

Misinformation on COVID-19

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INF351 Information Design Studio II: How to Design

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October 11, 2020

Part 1: Problem Description

In light of the current global pandemic, misinformation relating to COVID-19 is prevalent in most media platforms. Individuals require correct COVID related information but often encounter false information. When the pandemic first started, various preprints that contained false information about COVID-19 were published, misleading our initial perceptions of the virus. Since symptoms of the virus sometimes take up to 2 weeks to show, it has become harder to track whether the people we were in contact with have been exposed to COVID-19. With the erratic spread of the virus, it has also become harder to track whether places we have recently visited have had previous customers with the virus.

Assumptions and claims

Based on our current understanding of the issue, we have recognized many potential contributing factors. One of the most notable being that existing media sources are unreliable, questionable, and biased, and form inaccurate perspectives of COVID-19. There is also the issue in which the public is no longer up to date on COVID-19 news. Instead, we have normalized the current way of living and have become more ignorant of the persisting issue. Another factor is disinterest—people simply no longer care about the issue and as a result, are unaffected by being misinformed. Finally, there is the delivery method of COVID-19 information in which social media and word-of-mouth are seemingly the main platforms where people are learning about

COVID. This becomes problematic due to the convoluted nature of these platforms and results in a large discrepancy between the public's knowledge and legitimate information and creates a continuous cycle of misinformation.

Risks and Realities

There are many potential risks in creating a “solution” for COVID misinformation. One is the political risks: “COVID-19 itself caused high levels of frustration and political polarisation” (Bolsover & Tokitsu Tizon, 2020). Another potential risk is the fact that in creating a platform to prevent misinformation, we may simply end up creating another platform of misinformation. For instance, as the scope of the project increases, if the project is not properly moderated, the project can become equally as unreliable and biased as the existing sources. However, having this project could also generate many positive outcomes. Specifically, it could result in an overall better understanding of COVID-19 and its risks, and motivate the public to take proper measures during the pandemic. Thus, we would like to learn more about how the existing sources are managed and how we could better manage this project to prevent the issue of misinformation.

Justification

The issue of misinformation was selected due to its current prevalence with regards to COVID-19. People struggle globally to determine true from false and tend to fall into the trap of misinformation and continue to spread this false information. This is especially harmful during a

time where people need to have the correct information to stay healthy and safe. As of August 12th, 2020, at least 800 people have died worldwide as a result of COVID-19 misinformation (Coleman, 2020). As victims of misinformation, we concluded that this issue is worth addressing.

Part 2: Secondary Research

The topic of focus is on where and how information on COVID-19 is found. This could include searching up which sources are mainly responsible for inaccurate information, identifying what triggers a sudden rise of COVID-19 searches, or how fast COVID-19 information can spread across the world. These studies will inform us where we need to focus most on and the needs of the users. Noticing where trends are can also allow us to learn how best to provide regional data.

The first study we consulted, *Assessment of Health Information About COVID-19 Prevention on the Internet: Infodemiological Study* (Hernández-García & Giménez-Júlvez, 2020) looked at the quality of information that is provided to people when they search for COVID-19 preventions on google. In general, the authors found that the adherence could be improved on as availability of information ranged between 32.5% - 81.3%. Information provided by public health officials was found to be more correct in all guidelines compared to digital media, especially in regards to masks. Incorrect information on mask usage was present in over half of the links. Adherence for digital media averaged at 48% across all guidelines. It should be noted that this study was done in February and that the information may not have been as well established as it is today. Search results may also have been greatly altered throughout the pandemic and we may not find the same variety of sources today. This study helps highlight where the information for the project should be sourced, while also providing information to users on which sources to avoid.

The second study we consulted, *Global Infodemiology of COVID-19: Analysis of Google Web Searches and Instagram Hashtags* (Rovetta & Bhagavathula, 2020) looked at general patterns in google searches or hashtags tied to COVID-19. The results found that the number of searches per country was correlated to the number of cases per 1 million people. The most popular infodemic keywords included mention of ozone, 5G, and laboratory origin. These terms saw increased uptick when a major event referenced them, for example, Nobel Laureate Luc Montagnier stating that COVID-19 originated from a laboratory. COVID-19 keywords relating to the news were searched the most with symptoms and prevention being the least. It should be noted that searches related to prevention did see increased volume twice when U.S. President Donald Trump made two separate statements, one on the unproven, at the time, drug hydroxychloroquine, and the other on injecting disinfectant. Regarding Instagram, over 2 million hashtags were denoted as infodemic. This study provides us with a good idea of how to predict when users will need important news and when is most important to keep users updated. It also provides us which important keywords to look out for.

Our third study, *Social Media and Health Misinformation during the US COVID Crisis* (Bolsover & Tokitsu Tizon, 2020) is a response to the current situation in the US and COVID. It recognizes that many Americans, either think the pandemic is a hoax or has been exaggerated for political purposes. Dubbed the ‘sham-demic’, the researchers analyzed social media platform

Twitter using custom python scripts to find the most recent 100 tweets associated with the top 50 trending topics. The study itself found that misinformation of the COVID itself caused high levels of frustration and political polarisation (particularly tweets made by Trump). This study raises the issue that COVID itself has become a political issue where people are more concerned about what politicians say rather than public health officials.

Our last source is a news article from the BBC titled *'Hundreds dead' because of Covid-19 misinformation* (Coleman, 2020). Coleman argues the real-life implications of COVID-19 misinformation. As of August 12th, at least 800 people have died worldwide from misinformation on COVID-19, many of whom drank methanol or alcohol-based cleaning products. This justifies our research as misinformation has shown it has real repercussions that affect people's lives.

Part 3: Supporting Primary Research

Our data collection process included obtaining information through an electronic survey that was sent out to family, colleagues, and friends. The survey was sent out through social media platforms such as Facebook, Whatsapp, and email. The survey encompassed questions on the participants' demographics, where they get the majority of their COVID-19 information from, and why. It also included whether or not our participants were exposed to COVID-19 misinformation and how they came to know the information was false (see Appendix A). The purpose was to see if participants' responses corroborated with what we learned in the first two studies in our secondary research. Participants were screened based on whether they had sought out information regarding COVID-19. The total participants that filled out the survey are 93 after 4 days. The results have been sorted in Table 1 in Appendix B as well as provided in raw format in a separate CSV file. There were some instances of duplicated results which will be sorted out at a future time. They have been counted in Table 1.

The second data collection process was an interview. The interviews were semi-structured and the total duration was from 15-30 minutes. These were either conducted in-person or over a video call. The interviews were not recorded, however, each interviewer recorded notes based on the responses (see Appendix C). Participants were screened based on whether or not they kept up to date on current events. This screening was done before the interview but was also done as the

first question of the interview. The questions were designed to elicit more personal responses than the survey (see Appendix B). Questions focused on how participants felt about the handling of COVID-19 information and what they were specifically looking for. This was based on the third study in our secondary research which looked at the emotional impact of information. The total participants that took part in the interview were 10.

The final participant count is 93 different participants for a total of 103 different responses. A copy of the study protocol and consent form can be found in Appendix D and Appendix E, respectively.

References

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US COVID Crisis. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3666955>

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Table 1: Survey Results

Response	Frequency, n (%)
Age of Participant (n = 91)	
19-25	53 (58.2)
26-45	26 (28.6)
18 and Under	6 (6.6)
46-64	5 (5.5)
65+	1 (1.1)
Country of Residence (n = 93)	
Canada	45 (49.5)
United States	23 (25.3)
India	6 (6.6)
Turkey	6 (6.6)
Germany	3 (3.3)
Bahrain	2 (2.2)
United Kingdom	2 (2.2)
China	1 (1.1)
Hong Kong	1 (1.1)
Jordan	1 (1.1)
Malaysia	1 (1.1)
Qatar	1 (1.1)
Saudi Arabia	1 (1.1)
Taiwan	1 (1.1)
When are you most likely to search up COVID-19 News? (n = 91)	
When curiosity strikes	46 (50.5)
When I hear about it from the news or social media	28 (30.8)

When someone brings it up to me	6 (6.6)
When someone I know is affected	6 (6.6)
Part of work	2 (2.2)
When you might have symptoms	1 (1.1)
When cases are going up	1 (1.1)
When the pigeons (government spies) start coughing	1 (1.1)

Where do you get most of your information on COVID-19? (n = 91)

Government Website/Resources/News	74 (81.3)
State Media Television/Websites (BBC/CBC/ABC/Al Jazeera)	40 (44)
Private Television/Websites (CTV/Global/CNN/National Post)	36 (39.6)
Social Media Posts (Twitter/Facebook/Instagram)	29 (31.9)
Word of Mouth	16 (17.6)
IM (WhatsApp/Messenger/Telegram)	11 (12.1)
Blogs	6 (6.6)
Medical/Scientific Sources	6 (6.6)
Google	3 (3.3)
From the willow of the whips	1 (1.1)

Which televised news channels do you watch? (n = 87)

CNN	21 (24.1)
CBC	17 (19.5)
None	15 (17.2)
BBC	14 (16.1)
CP24	6 (6.9)
Al Jazeera	5 (5.7)
FOX	5 (5.7)
NBC	5 (5.7)

CTV	4 (4.6)
CNBC	3 (3.4)
Tagesschau	3 (3.4)
ABC	2 (2.3)
TV9	2 (2.3)
ETV	2 (2.3)
TVO	1 (1.1)
Sky News	1 (1.1)
Mint	1 (1.1)
Scroll In	1 (1.1)
Kmon	1 (1.1)
MSNBC	1 (1.1)
Republic Ft. Arnab	1 (1.1)
Taiwan State	1 (1.1)
Times Now	1 (1.1)
Tv5	1 (1.1)
NDTV	1 (1.1)
ITV	1 (1.1)
Local Turkish	1 (1.1)

What news websites do you generally get your news from? (n = 82)

CBC	14 (17.1)
Any	13 (15.9)
BBC	12 (14.6)
New York Times	12 (14.6)
Government	6 (7.3)
None	6 (7.3)
The Guardian	5 (6.1)

CTV	5 (6.1)
CNN	5 (6.1)
Al Jazeera	3 (3.7)
Economist	3 (3.7)
Bloomberg	3 (3.7)
CP24	3 (3.7)
Toronto Star	3 (3.7)
NBC	3 (3.7)
Deutschewelle	2 (2.4)
Roya News	2 (2.4)
New Yorker	2 (2.4)
The Telegraph	2 (2.4)
Reddit	2 (2.4)
Wall Street Journal	2 (2.4)
ABC	1 (1.2)
Tagesschau	1 (1.2)
CNBC	1 (1.2)
Flatworld.org	1 (1.2)
Globe and Mail	1 (1.2)
Infowars	1 (1.2)
Inshorts	1 (1.2)
Mayo Clinic	1 (1.2)
American Health	1 (1.2)
MSNBC	1 (1.2)
National Post	1 (1.2)
NDTV India	1 (1.2)
Economic Times	1 (1.2)

Times of India	1 (1.2)
Twitter	1 (1.2)
Snapchat	1 (1.2)
The Atlantic	1 (1.2)
Global News	1 (1.2)
YouTube	1 (1.2)
Washington Post	1 (1.2)
Vox	1 (1.2)
Reuters	1 (1.2)

Which sources do you think are the most trustworthy? (n = 91)

Public Health/Government Resources	68 (74.7)
Academic Sources	51 (56)
State News Outlets (BBC/CBC/ABC/Al Jazeera)	30 (33)
Private News Outlets (CTV/Global/CNN/National Post)	29 (31.9)
Family and Friends	2 (2.2)
Cats that eat pigeons	1 (1.1)
My Opinion	1 (1.1)

Have you tried contacting public health officials (or visiting their website) for Covid-19 related information and how was the experience? (n = 91)

Did not contact	49 (53.8)
Sufficient	33 (36.3)
Confusing	6 (6.6)
Insufficient	5 (5.5)
They tried to brainwash me	1 (1.1)

How was the process of obtaining information from public health officials? (n = 42)

Easy	38 (90.5)
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Complicated	5 (11.9)
Hundreds of pigeons lifted me up from my roof	1 (2.4)
Have you been exposed to misinformation in relation to Covid-19? (n = 91)	
Yes	69 (75.8)
No	22 (24.2)
How did you come to know that that information was false? (n = 67)	
Cross-checking	
w/ Medical/Scientific Sources	18 (26.9)
Unspecified	15 (22.4)
w/ Government Sources	11 (16.4)
w/ Other News Media	7 (10.4)
From unreliable source	7 (10.4)
Absurdity	5 (7.5)
Personal Background	5 (7.5)
Algorithm Checking	2 (3)

Note. Of the 93 surveys received, 91 passed the screening criteria. All responses retrieved for each question are presented as is in the above table aside from the final question, where responses were grouped based on similarity. Instances where *n* varies from 91 is due to skipped questions or multiple answers.

Appendix A: Survey Questions

1. Have you sought out information regarding COVID-19?
 - a. Yes
 - b. No
2. How old are you?
 - a. 18 and under
 - b. 19-25
 - c. 26-45
 - d. 46-64
 - e. 65+
3. Which country do you reside in?
4. When are you most likely to search up information regarding COVID-19?
 - a. When someone I know is affected
 - b. When curiosity strikes
 - c. When someone brings it up to me
 - d. When I hear about it from the news or social media
 - e. Other...

5. Where do you get most of your information regarding the COVID-19 pandemic? (Choose all that apply)
- a. Government Website/Resources/News
 - b. State Media Television/Webbsites (BBC/CBC/ABC/AlJazeera)
 - c. Private Television/Webbsites (CTV/Global/CNN/National Post)
 - d. IM (WhatsApp/Messenger/Telegram)
 - e. Social Media Posts (Twitter/Facebook/Instagram)
 - f. Word of Mouth
 - g. Blogs
 - h. Other...
6. Which televised news channels do you watch?
7. What news websites do you generally get your news from?
8. Which sources do you think are the most trustworthy? (Choose all that apply)
- a. Public Health/Government Resources
 - b. State News Outlets (BBC/CBC/ABC/AlJazeera)
 - c. Private News Outlets (CTV/Global/CNN/National Post)
 - d. Academic Sources
 - e. Family and Friends

- f. Other...
9. Have you tried contacting public health officials (or visiting their website) for Covid-19 related information and how was the experience?
- a. Insufficient
 - b. Sufficient
 - c. Confusing
 - d. Did not contact
 - e. Other...
10. How was the process of obtaining this information?
- a. Easy
 - b. Complicated
 - c. Other...
11. Have you been exposed to misinformation in relation to Covid-19?
- a. Yes
 - b. No
12. How did you come to know that that information was false?

Appendix B: Interview Questions

1. Are you generally exposed to current events whether in the form of discussions, listening or reading to the news, or other forms? How, and to what extent? Please explain.
2. Have you been keeping up to date on scientific, political, and statistical information related to the COVID-19 pandemic? (News, Social Media, Word of Mouth etc) Please explain how and where you get your information regarding this from?
3. For you personally, what is the easiest way for you to update yourself with the news? (e.g. social media, daily notifications)
4. Do you find yourself seeking out more news during this pandemic and why?
 - a. Potential Follow Up: Have you or anyone you know been personally affected by the pandemic?
5. How did you feel in regards to the information you found out? Was it clear? Biased? Sufficient?
 - a. (If Insufficient Or Confused) Did you need to continue your search afterwards and did that lead you to still feeling that way or were you satisfied? (Ask Details On Why They Are Now Satisfied)
6. What is your emotional state after learning about the information and why do you think it was so? (Calm/worried/happy/dejected/indifferent)

7. In your opinion, do you think your local public health officials, provincial/state, and federal governments are doing enough to keep you informed? Please provide some examples of what you think the said officials are doing well.
8. Do you think the media has had a great impact on the kind of information you could seek out?
9. Throughout this pandemic, has the ability to obtain the information you need become easier, more difficult, or more or less the same from when the pandemic first began?
10. Have you had to adapt in any way to avoid becoming misinformed or have the resources done that for you? (Example: did you have to learn to spot fake news or could you rely on just Facebook for fact-checking)
11. What kind of information do you wish would be more readily available or easier to find to you and why?

Appendix C: Interview Responses

Participant 1

(26-45, Female, Canada | Interviewed by Alan)

Response 1:

- News headers on twitter, 1 p.m. CBC radio, and 11 p.m. CTV News Channel

Response 2:

- Reports on numbers from CBC radio
- Guidelines updates heard first from Twitter then checked on public health sites
- Read abstracts on Google Scholar to better understand transmission rates to sew masks

Response 3:

- Twitter and 680 News Toronto (15 min updates)

Response 4:

- Generally same as before but initially listened to the Prime Minister's address often and sought out the Premier's address regarding school reopening guidelines (participant identified as a teacher)

Response 5:

- News sites reported that guidelines were changed but not specify which
 - Reporting of original guidelines were however thorough

- Reports were not confusing but the guidelines themselves were
- An article on mask material did not source the article they were referring to

Response 6:

- The news was objectively depressing due to the lack of changes or in some cases going backwards
- Read a variety of different sources, each leaning a certain way, resulting in a neutral overall viewing

Response 7:

- Doing a fine job keeping everyone informed but Kingston remarkably better than Toronto due to the inclusion of a spread map
 - Notifications informed participant of the map in Kingston

Response 8:

- Media is not doing a good job of making info readily available
- A lot of sensational headlines and wordiness

Response 9:

- Media has been the same throughout

- The government initially made sure that state media was releasing certain messages that needed to be heard, although participant only believes that this should be used in specific scenarios

Response 10:

- Comparisons between new articles were done long before the pandemic and believe the skill should be taught
- Has not used any fact-checking algorithm but would be interested in a system that compares differences between articles

Response 11:

- Control panel page with stats and infographics that are easy to decipher and guidelines applicable to the local area

Participant 2

(26-45, Male, Canada | Interviewed by Alan)

Response 1:

- Reddit, the front page of select news journal websites (e.g. New Yorker), and social interactions

Response 2:

- Initially read scientific papers on COVID and annotated them as part of job
- Later, read through a mixture of different government resources or apps specialized in topics in medicine that are peer-reviewed (DynaMed)

Response 3:

- General knowledge obtained from Reddit then double-checked with government
- More in-depth knowledge obtained from the aforementioned apps

Response 4:

- Less than previously as nowadays the news just updates on numbers with no new information (actively avoids now)

Response 5:

- Hard to keep up within the beginning as everything was very novel and information that wasn't always the highest quality was promoted

- Media ran with information that didn't make a lot of sense and claimed the media's job was readership, not accuracy
- Usually satisfied upon searching for further information

Response 6:

- News articles always made participant tired, annoyed and frustrated when it was tied to U.S. politics
- The participant was nonplussed with regards to factual information

Response 7:

- Thorough job, particularly in the film industry

Response 8:

- Information initially was very "clickbaity" but now there is a lot more accuracy, in addition to fact-checking algorithms censoring false information

Response 9:

- Started off very fast and sporadic but now it is slower and more accurate

Response 10:

- Noticed that news is lacking the nuance to understand topics in science and medicine and has to rely on own double-checking. Does not rely on fact-checking algorithms but would feel ok if it was designed by highly relevant people in the field

Response 11:

- As a researcher, the participant wishes even more information, in general, was more readily available but believes for the casual reader, currently, it is sufficient. Would not mind a map

Participant 3

(19-25, Male, United States | Interviewed by Venkat)

Response 1:

- Yes, I subscribe to all sorts of media. I mostly get my news from news articles, social media, and my family.

Response 2:

- Yes, I have; on all the platforms that are mentioned in the question actually.

Response 3:

- Mostly through discussions with my parents and sources on social media such as Instagram.

Response 4:

- Yes, I have. I find myself to be more engaged in what's happening and what it means. No one I know nor have I been affected by the pandemic.

Response 5:

- It's somewhat biased. I do listen to a diverse variety of news outlets in order to get a variety of information. I do generally continue my search in order to verify the information I read from more reputable sources. I feel satisfied due to the source I validate my information from.

Response 6:

- Stressed out

Response 7:

- Yes and no. There is a lot of information that is out there but there should be more credible and less biased sources, regardless of who it is coming from.

Response 8:

- Yes, it has.

Response 9:

- It has become easier, but the information is not always credible, so we should be cautious about where we get our information from.

Response 10:

- Yes, I mention and guide my family and friends on the sources that are reliable and the sources that are questionable. As I mentioned, I fact check from reputable sources and guide them accordingly.

Response 11:

- I wish more information was available about things happening in my community and what stores and people around me are doing, so a bigger emphasis on local or regional information that affects you on a personal level.

Participant 4

(19-25, Female, Canada| Interviewed by Bill)

Response 1:

- I like to be up to date, I regularly browse twitter which is mostly my daily news source.

Sometimes I watch CP24 when I am out in public which is mostly played at places like restaurants. I don't tend to watch the news much.

Response 2:

- I follow a lot of political discussions on twitter, a lot of which involve US politics as it is out of control over there. I follow many politicians here in Canada like Trudeau and local Public Health officials like Eileen Da Villa. Usually, I get my political news from the politicians' tweets and stuff. If I actually need info on COVID I refer to the Public Health officials and their links they tweets.

Response 3:

- Twitter haha, I have notifications from twitter to that relate to COVID-related news that I find very helpful.

Response 4:

- Sometimes, if I find myself questioning something Trump may say or what seems untrue I would usually search this up.

- (FOLLOW-UP response) No, fortunately not.

Response 5:

- I have read a lot of political debates on twitter, such as Trump's tweets and all the backlash from US citizens and Joe Biden. In terms of bias, I think there is always bias with political discussions. For public health tweets, they provided links to sites that are comprehensive and very clear.
- (FOLLOW-UP response) I usually tend to continue to research afterwards if something new comes up about COVID. I try to cross-reference multiple sources (news, studies) to see if they all align.

Response 6:

- Sometimes I become worried, depending on the fact that I learn. Usually, it is about how dangerous COVID is or how fast it spreads.

Response 7:

- I think politics play a huge role in the effectiveness of the information given by Public Health officials. For example here in Ontario, I think Doug Ford has done a decent job of not overstepping public health recommendations. On the other hand, the states face huge overstepping by Donald Trump and his medical expert Dr. Fauci.

Response 8:

- Yes, it is where I start to find information about COVID. Usually, all of my interest piques from social media.

Response 9:

- I think it has become harder since there is much more discussion on COVID now than before. There are way more varying views and politics play a huge role in representing and misrepresenting how COVID should be handled nowadays.

Response 10:

- Generally, I like to fact check everything I come across on social media as I know social media can be misleading sometimes. I have a good sense of things that usually sound right or not. Sometimes I feel like I do brush past misleading or partially correct information.

Response 11:

- I wish a more comprehensive FAQ was available. Something universal that everyone would have to refer to. There are so many government websites that sometimes have varying information on COVID, I wish there was something more like a universal COVID information data system.

Participant 5

(19-25, Male, Canada | Interviewed by Bill)

Response 1:

- I read a lot of news. I watch CP24 every day at my work. Sometimes I browse Twitter and Reddit for news.

Response 2:

- Mostly CP24 which has scientific and stats. Sometimes Reddit has a discussion on political info.

Response 3:

- I have daily notification of the things I follow on Reddit and Twitter. Occasionally, I will tap them and read the news.

Response 4:

- Not really, I become a bit accustomed to the daily news of COVID. I used to check the number of cases all the time but now it is all the same to me
- (FOLLOW-UP response) I know a friend who's mom got COVID. I couldn't see my friend for a month.

Response 5:

- I think the information CP24 provides is sufficient and clear. I am not interested in the rest of the world, I just want COVID news here in Toronto.

Response 6:

- At first, all the cases worried me. But now, I feel indifferent as it is a daily occurrence and COVID is not going to be solved any time soon in my opinion.

Response 7:

- I think public health should be the ones enacting the laws of COVID. For example, the past couple of weeks should have seen the return of Phase 2 much sooner.

Response 8:

- Yes. I get all my news from either CP24 or social media.

Response 9:

- It's much easier in my opinion. There is way more information on COVID since we have had it for so long and so much research has been put into it now.

Response 10:

- To be honest, sometimes I think I believe too much of what gets posted on social media.

Response 11:

- Something like a guide or list that I can reference to fact check things. It would be easier than just searching facts on google since it's all in one spot.

Participant 6

(19-25, Female, Canada | Interviewed by Elysia)

Response 1:

- I usually keep up through google news but have stopped looking into COVID-19 frequently since the summer

Response 2:

- I check world meter sometimes to see how COVID is affecting Canada compared to other countries and will sometimes talk about it with my friends

Response 3:

- The easiest way for me is through news apps

Response 4:

- Yes, because it directly affects all of our lives. I have a few mutual friends who have been infected.

Response 5:

- When I was trying to find information about how it would affect my flight, it was insufficient. Otherwise, there is sufficient news about COVID-19. Lost

Response 6:

- Worried that I would not be able to fly

Response 7:

- I think that they are doing enough to keep us informed but are not enforcing enough rules.

Response 8:

- Yes

Response 9:

- I think it is more or less the same

Response 10:

- I look at multiple sources and usually the official websites when I need specific information

Response 11:

- I would like more updates about how the government is dealing with the pandemic such as what the current restrictions are, what timelines look like, etc.

Participant 7

(19-25, Male, Germany | Interviewed by Jana)

Response 1:

- Yeah, I usually stay up to date on current events through Twitter or the Al Jazeera application. I might not be up to date on like day to day events, but I'd say I'm generally informed.

Response 2:

- I read about political information related to COVID-19 mostly on twitter. Statistics wise I just check the news to see the number of daily new cases.

Response 3:

- I usually have my push notifications on for my news applications such as Al Jazeera, and I follow up on twitter and sometimes Facebook as well.

Response 4:

- Yeah, with corona hitting the world I started to be more up to date, especially at the beginning of the pandemic. I'm not really sure why, I think we are all waiting for this to be over and we just check the news hoping that something good is happening, such as a vaccine or cure or something. I have not been and don't know anyone that has been personally affected during this pandemic.

Response 5:

- Well, everything I sought was sufficient and satisfactory.

Response 6:

- When initially learning about the coronavirus and seeing how different countries were being affected by it, I was very tensed and worried since my family lives in different parts of the world and we all usually gather in the summer/winter.

Response 7:

- I was in Jordan when the pandemic started, and I was very impressed by how the government handled everything from immediate lockdowns to strict rules. There were daily updates on the new cases and the source of each new case was immediately identified and informed to the public.

Response 8:

- Of course, the media pretty much shapes how we look at this pandemic, and since everyone looks at media articles/channels it has a great impact on the information we seek out

Response 9:

- Pretty much the same

Response 10:

- No, I don't think so, the information I get is pretty much straightforward

Response 11:

- Currently, I wish it could be a little clearer when airports in certain countries are going to be officially open, and since green red and yellow country zones change based on each country's cases it makes a lot of things really hard to grasp.

Participant 8

(19-25, Female, Canada | Interviewed by Elysia)

Response 1:

- I check the news through apps regularly and listen to news podcasts daily.

Response 2:

- Yes, I usually check different media sources and access these through the news app on my phone.

Response 3:

- It's easiest for me to check on news apps. I get notifications for relevant articles and when daily news podcasts are released

Response 4:

- No, I have always checked the news regularly. I only checked COVID news more frequently at the beginning of the pandemic. No one I am close to has been infected, however, I have some acquaintances who have been infected.

Response 5:

- Most of the COVID information I've found seems biased and inconsistent. There are so many sources and the information becomes convoluted and it becomes difficult to establish which ones are reliable.

Response 6:

- Skeptical

Response 7:

- Compared to some other countries, Canada is doing a very poor job of keeping the public informed. They gave me a flyer when I returned from my flight and called me during my mandatory two-week quarantine

Response 8:

- Yes

Response 9:

- I think it's more or less the same, however, it might get better now due to the second wave occurring.

Response 10:

- I fact-check by looking at multiple sources

Response 11:

- I would like more transparency about how the government is managing the pandemic because I don't think they are doing enough to enforce the regulations they set and it is resulting in another increase of cases.

Participant 9

(26-45, Female, Canada | Interviewed by Venkat)

Response 1:

- I am, I generally read news articles from news websites such as CTV or CBC. I also get my information from verified journalists on Twitter and other social media.

Response 2:

- Yes, I have.

Response 3:

- The easiest way for me is to get notifications on my phone from CTV or CBC.

Response 4:

- Not exactly. The more news I read, the more anxious it makes me, so I'm trying my best to avoid it, and no one I know got affected.

Response 5:

- There's obviously a bias with any report. I just try to filter and read the sources with the least bias possible. The information I find is sufficient and clear.

Response 6:

- Personally, I'm worried. I'm just hoping for better days ahead.

Response 7:

- Here in British Columbia, public health officials and the government have been doing a very good job. I'm satisfied with the information that I receive. Dr. Henry was quite popular across the country earlier due to her information and handling of the crisis.

Response 8:

- Obviously. The media plays a very huge role in the information that we receive with any major crisis or world event.

Response 9:

- More or less the same

Response 10:

- I'm generally pretty immune to fake news and questionable sources. I check where my information is coming from. I completely avoid information from Whatsapp, or fringe news media sites or shows.

Response 11:

- I'd like to learn more about how certain neighbourhoods are affected. I want to see area-based data to autopsy it and find out why certain areas are affected more than others.

Participant 10

(26-45, Male, United States | Interviewed by Venkat)

Response 1:

- Yes to understand the current guidelines of the CDC and the research being done in creating a vaccine.

Response 2:

- Yes, mostly from CDC, News outlets

Response 3:

- News outlets

Response 4:

- Yes

Response 5:

- Yes, sometimes had to research more in different ways to validate the information

Response 6:

- Worried, concerned about the family and beloved ones.

Response 7:

- Yes in terms of providing facilities for testing and treatment. No in terms of enforcing some preventive measures

Response 8:

- Yes

Response 9:

- It has become easier.

Response 10:

- Yes, I was initially, but now I check sources more often.

Response 11:

- More information on symptoms, testing facilities etc

Appendix D: Study Protocol

Project Title: Interviews and Surveys of people exposed to COVID-19 misinformation.

Investigators:

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Elysia Te: elysia.te@mail.utoronto.ca

Purpose:

The purpose of our study is to understand how individuals of different demographics and geographic locations have been exposed to COVID-19 misinformation to help us identify requirements for the design of a novel interactive computational media intended for individuals exposed to COVID-19 misinformation. Our research is aimed to understand how individuals obtain information about COVID-19, which sources they trust the most, and whether or not they have been previously exposed to misinformation.

The process to be followed

We will brief the participants about the purpose of the study, explain the consent form to them, and ensure their consent. We will then engage the participants in an 11 question survey and a semi-structured interview.

Participant selection

Participants will be chosen from the general public. The survey has been circulated to the *BI* 2022 Facebook group on October 8th, 2020 and has been shared with the peers of all researchers in this group. Participants are met with a screening question and selected according to whether or not they have searched for information regarding COVID-19. In general, they will be characterized by age and geographic location.

Relationships

Our relationship to the participants can be described as follows: friends, family, colleagues, and strangers.

Risk and benefit

There will be minimal risk to the participants; for example, they may feel time has been wasted.

The only benefit will be to contribute to the data collection of the investigators. Participants are free to withdraw before or at any time during the study without the need to give any explanation.

Consent details

We will brief the participants about the purpose of the study, and explain the attached consent form to them, and ensure that they consent to participate and sign the consent form.

Compensation

Participants will receive no compensation.

Information sought

The information to be sought is described in the attached surveys and interview notes.

Confidentiality

Information will be kept confidential by the investigators. Names or other identifying and identified information will not be kept with the data. The only exemption will be to include excerpts or copies in the assignment submitted, but names and other identifying or identified information will not be submitted.

Appendix E: Consent Form

Consent Form: Misinformation in COVID-19

I hereby consent to participate in a study conducted by Jana Anani, Alan Bui, Venkat Ravulaparthi, Elysia Te, and Bill Than for an assignment in University of Toronto INF352, Information Design Studio II: How to Design.

I agree to participate in this study the purpose of which is to better understand the flow of information regarding the current COVID-19 pandemic.

I understand that:

- The procedure to be used is an online survey.
- I will receive no compensation for my participation.
- I am free to withdraw before or any time during the study without the need to give any explanation.
- All materials and results will be kept confidential, and, in particular, that my name and any identifying or identified information will not be associated with the data.

Participant

Name (please print) _____

Signature _____ Place and Date _____

Investigator(s)

Name (please print) _____

Signature _____