1,4)
- Cross-national differences in reported exposure to misinformation are apparent, but are not as important as the differences marked by age. Younger people are more likely to report seeing misinformation on social media, share it, correct others' misinformation, fact-check misinformation, and report misinformation to social media platforms. While they are exposed to misinformation content and contribute to its circulation, they also demonstrate capacity to challenge this misinformation. In other words, while they are intense consumers of misinformation, they are also critical consumers who are correcting others, checking sources, and reporting problems to social media platforms. Seniors do not exhibit this same level of critical consumption. Ideological differences in seeing misinformation decreased from 2019 to 2021; those in the middle of the ideological scale are the least likely to see misinformation on social media. (Section 3)

- Facebook users are more likely to report seeing misinformation on that platform. On average, respondents rated the misinformation on Facebook as a "moderately" serious problem. While Facebook has made changes to address misinformation, comparing 2019 and 2021 survey results reveals increasing exposure, rather than decreasing exposure. In 2021, we asked about Facebook Messenger, with users of this application also more likely to report seeing misinformation on social media. Twitter faces similar issues of exposure as Facebook, but given the smaller user base (fewer people use), the impact may be smaller in scale than the impact of Facebook misinformation. YouTube is among the platforms with lower levels of exposure to misinformation, as measured by survey responses. This is important as this platform is widely used across the four countries.
- The high levels of awareness and self-reported exposure to misinformation have important policy implications. We are beyond the "awareness raising" phase of addressing the problem. At this point, providing useful strategies and tools to citizens to help them verify information is critical, as some research suggests people may become apathetic if they believe misinformation is pervasive and the truth unverifiable. McKay and Tenove (2020) refer to this as "epistemic cynicism," when people give up hope that the truth can be known or agreed upon. Others argue this is the goal of the Russian "firehose of falsehood" disinformation strategy (Paul & Matthews, 2016). It is therefore increasingly important for social media platforms, educators, and policymakers to work to empower social media users to address their own concerns over misinformation.

References

- Allcott, H., Gentzkow, M., & Yu, C. (2019). Trends in the diffusion of misinformation on social media. Research & Politics, April-June, 1-8. doi: 10.1177/2053168019848554
- BBC News. (2020, April 22). Coronavirus: YouTube bans 'medically unsubstantiated' content.
 - BBC News. https://www.bbc.com/news/technology-52388586
- Benkler, Y., Faris, R., & Roberts, H. (2018). Network Propaganda: Manipulation, Disinformation, and Radicalization in American Politics. Oxford University Press.
- Brin, C., & Charlton, S. (2020). Canada. In N. Newman, R. Fletcher, A. Schulz, S. Andi, & R. K. Nielson (Eds.), Digital News Report 2020. Reuters Institute, University of Oxford. http://www.digitalnewsreport.org/survey/2020/canada-2020/
- Chadwick, A., & Vaccari, C. (2019). News Sharing on UK Social Media: Misinformation, Disinformation, and Correction. https://repository.lboro.ac.uk/articles/report/ News_sharing_on_UK_social_media_misinformation_disinformation_and_ correction/9471269
- CIGI-Ipsos. (2019). 2019 CIGI-Ipsos Global Survey on Internet Security and Trust. Centre for International Governance Innovation and Ipsos. https://www.cigionline.org/ internet-survey-2019
- Corbu, N., Oprea, D. A., Negrea-Busuioc, E., & Radu, L. (2020). 'They can't fool me, but they can fool the others!' Third person effect and fake news detection. European Journal of Communication, 35(2), 165-180. doi: 10.1177/0267323120903686
- Del Vicario, M., Bessi, A., Zollo, F., Petroni, F., Scala, A., Caldarelli, G., Stanley, H. E., & Quattrociocchi, W. (2016). The spreading of misinformation online. Proceedings of the National Academy of Sciences, 113(3), 554–559. doi: 10.1073/pnas.1517441113
- Facebook. (2020). A new campaign to help spot false news. Facebook for Media. https:// www.facebook.com/formedia/blog/a-new-campaign-to-help-spot-false-news
- Golovchenko, Y., Buntain, C., Eady, G., Brown, M. A., & Tucker, J. A. (2020). Cross-platform state propaganda: Russian trolls on Twitter and YouTube during the 2016 U.S. presidential election. The International Journal of Press/Politics, 25(3), 357-389. https://doi.org/10.1177/1940161220912682
- Google. (2020a). COVID-19 Medical Misinformation Policy. YouTube Help Center. https:// support.google.com/youtube/answer/9891785?hl=en&ref_topic=9282436
- Google. (2020b). Spam, Deceptive Practices, & Scams Policies. YouTube Help Center. https:// support.google.com/youtube/answer/2801973?hl=en#zippy=%2Cpresidentialelection-integrity
- Guess, A., & Lyons, B. (2020). Misinformation, disinformation, and online propaganda. In N. Persily & J. A. Tucker (Eds.), Social Media and Democracy: The State of the Field, Prospects for Reform (pp. 10–33). Cambridge University Press. doi: 10.1017/9781108890960
- Guess, A., Nagler, J., & Tucker, J. (2019). Less than you think: Prevalence and predictors of fake news dissemination on Facebook. Science Advances, 5(1), eaau4586. doi: 10.1126/sciadv.aau4586
- Humprecht, E., Esser, F., & Van Aelst, P. (2020). Resilience to online disinformation: A framework for cross-national comparative research. The International Journal of Press/Politics, 25(3), 493-516. doi: 10.1177/1940161219900126
- Iosifidis, P., & Nicoli, N. (2020). The battle to end fake news: A qualitative content analysis of Facebook announcements on how it combats disinformation. The International Communication Gazette, 82(1), 60-81. doi: 10.1177/1748048519880729
- Jones-Jang, S. M., Kim, D. H., & Kenski, K. (2020). Perceptions of mis- or disinformation

exposure predict political cynicism: Evidence from a two-wave survey during the 2018 US midterm elections. New Media & Society, 1-21. doi: 10.1177/1461444820943878

- Koc-Michalska, K., Bimber, B., Gomez, D., Jenkins, M., & Boulianne, S. (2020). Public beliefs about falsehoods in the news. The International Journal of Press/Politics, 25(3), 447-468. doi: 10.1177/1940161220912693
- Lyons, B., Mérola, V., Reifler, J., & Stoeckel. (2020). How politics shape views toward factchecking: Evidence from six European countries. The International Journal of Press/Politics, 25(3), 469-492. doi: 10.1177/1940161220921732
- Marwick, A. E. (2018). Why do people share fake news? A sociotechnical model of media effects. Georgetown Law Technology Review, 2(2), 474–512.
- McKay, S., & Tenove, C. (2020). Disinformation as a threat to deliberative democracy. Political Research Quarterly, 0(0), 1–15. doi: 10.1177/1065912920938143
- Newman, N., Fletcher, R., Kalogeropoulos, A., Levy, D. A. L., & Nielsen, R. K. (2018). Reuters Institute Digital News Report 2018. Reuters Institute for the Study of Journalism. https://reutersinstitute.politics.ox.ac.uk/sites/default/files/digital-news-report-2018. pdf
- Nielsen, R. K., & Graves, L. (2017). "News you don't believe": Audience perspectives on fake news. Reuters Institute for the Study of Journalism. https://reutersinstitute.politics. ox.ac.uk/sites/default/files/2017-10/Nielsen&Graves_factsheet_1710v3_FINAL_ download.pdf
- Paul, C., & Matthews, M. (2016). The Russian "Firehose of Falsehood" Propaganda Model: Why It Might Work and Options to Counter it. Santa Monica: RAND Corporation. https://www.rand.org/pubs/perspectives/PE198.html
- Poushter, J., Bishop, C., & Chwe, H. (2018). Social media use continues to rise in developing countries but plateaus across developed ones: Digital divides remain, both within and across countries. Pew Research. https://www.pewresearch.org/ global/2018/06/19/social-media-use-continues-to-rise-in-developing-countries-butplateaus-across-developed-ones/
- Rossini, P., Stromer-Galley, J., Baptista, E. A., & de Oliveira, V. V. (2020). Dysfunctional information sharing on WhatsApp and Facebook: The role of political talk, cross-cutting exposure, and social corrections. New Media & Society, 1-22. doi: 10.1177/1461444820928059
- Roth, Y., & Pickles, N. (2020, May 11). Updating our approach to misleading information. Twitter Product. https://blog.twitter.com/en_us/topics/product/2020/updating-ourapproach-to-misleading-information.html
- Starbird, K., Arif, A., & Wilson, T. (2019). Disinformation as collaborative work: Surfacing the participatory nature of strategic information operations. Proceedings of the ACM on Human-Computer Interaction, 3(CSCW), 1–26. https://dl.acm.org/doi/ abs/10.1145/3359229
- Tenove, C. (2020). Protecting democracy from disinformation: Normative threats and policy responses. The International Journal of Press/Politics, 25(3): 517–37. doi: 10.1177/1940161220918740.
- Valenzuela, S., Halpern, D., Katz, J.E. & Miranda, J.P. (2019). The paradox of participation versus misinformation: Social media, political engagement, and the spread of misinformation. Digital Journalism, 7(6), 802-823. doi: 10.1080/21670811.2019.1623701.
- Vosoughi, S., Roy, D., & Aral, S. (2018). The spread of true and false news online. Science, 359(6380), 1146–1151. doi: 10.1126/science.aap9559
- Wanless, A., & Berk, M. (2017). Participatory propaganda: The engagement of audiences in the spread of persuasive communications. Proceedings of the social media and social order, culture conflict 2.0 Conference.
- Wardle, C., & Derakhshan, H. (2017). Information Disorder: Toward an interdisciplinary

framework for research and policy making (Report DGI(2017)09). Council of Europe. https://firstdraftnews.com/wp-content/uploads/2017/10/Information_Disorder_ FirstDraft-CoE_2018.pdf?x56713

Appendix A: Survey questions

A-1: Misinformation on social media

French	English
Les prochaines questions porteront sur la	The next questions will ask about
désinformation sur les réseaux sociaux.	misinformation on social media. By
Par désinformation, nous entendons des	misinformation, we mean false or
informations fausses ou trompeuses.	misleading information.
Au cours du dernier mois, à quelle fréquence avez-vous vu quelqu'un partager de fausses informations sur les réseaux sociaux ?	In the past month, how often on social media have you seen someone share misinformation?
1=Jamais (aller à la question A8)	1=Never (skip to A8)
2=Rarement	2=Rarely
3=De temps en temps	3=From time to time
4=Souvent	4=Often
Convertie en non (jamais) et oui (rarement,	Converted into no (never) and yes (rarely,
de temps en temps et souvent).	from time to time, and often)
Utilisée dans les graphiques	Used in Graphs 1-1, 2-1, 2-4, 3-1, 3-2, 3-3, 3-4,
1-1, 2-1, 2-4, 3-1, 3-2, 3-3, 3-4 et le tableau 3-1	Table 3-1

A-2: Seen someone be told they shared misinformation on social media

French	English
Au cours du dernier mois, avez-vous vu quelqu'un d'autre se faire dire sur les médias sociaux qu'il partageait de la désinformation ?	In the past month, on social media have you seen someone else being told they shared misinformation?
0=Non 1=Oui	0=No 1=Yes
Utilisée dans les graphiques 4-4 et le tableau 4-1	Used in Graph 4-4, Table 4-1

A-3: Checking or verifying misinformation

French	English
Lorsque vous avez vu cette désinformation, avez-vous vérifié les faits pour les comparer à d'autres sources d'information ?	When you saw this misinformation, did you check the information to compare it to other sources of information?
0=Non 1=Oui	0=No 1=Yes

A-4: Correcting misinformation

French	English
Lorsque vous avez vu cette désinformation,	When you saw this misinformation,
avez-vous proposé une correction à cette	did you offer a correction of this
désinformation ?	misinformation?
0=Non	0=No
1=Oui	1=Yes
Utilisée dans les graphiques 4-3, 4-7 et dans le tableau 4-1	Used in Graphs 4-3, 4-7, Table 4-1

A-5: Reporting misinformation

French	English
Lorsque vous avez vu cette désinformation, l'avez-vous signalée au fournisseur/à la plateforme de médias sociaux (par exemple Facebook)?	When you saw this misinformation, did you report it to the social media company/ platform (e.g., Facebook)?
0=Non 1=Oui	0=No 1=Yes
Utilisée dans les graphiques 4-2, 4-7 et dans le tableau 4-1	Used in Graphs 4-2, 4-7, Table 4-1

A-6: Topic of misinformation

French	English	
Quel était le sujet de cette désinformation ? Choisissez tous les sujets qui s'appliquent.	What was the topic of this misinformation? Check all that apply.	
ARTICLES	ITEMS	
a) Élection présidentielle américaine, y compris Trump/Biden, leurs partisans, leurs adversaires et la fraude électorale.	a) US presidential election, including Trump, Biden, their supporters, their opponents, voter fraud.	
b) COVID-19, le vaccin ou les mesures de santé publique liées à la pandémie.	b) COVID-19, the vaccine or the public health measures related to the pandemic.	
c) Autre (spécifier):	c) Other (specify):	
ÉCHELLE	SCALE	
0=Non 1=Oui	0=No 1=Yes	
Utilisée dans le graphique 1-2	Used in Graph 1-2	

A-7: Who shared misinformation?

French	English
De quelle source provenait la désinformation sur les médias sociaux ? Choisissez toutes les sources qui s'appliquent.	Who shared this misinformation on social media? Check all that apply.
 a) Ami(e) ou membre de la famille b) Voisin, collègue de travail ou autre connaissance c) Une personne que vous ne connaissez pas d) Les médias e) Un politicien ou une personnalité publique f) Une agence gouvernementale g) Je ne me souviens pas h) Aucune de ces réponses 	 a) Friend or family member b) Neighbor, work colleague or other acquaintance c) Someone that you do not know personally d) News organization e) Politician or political figure f) Government agency g) Cannot remember h) None of the above
Utilisée dans le graphique 1-3	Used in Graph 1-3

A-8: Accidentally shared

French	English
En pensant à toutes les informations que vous avez partagées sur les réseaux sociaux, avez-vous déjà, même par accident, partagé des informations fausses ou trompeuses ?	Thinking about all the information that you have shared on social media, have you ever, even by accident, shared misinformation?
0=Non 1=Oui	0=No 1=Yes
Utilisée dans les graphiques 4-5 et dans le tableau 4-1	Used in Graph 4-5, Table 4-1

A-9: Identify misinformation

French	English
Lorsque vous rencontrez de la	How well, would you say, you are able
désinformation en ligne, dans quelle	to identify misinformation when you
mesure êtes-vous capable de l'identifier ?	encounter it online?
1=Pas du tout	1=Not at all
2=Un peu	2=A little
3=Moyennement	3=Moderately
4=Facilement	4=Very
5=Extrêmement facilement	5=Extremely
Utilisée dans le graphique 1-4	Used in Graph 1-4

A-10: Social media platform use

French	English
Au cours des 12 derniers mois, à quelle	During the past 12 months, how often
fréquence avez-vous utilisé les sites, les	have you used the following sites, apps, or
applications ou les services suivants ?	services?
ARTICLES	ITEMS
a) YouTube	a) YouTube
b) Reddit	b) Reddit
c) WhatsApp	c) WhatsApp
d) Snapchat	d) Snapchat
e) Twitter	e) Twitter
f) Instagram	f) Instagram
g) TikTok	g) TikTok
h) Twitch	h) Twitch
i) Facebook	i) Facebook
j) Wikipedia	j) Wikipedia
ÉCHELLE	SCALE
1=Jamais	1=Never
2=Rarement	2=Rarely
3=De temps en temps	3=From time to time
4=Souvent	4=Often
Convertie en non (jamais) et oui (rarement,	Converted into no (never) and yes (rarely,
de temps en temps et souvent). Utilisée	from time to time, and often)
dans les graphiques 2-1 et 2-4	Used in Graphs 2-1, 2-4

A-11: Seeing misinformation on social media (only users and respondents who responded 2,3,4 to A-1)

French	English
Comme mentionné, la désinformation consiste en des informations fausses ou trompeuses. Au cours du dernier mois, à quelle fréquence avez-vous vu quelqu'un partager de la désinformation sur [insérer le nom du site] ?	As mentioned, misinformation is information that is false or misleading information. In the past month, how often have you seen someone share misinformation on [insert site name]?
ARTICLES	ITEMS
a) YouTube b) Reddit c) WhatsApp d) Snapchat e) Twitter f) Instagram g) TikTok h) Twitch i) Facebook j) Wikipedia	a) YouTube b) Reddit c) WhatsApp d) Snapchat e) Twitter f) Instagram g) TikTok h) Twitch i) Facebook j) Wikipedia
ÉCHELLE	SCALE
1=Jamais 2=Rarement 3=De temps en temps 4=Souvent	1=Never 2=Rarely 3=From time to time 4=Often
Convertie en non (jamais) et oui (rarement, de temps en temps et souvent). Utilisée dans le graphique 2-2	Converted into no (never) and yes (rarely, from time to time, and often) Used in Graph 2-2

A-12: Seriousness of Facebook misinformation (only users)

French	English
Quelle est la gravité du problème des fausses informations ou de la désinformation sur Facebook ?	How serious a problem is false information or misinformation on Facebook?
1=Pas du tout grave 2=Un Peu grave 3=Moyennement grave 4=Très grave 5=Extrêmement grave	1=Not at all 2=A little 3=Moderately 4=Very 5=Extremely
Utilisée dans le graphique 2-3	Used in Graph 2-3

A-13: Fact-checking website

French	English	
Au cours des 12 derniers mois, combien de fois avez-vous consulté le site internet ou le réseau social des organisations suivantes ?	During the past 12 months, how often have you visited the websites OR social media pages of these organizations?	
ARTICLES	ITEMS	
a) Une organisation de vérification des faits, telle que Politifact and Fact Check	a) A fact-checking organization, such as Politifact and Fact Check	
ÉCHELLE	SCALE	
1=Jamais 2=Rarement 3=De temps en temps 4=Souvent	1=Never 2=Rarely 3=From time to time 4=Often	
Utilisée dans les graphiques 4-6, 4-7, et tableau 4-1	Used in Graphs 4-6, 4-7, Table 4-1	

A-14: Other platforms

French	English
Au cours de 12 derniers mois, avez-vous utilisé : Cochez toutes les cases qui s'appliquent.	During the past 12 months, have you used any of the following: Check all that apply.
ARTICLES	ITEMS
a) Facebook Messenger b) Pinterest c) LinkedIn	a) Facebook Messenger b) Pinterest c) LinkedIn
ÉCHELLE	SCALE
0=Non 1=Oui	0=No 1=Yes
Utilisée dans le graphique 2-4	Used in Graph 2-4

A-15: Fake news stories

French	English		
Au cours des 3 derniers mois, les sujets suivants ont circulé sur les médias sociaux. Pour chaque sujet, indiquez si vous étiez au courant, que vous pensiez ou non qu'il soit véridique.	The following are stories circulated on social media over the past 3 months. For each story, please specify if you are aware of the story, whether or not you think it's true.		
ARTICLES	ITEMS		
 Les vaccins pour COVID-19 contiennent des matières toxiques. Les vaccins pour COVID-19 rendent les femmes infertiles. L'Association Médicale Américaine a changé d'avis sur l'hydroxychloroquine en tant que traitement COVID-19. Le Coca-cola a testé positif à COVID-19. En décembre 2020, il y avait une manifestation majeure à Paris à propos des restrictions sanitaires lié à la pandémie de COVID-19. Le 6 janvier dernier, l'émeute au Capitole des États-Unis été mise en scène par Antifa et les partisans de Trump n'ont rien à voir avec cet évènement. La fraude électorale était très répandue durant la dernière élection américaine. En janvier 2021, Trump a invoqué l'Insurrection Act. 	 The COVID-19 vaccines contain toxic material. The COVID-19 vaccine causes female sterilization. The US Medical Association changed its views on hydroxychloroquine as a COVID-19 treatment. Coca-cola tested positive for COVID-19. In December 2020, there was a major protest in Paris about the COVID-19 restrictions. The riot at the U.S. Capitol Building on January 6 was staged by Antifa, not Trump supporters. Voter fraud was high in the US election. Trump invoked the Insurrection Act in January 2021. 		
ÉCHELLE	SCALE		
0=Pas au courant 1=Au courant	0=Not aware 1=Aware		
Utilisée dans les tableaux 1-1 et 3-2	Used in Tables 1-1, 3-2		

Appendix B: Census and survey sample comparison

		United States	United Kingdom	France	Canada
18-24	Official	12%	11%	10%	11%
	Survey 2019	11%	11%	10%	9%
	Survey 2021	12%	11%	10%	11%
25-34	Official	18%	17%	15%	16%
	Survey 2019	18%	17%	15%	17%
	Survey 2021	18%	17%	15%	16%
35-44	Official	16%	16%	16%	16%
	Survey 2019	16%	16%	16%	17%
	Survey 2021	16%	16%	16%	16%
45-54	Official	17%	18%	17%	18%
	Survey 2019	17%	18%	17%	17%
	Survey 2021	17%	18%	17%	18%
55+	Official	37%	37%	42%	39%
	Survey 2019	38%	37%	42%	40%
	Survey 2021	37%	38%	42%	39%
		United States	United Kingdom	France	Canada
Male	Official	49%	51%	49%	49%
	Survey 2019	48%	51%	50%	47%
	Survey 2021	49%	51%	49%	48%
Female	Official	51%	49%	51%	51%
	Survey 2019	52%	49%	51%	53%
	Survey 2021	51%	49%	51%	52%

<u>United States:</u>

Age and sex (2017): Age in entire U.S. for 2017 American Community Survey

<u>United Kingdom:</u> Age and sex (2016): https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/mid2016#main-points

<u>France:</u> Age and sex (2018): https://www.insee.fr/en/statistiques/2382609?sommaire=2382613

<u>Canada:</u> Age and sex (2016): https://www12.statcan.gc.ca/datasets/Index-eng.cfm?Temporal=2016&Theme=115&VNAME E=&GA=-1&S=0