Document Cover Page

Study Protocol

Study Title:

Enhancing COVID-19 Vaccination Intentions by Eliciting Prosocial Altruistic Motives: Evaluating the Efficacy of a Brief Video-Based Intervention

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RESEARCH STUDY TITLE: Enhancing COVID-19 Vaccination Intentions by Eliciting Prosocial Altruistic Motives: Evaluating the Efficacy of a Brief Video-Based Intervention
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SOURCE OF FUNDING: This project is supported by the McGill Interdisciplinary Initiative in Infection and Immunity (MI4)

Introduction

The COVID-19 vaccine is the most effective way to arrest the pandemic. A high vaccine acceptance rate is needed to achieve community immunity; however, current COVID-19 vaccine acceptance rate remains low, particularly among younger Canadians. We were recently awarded a McGill MI4 grant to examine the efficacy of a video intervention eliciting altruism on increasing younger Canadians' (ages 20-39) intentions to receive the COVID-19 vaccine.

Literature Review

As Canada's COVID-19 cases of infection and deaths continue to increase, it is imperative to stop the spread of the virus. Younger people (between ages 20-39) are more likely to spread the virus (1), while experiencing milder symptoms than older individuals. The COVID-19 vaccine is the most effective way to control the pandemic by achieving community immunity through high vaccination rates. However, around 40% of Canadians are hesitant to accept the vaccine (2). In particular, younger age has been associated with COVID-19 hesitancy (3). Previous studies have found that individuals who demonstrated more prosocial behaviours were more likely to get a vaccine if it benefits others whom they value (4-7). Only two studies examined the usage of a text-based altruistic intervention to increase vaccine uptake (8, 9), but they were not specific to the Canadian context. In addition, video-based messaging is known to have high appeal to younger audiences, as seen by the success of platforms such as TikTok and Instagram.

Study Rationale

To the best of our knowledge, there have been no studies that examined the impact of altruism on COVID-19 vaccine intentions using a video-based intervention.

Purpose of the Research

This study has two objectives: 1) To develop a video-based intervention designed to elicit altruism in increasing younger adults' intentions to receive a COVID-19 vaccine 2) To estimate the efficacy of this video intervention on young Canadians' (ages 20-39) intentions to receive a COVID-19 vaccine. The results of this study will be used by public health authorities to increase COVID-19 vaccine uptake.

Development and validation of the video-based intervention

Our team will work with a media company (Akufen) who will be contracted by us to create a two-minute video designed specifically to elicit altruistic motives to influence COVID-19 vaccine intentions and uptake in our target population. The draft contract with the company Akufen is attached in section 13 "Other document" on Nagano (F11P-20611) and has also been sent to the LDI contracts office for approval (ID# RCO-3977) on 15 February 2021.

As part of the development of our video, a preliminary aim will be to ensure clarity and face validity of our intervention with our target audience of Canadians between 20 and 39 years old.

Methods

Sample

We will conduct two focus groups with a convenience sample of 6-8 participants to obtain feedback regarding comprehension and content of the video. Inclusion criteria are being 20 to 39 years of age, being current Canadian residents, and speaking English or French. Our only exclusion criterion is having received any number of doses of any of the COVID-19 vaccines. We will recruit a diverse sample of participants, with both males and females, anglophones and francophones, and with a range in educational level.

Recruitment Strategy

Due to the current pandemic situation, the safest and easiest way to recruit participants will be through social media postings (e.g. Facebook) in a set of diverse Facebook groups (e.g. Toronto City group, Gamers and Geeks Quebec, McGill Psychology Students Association, etc) directing them to get in touch with our research assistant by email or by phone. Eligibility criteria will be assessed by email/phone (depending on how the participant contacts us) by the research assistant, according to the eligibility criteria in the previous section. Eligible and interested participants will then be sent (by email) a copy of the consent form such that participants have enough time to read and understand the content, in order to make an informed decision. Then, they will be sent (by email) an invitation to a secure Microsoft Teams meeting, where they will give verbal informed consent. Subsequently, another Microsoft Teams meeting invitation will be sent to participants for the actual focus group study procedures.

Procedure

Focus groups will be conducted by two experienced members of the research team, with 3-4 participants in each group. One focus group will take place in French, and the other will take place in English. In each focus group, one member of the research team will assume the role of moderator, and the other will assume the role of note-taker. The focus groups will take approximately 60-90 minutes. The focus groups will be recorded using Microsoft Teams. Participants will be informed that they are free to choose to have their cameras on or off during the study.

Focus Group Topic Guide (English)

- Introduction: we will start by explaining the focus group procedures, our research project and our objectives, as outlined in the consent form.
- "There are many reasons people decide to get vaccinated. Many choose to do so to protect themselves against a disease, or because their healthcare professional has recommended it. Today we will be presenting you with a video where we focus only on altruistic motivations for deciding to receive a vaccine. In other words, the video you will watch in a few minutes is about how some people decide to get vaccinated to protect others, as opposed to getting vaccinated to protect themselves."
- Show video
- What are your initial impressions/thoughts/concerns?
- What did you like about this video/what didn't you like?
- What do you think of the length?
- Do you have any questions about the video? Was anything unclear to you?
- To you, what is the main takeaway point from this video?
- How does this video change your perspective, if it does?
- Do you think this video could in any way change your decision regarding vaccination, and how?
- Is there any way you consider that the delivery of the message can be improved? What would you change/add/remove?

Focus Group Topic Guide (French)

- Introduction: nous commencerons par expliquer la procédure du groupe de discussion, notre projet de recherche et nos objectifs, tel qu'indiqué dans le formulaire de consentement.
- « Il existe de nombreuses raisons pour lesquelles les gens décident de se faire vacciner. Beaucoup choisissent de le faire pour se protéger contre une maladie ou parce que leur professionnel de la santé le leur a recommandé. Aujourd'hui, nous vous présenterons une vidéo où nous nous concentrons uniquement sur des raisons altruistes de décider de recevoir un vaccin. En d'autres termes, la vidéo que vous regarderez dans quelques minutes expliquera comment certaines personnes décident de se faire vacciner pour protéger les autres, plutôt que de se faire vacciner pour se protéger soi-même seulement. »
- Afficher la vidéo
- Quelles sont vos premières impressions ?
- Qu'avez-vous aimé dans cette vidéo / qu'est-ce que vous n'avez pas aimé ?
- Que pensez-vous de la longueur de la vidéo ?
- Avez-vous des questions sur la vidéo ? Y a-t-il des éléments que vous n'avez pas bien compris ou qui n'étaient pas clairs selon vous ?
- Pour vous, quel est le point principal à retenir de cette vidéo ?
- En quoi cette vidéo change-t-elle votre point de vue, si c'est le cas ?
- Pensez-vous que cette vidéo pourrait d'une manière ou d'une autre changer votre décision concernant la vaccination, et comment ?
- Estimez-vous que la livraison du message pourrait être améliorée d'une manière ou d'une autre ? Comment ? Que changeriez-vous / ajouteriez-vous / supprimeriez-vous ?

Analytic Process

Participants' answers and comments will be written down by the note-taker during the focus groups. Focus groups will not be transcribed. Once both focus groups are completed, these notes will be compiled together in a single Word document, in a list format, without any identifying information - anonymized. Based on participants' reactions and feedback overall, adjustments will be made to the video as it is being developed by the media design company Akufen with whom we are working to develop the video intervention.

Funding

This study is funded by the McGill Interdisciplinary Initiative in Infection and Immunity (MI4) (https://www.mcgill.ca/mi4/). Neither the principal investigator nor the institution is in a situation of conflict of interest as a result of this funding.

Risks and Concerns

Participating in this research study has no known physical risks. There is no evidence in the scientific literature that eliciting altruism could produce negative consequences or emotions in participants. However, it is possible that participants of the focus group may experience discomfort or upset as the result of the research intervention (video and discussion about its content). Participants will be informed that they are free to refuse to answer any question or stop their participation.
At the end of each focus group, participants will be asked whether they have questions or concerns. Participants will also be provided with the link to a governmental website where they will find available resources in their regions: https://www.canada.ca/en/public-health/services/mental-health-services/mental-health-get-help.html.

Participants will also receive to the contact details of the principal investigator and the study coordinator should they have any additional questions or comments about the study. In addition, they will be provided with the contact numbers for the Local Commissioner of Complaints & Quality of Services at the JGH and for our laboratory.

Participants will also be provided with a list of online resources about the COVID-19 vaccines:

- National Advisory Committee on Immunization (NACI) https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines.html
- Public Health Agency of Canada (PHAC) https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/vaccines.html?&utm_campaign=hc-sc-covidvaccine&utm_medium=sem&utm_source=ggl&utm_content=ad-text-en&utm_term=%2Bcovid%20%2B19%20%2Bvaccine&adv=2021-0051&id_campaign=12088104441&id_source=116538480476&id_content=491971664630

Inconvenience

Inconveniences involve time commitment, identifying a quiet location in which they will have privacy and be able to concentrate for approximately 60-90 minutes. No additional inconveniences will be involved as participants will not be required to travel to our lab.

Benefits

Participants will not receive any direct personal benefit from participating in this focus group.

Compensation

Participants will be compensated 35 dollars for taking the time to participate in our focus group that will require concentration, as well as finding a quiet and private location for the duration of the focus group (approximately 60-90 minutes). The compensation will be delivered through Interac e-transfer which is password-protected, using participants' email address of their choice. If participants do not wish to receive the payment through Interac e-transfer, a cheque will be sent to them via postal mail.

Confidentiality

Focus groups will be conducted via the video conferencing platform Microsoft Teams. Prior to the study itself, verbal informed consent will be obtained in which participants will first be provided with a Microsoft Teams meeting link where they will be audio-recorded providing verbal informed consent. The participants will be informed that they should turn off their cameras for this step, as only the audio recording is required for verbal informed consent. If the participant consents to taking part in the study, they will state their full name, the date, and that they consent to take part in the study, according to the script on the last page of the consent form. After having stated these elements, the recording will be ended, as well as the Microsoft Teams meeting, and an e-mail will be sent to confirm that their informed verbal consent was obtained. Then, in an additional e-mail, a new Microsoft Teams link (distinct from the one provided for obtaining verbal informed consent) will be provided to start a new Microsoft Teams meeting, where the focus group will take place. Participants will be informed that they are free to choose to have their cameras on or off during the study. Participants will also be informed that their participation in the study is entirely voluntary and that they may decline to discuss any question that makes them feel uncomfortable or terminate the study at any time.

No identifying or contact information will be collected for this study except for their email address, province of residence (QC/ON), current age, mother tongue French/English, and education level – all of which are collected strictly for recruitment purposes. No participant's identifying information will be kept on file with the focus group notes – the notes will be taken anonymously. The moderator will ask participants to keep the information shared between them private but will inform participants that they cannot guarantee that other participants will not share this information outside of the focus group setting.

Verbal informed consent audio-recordings, focus group recordings, as well as compiled, anonymous notes taken during the focus groups will be saved on the "Zeev Rosberger File Share" stored on a secure Lady Davis Institute server, where backups are being performed regularly by the LDI and stored files are encrypted (only accessible by individuals who have the credentials to access the data). These files will be accessible remotely to designated members of the research team through a File Cloud. Five (5) lab members will have access to this data (the

Study Coordinator, two Research Associates, a Master's student and the Principal Investigator). These individuals will enter their LDI account credentials to obtain access to the electronic files stored on the Zeev Rosberger File Share.

Verbal informed consent audio-recordings, focus group recordings, and focus group notes will each be stored in separate folders of the shared secure drive i.e. one folder for verbal informed consent audio-recordings, one for focus group recordings, and another for the anonymous focus group notes.

This data will be stored and kept for 10 years, and then permanently destroyed as per CIUSSS-West-Central Montreal policy. The security tool BC Wipe (www.jetico.com) will be used for permanent destruction of the electronic files.

For surveillance, monitoring and protection purposes, your research file may be consulted by a person mandated by the CIUSSS du Centre-Ouest-de-l'Île-de-Montréal Research Ethics Board. This person is subject to a confidentiality policy.

Incidental Findings

This is not an experimental study and does not involve medical sample analysis, incidental findings concerning their physical or psychological health are not expected.

Participants will be provided with the research lab's contact information, and if they express concerns during the study or afterwards, we will be able to direct them to relevant resources for them to seek help.

Communication and Publication of Research Results

Results of these focus groups will be used only to inform the development of the video intervention, with the objective of ensuring its clarity and validity as it relates to our target audience. The final version of the video-based intervention will be submitted as an amendment to the REB for approval before proceeding to the next steps.

Evaluating the efficacy of the video-based intervention

Study design

While we have essentially kept the pre-post evaluation format as per the approved MI4 proposal we have decided to improve the research design by adding a control condition, therefore making this a randomized controlled trial. The full research proposal that has been submitted to the McGill Interdisciplinary Initiative in Infection and Immunity (MI4) and approved for funding is attached in section 13 "Other document" on Nagano (F11P-20611).

Methods

Sample

A survey will be administered online to a sample of Canadian residents aged 20-39 years old in both English and French. Our only exclusion criterion is having received any number of doses of any currently available COVID-19 vaccine. A sample of 2,630 participants will be drawn from a database panel provided by Dynata, the world's largest first-party data and insight

platform, to complete the survey. Dynata's use of Canadian census data from Statistics Canada and quota-based sampling will ensure that the sample will closely match the Canadian population in terms of sex, first language English/French, population density (i.e. urban vs. rural), and household income.

To calculate the required sample size for the within-participant change in vaccine hesitancy (i.e., pre-post intervention) we used the latest survey data showing that approximately 40% of Canadians in this age group are COVID-19 vaccine hesitant i.e., don't know yet or would refuse vaccination. Estimating a 5% decrease of hesitancy in the intervention group and a correlation of about 0.45 between paired observations, the intervention group requires a sample size of 1315 pairs for detecting a 5% change of marginal proportions at a power of 80% and two-sided significance of 5%.

We will use 1:1 randomization of participants. Thus, 50% will be allocated to the intervention and 50% to the control group. Using equal size groups will allow us to detect a between group difference in vaccine intentions of 5-6% with a power of 0.8 and a two-sided significance of 5%. The total sample required for this study is 2630 participants i.e., 1315 in the intervention group and 1315 in the control group.

Recruitment Strategy

Dynata will send invitations in various forms (e.g., e-mail invitations, text messages and in-app alerts) to recruit eligible participants from their existing panel (individuals who have signed with Dynata and have expressed willingness to receive invitations to various appropriate surveys) until recruitment goals and quotas are met. For recruitment purposes only, Dynata collects IP addresses as an identifier to make sure that the same person is not recruited for the same study multiple times. IP addresses are not retained by Dynata after the study and are not shared with the researchers. Dynata has identifying socio-demographic information that allows them to use our inclusion and exclusion criteria to recruit eligible participants. None of this information is communicated to the research team. Please refer to the "confidentiality" section for Dynata's privacy policies.

An electronic consent form describing the study goals and procedure will be provided at the start of the survey, after which participants will be asked whether they consent to taking part in the survey. Once they click on the icon that states they agree to participate, consent will be implied. The information collected for the survey is completely anonymous. If they decline, the survey will be terminated.

Procedure

Stratified randomization will be used to allocate participants to either: 1) intervention condition: viewing a 2-minute altruism-eliciting video, or 2) control condition: reading a text containing information (from the Public Health Agency of Canada website: https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks.html) about general health behaviours and public health recommendations concerning COVID-19 e.g. hand hygiene and respiratory etiquette, wearing non-medical masks, physical distancing, etc. Within each stratum (first language, sex, population density and household income), participants will be allocated randomly using a 1-to-1 ratio (1 to the intervention condition and 1 to the control condition).

The online survey will be approximately 10 minutes in length and will be available in both French and English. After reading the introductory statement of the study, participants will

be asked whether they consent to taking part in the survey. Those who consent to taking part in the survey will be invited to go to the next page and start completing the survey. Participants will first be asked to answer several socio-demographic questions and will be asked to choose one of the following categories which describe their COVID-19 vaccine decision-making stage according to the Precaution Adoption Process Model (PAPM): unengaged, undecided, decided not to receive the vaccine, or decided to receive the vaccine.

Subsequently, depending on their randomly assigned condition, participants will either be shown a 2-minute altruism-eliciting video, or a brief informational text. After viewing this content, to ensure that participants paid attention, participants will answer questions about the contents to check their understanding.

Finally, participants will: 1) once again be asked to choose their COVID-19 vaccine decision-making stage; 2) be asked questions regarding previous vaccination history (e.g. seasonal influenza), lifestyle factors, self-perceived health status, personal history of SARS-CoV-2 infection, and preferred health-information channels; and 3) complete validated scales regarding altruism, empathy, personal distress, and vaccine hesitancy.

Funding

This study is funded by the McGill Interdisciplinary Initiative in Infection and Immunity (MI4) (https://www.mcgill.ca/mi4/). Neither the principal investigator nor the institution is in a situation of conflict of interest as a result of this funding.

Risks and Concerns

Participating in this research study has no known or serious risks. There is no evidence in the scientific literature that eliciting altruism could produce negative consequences or emotions in participants. However, it is possible that participants of the focus group may experience discomfort or upset as the result of the research intervention.

In the event that participants experience discomfort after the study procedures, they will also be provided with the link to a governmental website where they will find available resources in their regions: https://www.canada.ca/en/public-health/services/mental-health-services/mental-health-get-help.html.

Further, if the participants have any additional questions or comments related to this survey, they may contact the principal investigator or the study coordinator, as indicated at the beginning of the survey before providing consent. Participants will also be provided at the beginning of the survey with the contact numbers for the Local Commissioner of Complaints & Quality of Services at the JGH.

At the end of the survey, participants will also be provided with a list of online resources about the COVID-19 vaccines:

- National Advisory Committee on Immunization (NACI) https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines.html
- Public Health Agency of Canada (PHAC) https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/vaccines.html?&utm_campaign=hc-sc-covidvaccine&utm_medium=sem&utm_source=ggl&utm_content=ad-text-

en&utm_term=%2Bcovid%20%2B19%20%2Bvaccine&adv=2021-0051&id_campaign=12088104441&id_source=116538480476&id_content=491971664630

Inconvenience

Inconveniences involve time commitment of about 10 minutes. There will be no additional inconveniences as the survey will be filled out online, and as such they are not required to travel to our lab.

Benefits

Participants will not receive any direct personal benefit from participating in this study; however, the research results from this survey will be used to inform public health authorities on promoting COVID-19 vaccine uptake, especially among younger Canadians between ages 20-39.

Compensation

Compensation will be handled by the survey company Dynata, who is responsible for the data collection. Dynata's compensation options allow panelists to redeem from a large range of gift cards, points programs (e.g., Aeroplan), charitable contributions, and partner products or services (e.g., Hertz). All compensation is awarded only once the survey is completed. This study will compensate approximately $2.50-$3 depending on the way the respondent chooses to use their rewards.

Confidentiality

All data in this study will be collected online. Participants will be informed that the information collected as part of the survey will be confidential and that their participation is anonymous to the research team.

Dynata has identifying socio-demographic information that allows them to use our inclusion and exclusion criteria to recruit eligible participants. None of this information is communicated to the research team. Dynata will send anonymized survey data to the research team. The following summarizes Dynata's privacy policies:

We follow all national, regional and local laws with respect to privacy and data protection. As such, the privacy policy for each panel adheres to local law. We ensure our panels comply with all applicable industry standards set by ESOMAR, MRS (UK), AMSRS (Australia), BVM (Germany), Insights Association (U.S.), etc. Among others, this includes observing the following guidelines: • Voluntary co-operation of panelists • Protection of researchers' and participants' identities • Terms & conditions and privacy policies compliant with local laws • State-of-the-art data security policies and measures • Reliable and validated data procedures • Strict adherence to rules governing the interviewing of children and young people. For examples of our privacy policies in individual markets, please refer to: • EU privacy policy: http://www.opinionoutpost.co.uk/en-gb/policies/privacy • All other countries privacy policy: https://www.surveyspot.com/policies/privacy

From: https://www.dynata.com/?utm_source=google&utm_medium=cpc&utm_campaign=dynata&utm_content=searchdy&gclid=CjwKCAiA_9r_BRBZEiwAHZ_v1wr8Cu0VLTmAXmkPYSoZjTBGvq2Xvc8PVvq-ud1seg2QGbMnyiHMtRoCc8wQAvD_BwE

Dynata follows all local data protection regulations. Our training teams conduct extensive trainings on Data Protection with client-facing staff highlighting industry (ESOMAR, Insights Association, etc.) guidelines and legal recommendations. We have secure servers to carry out the collection of survey data. Sampling is undertaken with highly encrypted links to the database servers. Personal information is fully protected and can only be communicated following a strict procedure. We also use randomization procedures to ensure there is no preferential treatment of certain parts of the database. Our sampling teams do not have direct access to the database to reveal the identity of users. Survey data is linked to the panel database using numeric IDs so the identity of the end-user (panelist) is always protected. As a company with extensive panel data assets based on recruitment and a "permissioned" approach, we understand the importance of having a mutually beneficial relationship with our research participants – whether consumers or business professionals – and the value which such a relationship brings to enriching marketing and communications. To protect our respondents' valuable personal information, Dynata has a team dedicated to privacy law compliance, including the GDPR.

From:

https://www.dynata.com/?utm_source=google&utm_medium=cpc&utm_campaign=dynata&utm_content=searchdy&gclid=CjwKCAiA_9r_BRBZEiwAHZ_v1wr8Cu0VLTmAXmkPYSoZjTBGvq2Xvc8PVvq-ud1seg2QGbMnyiHMtRoCc8wQAvD_BwE

The survey company Dynata uses a survey software called Decipher, and information collected as part of this survey will be stored on a Decipher Canadian server. All information collected will be stored in Canada, on Canadian servers for a duration of three months starting after the data has been collected, to provide the research team with enough to ensure the dataset is complete. Anonymized survey data collected by Dynata will be sent to the Study Coordinator who will be in charge of overseeing the storage of data and study documents. This anonymized survey data will be stored on the "Zeev Rosberger File Share" stored on a secure Lady Davis Institute server, where backups are being performed regularly by the LDI and stored files are encrypted (only accessible by individuals who have the credentials to access the data). These files will be accessible remotely to designated members of the research team through a File Cloud. Five (5) lab members will have access to this data (the Study Coordinator, two Research Associates, a Master's student and the Principal Investigator). These individuals will enter their LDI account credentials to obtain access to the electronic files stored on the Zeev Rosberger File Share. This data will be stored and kept for 10 years, and then permanently destroyed as per CIUSSS-West-Central Montreal policy. The security tool BC Wipe (www.jetico.com) will be used for permanent destruction of the electronic files.

Incidental Findings

This study does not involve medical sample analysis, therefore this is not applicable here.

Participants will be provided with the research team's contact information, and if they express concerns or discomfort during the study or afterwards, we will be able to direct them to relevant resources for them to seek help.

Communication and Publication of Research Results

The results of this study will directly inform development of public health strategies to help promote COVID-19 vaccine uptake among younger Canadians in order to control the pandemic in the future and protect those at higher risk of hospitalisation and death (e.g., elderly,

those with chronic diseases). Results will be shared with the Public Health Agency of Canada and the Institut national de santé publique du Québec, whose representatives are co-investigators on this project. Publication of results in the peer-reviewed scientific literature are also planned.

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