Superstition: A Contagion of Unproven COVID-19 Remedies Triggered by Superstitious Beliefs

Andrew Scutt

Department of Writing and Rhetoric, University of Toronto

WRR104: Writing Reports

Dr. Vitoria Jovanovic-Krstic

March 27th, 2023

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Abstract

Despite extensive research about superstition in humans, in the context of pandemics, there is a significant gap in whether or not unproven COVID-19 remedies stemmed from superstitious beliefs. It is assumed that superstitious beliefs originated from culture and/or synchronicity with positive outcomes. In addition, according to previous literature, variables that could possibly affect the development of superstitious beliefs are education, gender, and superstitious predispositions. Using a questionnaire posted online with queries pertaining to the aforementioned variables (see Appendix A), this study found that unproven remedies stemmed from superstitious beliefs as evidenced by their origin in culture and synchronicity. In addition, there were no conclusive relationships between education, gender, superstitious predispositions and superstitions regarding unproven remedies.

Introduction

Background

COVID-19.

For the past four years, the COVID-19[1] pandemic has severely impacted the overall well-being of Canadians. Psychologically speaking, the constant fear of contracting COVID-19 led to the withdrawal of the person and a reduction in social relationships as stated in a review of previous literature conducted by Brooks et al. (2020). However, the effects of the COVID-19 pandemic were not limited to the fear of contracting the virus according to a literature survey conducted by Barbisch et al. (2015). Instead, this pandemic fostered the following issues: separation from loved ones, loss of freedom, uncertainty about the advancement of the disease, and feelings of helplessness in relation to Cao et al. (2020)'s survey with 7,143 respondents that analyzed the participants' pandemic-related psychological hardships. The accumulation of the abovementioned problems led to a significant spike in psychological distress, especially in young adults and children due to their strong need for socialization, referring to Manchia et al. (2021)'s literature survey. In turn, this significant increase in distress resulted in serious social consequences, such as the rise in suicide rates (Kawohl, W. and Nordt, C., 2020), economic issues and the deceleration in academic activities (Alvarez et al., 2020). An overall increase in violence, bad temper, conflict, theft, murder, suicide, sabotage, and disregard for the law was recorded in society (Mohler et al., 2020). Under these stress-inducing circumstances, the dissemination of information about the virus' treatments and prevention was tainted by rumours, deception, and misinformation as per Garfin (2020) literature review. Subsequently, these

[1] COVID-19 refers to "a respiratory disease caused by SARS-CoV-2, a coronavirus discovered in 2019" (CDC, n.d.)

common falsehoods about COVID-19 remedies were intricately related to superstitious beliefs[2] based on Hoseini et al. (2020)'s study of previous literature.

superstition.

In the 4th century BCE, the term "superstition[3]" emerged from a Greek concept called *deisidaimonia*, meaning "scrupulous in religious matters." Later in history, superstition was associated with the irrational implication that too much power or reverence had been given to something undeserving, bringing it closer to its modern definition shown in the footnotes (Vyse, 2020). From an evolutionary psychology perspective, superstitions originated from our ancestors not being able to understand the dangerous "forces" of the natural world, such as predation and natural disasters (Mandal et al., 2018). Consequently, superstitious beliefs evolved as a means to have a sense of control over incontinent "forces," subsequently attenuating symptoms of anxiety (Mandal et al., 2018). According to previous literature, superstitious beliefs were related to culture, gender, educational pathway, and synchronicity[4]. Concerning synchronicity, B.F. Skinner studied the relationship between synchronicity and superstitious beliefs in animals. In 1948, he conducted an experiment where food was presented to starved pigeons at irregular intervals, resulting in the linkage of food and certain behaviours. Consequently, the pigeons replicated their exhibited behaviour for more food. He concluded that accidentally reinforced behaviour might be reproduced due to synchronicity with positive outcomes (Skinner, 1948). In terms of

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[2] Superstitious beliefs refer to "an irrational belief in the significance or magical efficacy of certain objects or events [...] or a custom or act based on such belief" (APA Dictionary of Psychology, n.d.).

[3] The term superstition refers to "an irrational belief in the significance or magical efficacy of certain objects or events (e.g., omens, lucky charms) or a custom or act based on such belief" (APA Dictionary of Psychology, n.d.).

[4] Synchronicity refers to "the simultaneous occurrence of events that appear to have a meaningful connection when there is no explicable causal relationship between these events, as in extraordinary coincidences or purported examples of telepathy" (APA Dictionary of Psychology, n.d.).

education, as the level of education increased, superstitions decreased and vice-versa as mentioned by a poll conducted by Noble (2017) that questioned 1929 respondents about their superstitious beliefs. With regard to gender, women were more likely to believe in superstitions than men according to Randall (1988)'s survey where 273 males and 476 females were queried about their superstitious predispositions. From a cultural perspective, Mandal (2018)'s literature survey, based on careful analysis of previous superstition-related literature, concluded that people respond differently to situations based on their beliefs formed by culture. These beliefs, in part superstitious, may be acquired through verbal communication, enabling cultural transmission (Mandal, 2018). Recently, the study of superstition has expanded to determine the relationship between remedial behaviour[5] and superstitious beliefs. However, previous research failed to determine the role of superstitious beliefs in creating COVID-19-related remedies among college and university students from 2020 to 2022, creating a gap in knowledge. More importantly, this research will create more awareness of how superstitious beliefs encourage the manifestation of unproven remedies in subsequent global health issues.

[5] Remedial behavior refers to any actions that serve as a possible solution to a problem.

Purpose Statement

The purpose of this research was to investigate the main hypothesis that unproven COVID-19 remedies[6] stemmed from superstitious beliefs. This belief was tested via the analysis of unproven remedies and their respective superstition-related origins through survey data gathered from 25 Canadian undergraduate or college students. These origins consisted of the following independent variables: culture and direct/indirect experience with treating COVID-19. Gender, education, and superstitious predispositions were treated as non-origin-related independent variables. In addition, this hypothesis implied that all of the variables mentioned above supported the development of superstitious beliefs regarding unproven remedies[7], the dependent variable. In addition, respondents had to be 18 years or older, a Canadian undergraduate or college student, and showed belief in at least one unsanctioned COVID-19 remedy; these were the control variables. Via demographic data, a correlation between culture, gender, education, superstitious predispositions, and indirect/direct experience with treating COVID-19 and superstitious beliefs regarding unproven remedies would be established.

[6] In this study, to qualify a COVID-19 remedy as unproven, it had to be absent from Health Canada's list of approved COVID-19 treatment methods. Check the following link: https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/drugs-vaccines-treatments/treatments.html.

[7] This statement should be interpreted as an additional hypothesis: culture, positive direct/indirect experience with treating COVID-19, lower education, feminine gender, and higher levels superstitious predispositions foster the creation of superstitious beliefs regarding unsanctioned cures.

Objectives and Hypothesis

In terms of research objectives, this research aimed to answer the following questions: 1) How does culture[8] affect the transmission of these unproven remedies? 2) How does education affect superstitious beliefs in unproven remedies? 3) How do superstitious predispositions encourage certainty in unsanctioned treatment methods? 4) How do direct or indirect experiences with treating COVID-19 using unproven treatment methods affect the subject's perception of them? 5) How does gender affect superstitious beliefs in unproven remedies? Using these objectives, the study ultimately aimed to answer: "Have certain unproven remedies for the COVID-19 pandemic stemmed from superstitious beliefs among Canadian university and college undergraduate students from 2020 to 2022?" The study is based on the hypothesis that unproven COVID-19 remedies[9] stemmed from superstitious beliefs.

[8] In this study, culture was broken down into the following settings: national setting, educational setting, professional setting, ethnic setting, religious setting, family setting, friendship setting, corporate or organization setting. In addition, religion and ethnicity are regarded as components of culture.

[9] In this study, to qualify a COVID-19 remedy as unproven, it had to be absent from Health Canada's list of approved COVID-19 treatment methods. Check the following link for the aforementioned list: https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/drugs-vaccines-treatments/treatments.html.

Limitations

This study recognized the inadequate definition of an unproven remedy, limited cultural scope, linearization of responses, short timeframe, and poor sample size as limitations in the interpretation of results.

Methods of Investigation

The primary data used in the report was collected using a Google Forms questionnaire that was posted on the "/SampleSize" and "/UofT" subreddits for a week. (See Questionnaire in Appendix A). The data gathered was examined using the statistical analysis tools provided by Google Forms. These instruments included bar and circle graphs based on percentages. All of the collected primary data was kept. The secondary data was collected using the University of Toronto Libraries. This data was analyzed in terms of its relevance to superstition and remedies.

Body

Results

introduction.

This study aimed to determine the role of superstitious beliefs in creating COVID-19-related remedies among college and university students from 2020 to 2022. The survey had 25 respondents who were Canadian undergraduate or college students. In addition, all of these participants believed in at least one unproven COVID-19 remedy and were older than 18 years of age. The survey was kept online on the "/SampleSize" and "/UofT" subreddits for a week. No collected data was discarded. In terms of organization, the questionnaire followed a thematic pattern: unproven COVID-19 remedies, cultural sources enabling the spread of these unsanctioned remedies, indirect/direct experiences with treating COVID-19, gender identity, ethnicity, education, and superstitious predispositions.

unproven COVID-19 remedies.

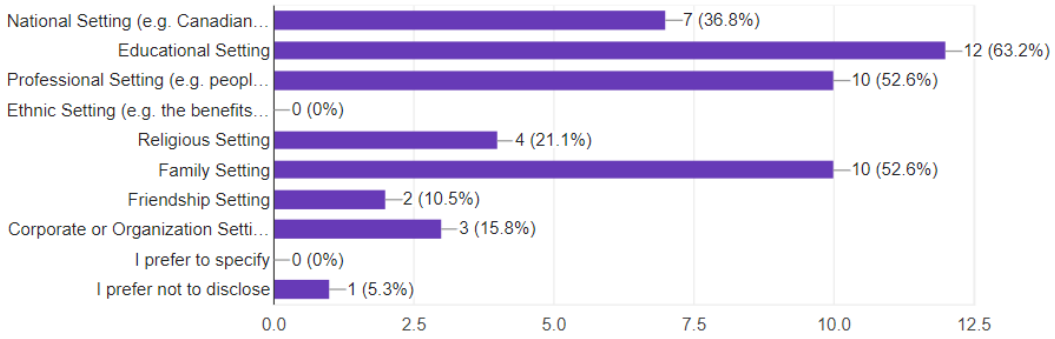
The treatment methods indicated by respondents did not directly relate to the research questions/hypotheses; therefore, see Appendix B for these results.

cultural sources.

A bar graph with percentages was used to represent the settings in which these unproven remedies were professed (see Figure 1). All respondents indicated that the remedy's validity stemmed from at least one component of cultural provenance. This finding reinforced the hypothesis that culture supported the development of superstitious beliefs regarding unproven remedies.

Figure 1

Bar graph that displays the cultural origin of the unproven treatment methods



direct/indirect experiences with treating COVID-19 using unproven remedies.

57.9% of respondents did not have an indirect/direct experience with treating COVID-19 whilst 42.1% of respondents claimed that they or members of their immediate entourage have used at least one of the aforementioned treatment methods to cure COVID-19. The 42.1% group of respondents asserted that the remedy/remedies positively contributed to the treatment of COVID-19. In addition, they all stated that their direct/indirect experience with COVID-19 helped them view the unproven remedy/remedies as valid treatment methods for COVID-19. This finding supported the claim that positive indirect/direct experiences with treating COVID-19 using unproven remedies helped the manifestation of superstitious beliefs regarding unproven remedies.

gender identity.

47.4% of students identified as men, 47.4% of students identified as women, and 5.3%–1–of students preferred not to specify. This data will be used to answer the research questions/hypotheses in the superstitious predispositions section.

ethnicity.

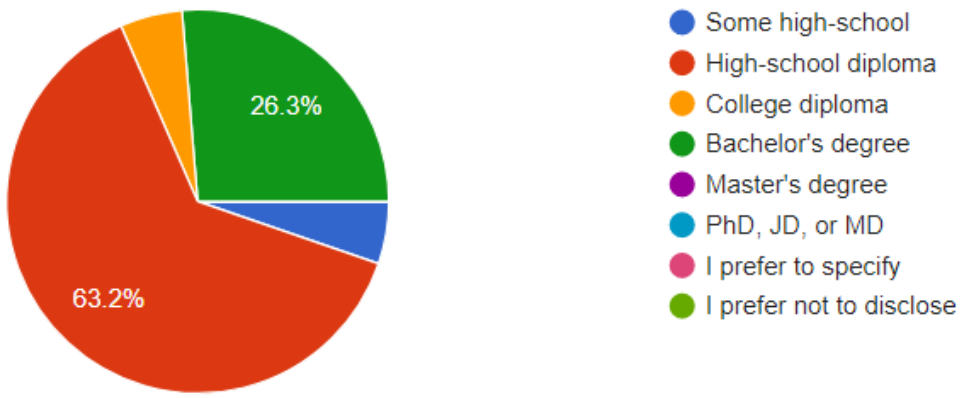
The ethnicities indicated by respondents did not directly relate to the research questions/hypotheses; therefore, see Appendix C for these results.

education.

A circular graph with percentages was used to represent the levels of education achieved (see Figure 2). More importantly, 63.2% of respondents had a high-school diploma, followed by 26.3% of respondents having a Bachelor's degree. This data will be used to answer the research questions/hypotheses in the superstitious predispositions' section.

Figure 2

Circular graph that shows the respondents' highest level of education.



superstitious predispositions.

The participants' superstitious predispositions were assessed using a 7-point Likert scale[10] that quantified their agreeability/disagreeability levels with statements that elicited

[10] A 7 point Likert scale offers the participant the following levels of agreement/disagreement: (1) Strongly Disagree, (2) Disagree, (3) Somewhat Disagree, (4) Neither Agree Nor Disagree, (5) Somewhat Agree, (6) Agree, and (7) Strongly Agree.

elements of superstitious thinking[11]. Their responses were converted into averages[12] based on demographic data. The overall average of respondents' superstitious predispositions did not support/deny the hypothesis that high levels of superstitious predispositions contribute to the development of superstitions regarding baseless cures. On a scale from 1 to 7, 7 being high in superstitious thinking and 1 being low in superstitious thinking, on average, men scored 3.15 and women scored 5.38. This revelation means that the feminine gender encourages the inception of superstitious beliefs, but not necessarily unproven remedies, which will be mentioned in the Discussion section. Due to the majority of respondents having a high school diploma– 62.4%–, the hypothesis that lower education results in lower superstitious beliefs regarding nonscientific cures cannot be supported/denied. Finally, the short-answer response questions did not yield any important data; hence, they were not included in the Results section.

[11] These statements were: "I sometimes perform little rituals to bring good luck," "I do not want to lose things that bring me good luck," "I do not want to lose things that bring me good luck," "People who know me would say that I am a superstitious person."
[12] These averages were referred to as "general superstition scores" in this research report.

Discussion

introduction.

This study is important as it will help the Canadian healthcare system understand the various superstition-related origins of unproven remedies. Subsequently, this information will enable them to directly address these disruptive sources of information. In relation to this intent, this study demonstrates that unproven COVID-19 remedies stemmed from superstitious beliefs[13].

culture and synchronicity.

This conclusion is substantiated by these unproven remedies, all originating from a component of culture and/or an indirect/direct experience with treating COVID-19, that was linked with a positive outcome. In terms of culture, the findings agree with previous literature stating that superstitions are culturally transmitted as the validity of all of these treatment methods was professed in some cultural context. In terms of synchronicity, having a positive outcome in treating COVID-19 using an unproven remedy solidified the surveyor's view that the remedy is a valid treatment method in all cases. This statement conforms to previous literature asserting that synchronicity with positive outcomes leads to superstitious beliefs.

education.

The data is inconclusive as the majority of respondents–62.4%–had a high-school diploma, not enabling adequate comparison. In addition, the questionnaire asked people about their educational background only if they believed in baseless treatment methods. It should have asked respondents about their educational background regardless of their beliefs in unsubstantiated treatments. This would facilitate a proper comparison between educational pathways and superstitious beliefs regarding groundless cures.

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[13] This claim is predicated on the assumption that any unsanctioned remedy's validity originating from culture or synchronicity is rooted in superstition.

gender identity.

Women, on average, scored a higher general superstition score–5.38–, than men–3.15–. These results supported previous literature stating that women are, on average, more superstitious than men. However, it cannot be concluded that women are more likely to support unproven remedies than men as the questionnaire asked people about their gender only if they believed in unproven remedies. It should have asked respondents about their gender regardless of their belief in unproven remedies. This would facilitate an accurate comparison between gender and unproven remedies.

superstitious predispositions.

The data is inconclusive as the questionnaire asked people about their superstitious predispositions only if they believed in unproven remedies. It should have asked respondents about their superstitious predispositions regardless of their beliefs in unproven remedies to enable a proper comparison between superstitious predispositions and unproven remedies.

negative data.

In reference to previous literature, no negative data was observed in this study.

limitations.

This study has multiple shortcomings that may have obscured the findings. Firstly, this study's definition of an unproven remedy rooted in superstition is limited to any remedy not on Health Canada's list of approved remedies. Therefore, there may be some unproven remedies that do not, empirically speaking, originate from superstition. Secondly, if a remedy's validity stems from a component of culture, it does not inherently make the cure based on superstition. Thirdly, the scope of this study has been limited to Western culture, not enabling global applicability. Fourthly, the responses were linearized in the sense that the questionnaire did not

allow any leeway for origins that were not superstitious. More specifically, respondents could only describe the origin of their beliefs in terms of culture or synchronicity, making it difficult for them to indicate a “non-superstitious” source. Fifth, this research report and the data collection process were done in a very short timeframe, increasing the possibility of errors. Finally, the sample size of this study is extremely small.

Conclusion

This study is important as it will help the Canadian healthcare system understand the various origins of unproven remedies. Subsequently, the Canadian government will directly address these sources of misinformation. Unproven remedies stemmed from superstitious beliefs as evidenced by their origin in culture and synchronicity. In addition, there were no conclusive relationships between education, gender, superstitious predispositions and superstitious beliefs regarding unproven remedies. The questionnaire needs to be redefined according to the suggestions mentioned in the Discussion section. New research should examine this research question and its respective hypotheses using a questionnaire that has incorporated the suggestions in the Discussion report. Furthermore, the inadequate definition of an unproven remedy, limited cultural scope, linearization of responses, short timeframe, and poor sample size should be remediated in the new study. These rectifications will help find connections between education, gender, superstitious predispositions and superstitious beliefs regarding unproven remedies.

References

Alvarez, F. E., Argente, D., & Lippi, F. (2020, April 1). *A Simple Planning Problem for COVID-19 Lockdown*. National Bureau of Economic Research. https://www.nber.org/papers/w26981

APA Dictionary of Psychology. (n.d.). Dictionary.apa.org. https://dictionary.apa.org/

Barbisch, D., Koenig, K. L., & Shih, F.-Y. (2015). Is There a Case for Quarantine? Perspectives from SARS to Ebola. *Disaster Medicine and Public Health Preparedness*, *9*(5), 547–553. https://doi.org/10.1017/dmp.2015.38

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The Psychological Impact of Quarantine and How to Reduce it: Rapid Review of the Evidence. *The Lancet*, *395*(10227), 912–920. https://doi.org/10.1016/S0140-6736(20)30460-8

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research*, *287*(112934). https://doi.org/10.1016/j.psychres.2020.112934

CDC. (2022). *Centers for Disease Control and Prevention*. Centers for Disease Control and Prevention; U.S. Department of Health & Human Services. https://www.cdc.gov/

Garfin, D. R., Silver, R. C., & Holman, E. A. (2020). The novel coronavirus (COVID-2019) outbreak: Amplification of public health consequences by media exposure. *Health Psychology*, *39*(5). https://doi.org/10.1037/hea0000875

Hoseini, A. S., Taher, M., Pashaeypoor, S., Cheraghi, M., & karimy, M. (2020). Superstition in health beliefs: Concept exploration and development. *Journal of Family Medicine and Primary Care*, *9*(3), 1325. https://doi.org/10.4103/jfmpc.jfmpc_871_19

Kawohl, W., & Nordt, C. (2020). COVID-19, unemployment, and suicide. *The Lancet Psychiatry*, *7*(5), 389–390. https://doi.org/10.1016/S2215-0366(20)30141-3

Manchia, M., Gathier, A., Eser, H. Y., Schmidt, M. V., de Quervain, D., van Amelsvoort, T., Bisson, J. I., Cryan, J. F., Howes, O. D., Pinto, L., van der Wee, N., Domschke, K., Branchi, I., & Vinkers, DR. C. H. (2021). The impact of the prolonged COVID-19 pandemic on stress resilience and mental health: A critical review across waves. *European Neuropsychopharmacology*, *55*. https://doi.org/10.1016/j.euroneuro.2021.10.864

Mandal, F. B. (2018). *Superstitions: A Culturally Transmitted Human Behavior*. http://article.sapub.org/10.5923.j.ijpbs.20180804.02.html

Mohler, G., Bertozzi, A. L., Carter, J., Short, M. B., Sledge, D., Tita, G. E., Uchida, C. D., & Brantingham, P. J. (2020). Impact of social distancing during COVID-19 pandemic on crime in Los Angeles and Indianapolis. *Journal of Criminal Justice*, *68*, 101692. https://doi.org/10.1016/j.jcrimjus.2020.101692

Noble, K. (2017). *The Relationship Between Social Class and Supernatural Belief*. Retrieved March 27, 2023, from https://media.suweb.site/2017/12/Noble_Kassidy-THESIS.pdf

Randall, T. M., & Desrosiers, M. (1980). Measurement of Supernatural Belief: Sex Differences and Locus of Control. *Journal of Personality Assessment*, *44*(5), 493–498. https://doi.org/10.1207/s15327752jpa4405_9

Skinner, B. F. (1948). "Superstition" in the pigeon. *Journal of Experimental Psychology*, *38*(2), 168–172. https://doi.org/10.1037/h0055873

Vyse, S. (2020). 1. The origins of superstition. *Superstition: A Very Short Introduction*, 1–15. https://doi.org/10.1093/actrade/9780198819257.003.0001

Appendix A

Research Questionnaire Presented to Respondents

COVID-19 Remedies

Thank you very much for the time spent completing this research questionnaire. Your effort is truly appreciated.

Context-wise, the topic of the research is superstitious beliefs. More specifically, this research seeks to determine how superstitions affect remedies to global health issues. The data collected from this questionnaire shall be used to establish the aforementioned relationship in an anonymous, unintrusive, and objective manner.

Your privacy and confidentiality are of the utmost importance to us. The collected data is anonymous. You may stop the survey at anytime if you wish. In addition, the data collected shall not be published. It will be used for a project related to WRR104: Writing Reports, which is a course taught at the University of Toronto.

You must be 18 years or older and be a Canadian college or university student to complete this survey.

* Required

Consent Section

Your consent to the terms below is required:

- I understand that this questionnaire
  will be used to complete a final formal report for WRR104 which shall be read by the professor and/or TA
- I understand that the information shall not be published
- I understand that the researcher values my anonymity, so I shall not be asked to provide any confidential, identifying information.
- I understand I can stop answering questions at any time
- I understand that the information collected for this survey shall be carefully discarded once the report for WRR104 has been completed.

1. Your Answer *

Mark only one oval.

- ◯ Yes, I consent to participating in this survey. *Skip to question 2*
- ◯ No, I do not wish to participate in this survey *Skip to question 22*

Demographic Data

2. Are you at least 18 years old? *

Mark only one oval.

- ◯ Yes
- ◯ No *Skip to question 22*
- ◯ I prefer not to disclose *Skip to question 22*

3. Are you a Canadian college or university student? *

Mark only one oval.

- ◯ Yes
- ◯ No *Skip to question 22*
- ◯ I prefer not to disclose *Skip to question 22*

4. Consult Health Canada's list of approved COVID-19 treatment methods in the figure below. The figure was pulled from https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/drugs-vaccines-treatments/treatments.html. *

How much do you agree with the following statement:
In reference to the list below, I believe that there are other effective treatment methods for COVID-19.

- Remdesivir (Veklury®)
- Nirmatrelvir and ritonavir (Paxlovid®)
- Tixagevimab and cilgavimab (Evusheld®)
- Tocilizumab (Actemra®)
- Bamlanivimab
- Casirivimab and imdevimab
- Sotrovimab

Mark only one oval.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Somewhat Agree
- ◯ Neutral
- ◯ Somewhat Disagree *Skip to question 22*
- ◯ Disagree *Skip to question 22*
- ◯ Strongly Disagree *Skip to question 22*
- ◯ I prefer not to disclose *Skip to question 22*

COVID-19 Remedies

5. Which of the following remedies would you rate as effective treatment methods for COVID-19? Select all that apply *

Check all that apply.

- [ ] Vitamins and/or other Nutritional Supplements (e.g. Vitamin C, Vitamin D, Zinc, Magnesium)
- [ ] Radiation (e.g. sunlight kills COVID-19)
- [ ] Extreme temperatures (Coldness kills COVID-19)
- [ ] Gargling, and/or nasal rinsing with disinfectants (e.g. salt water)
- [ ] Inhaling and/or ingesting disinfectants
- [ ] Antiparasitic drugs (e.g. Ivermectin)
- [ ] Traditional medicine (e.g. herbal remedies)
- [ ] Anti-malarial Drugs (e.g. hydroxychloroquine, chloroquine)
- [ ] Religious methods (e.g. praying)
- [ ] Magical methods
- [ ] I prefer to specify other treatment methods
- [ ] I prefer not to disclose

COVID-19 Remedies

6. If applicable, please specify any other remedies that you would rate as effective treatment methods for COVID-19. Please note, **do not include COVID-19 treatment methods that are authorized by Health Canada**. If not applicable, press the "Next" button below.

Sources of Spread of COVID-19 Remedies

7. In which of the following settings was the validity of this/these treatment method(s) expressed? Select all that apply *

Check all that apply.

- [ ] National Setting (e.g. Canadian citizens tell you about the benefits of Ivermectin)
- [ ] Educational Setting
- [ ] Professional Setting (e.g. people in your workplace tell you about the benefits of Vitamin C)
- [ ] Ethnic Setting (e.g. the benefits of tea are professed at a Somalian gathering)
- [ ] Religious Setting
- [ ] Family Setting
- [ ] Friendship Setting
- [ ] Corporate or Organization Setting (e.g. Youtube and/or its users indicate the benefits of Ivermectin)
- [ ] I prefer to specify
- [ ] I prefer not to disclose

Sources of Spread of COVID-19 Remedies

8. If applicable, please specify any other setting(s) where the validity of this/these treatment method(s) was expressed. If not applicable, press the "Next" button below.

Direct and Indirect Experience with COVID-19 Remedies

9. Have you or other people in your physical entourage used the aforementioned treatment methods for treating COVID-19? (The treatment methods found in the COVID-19 Remedies of this questionnaire) *

Mark only one oval.

- ◯ Yes
- ◯ No *Skip to question 12*
- ◯ Not certain *Skip to question 12*
- ◯ I prefer not to disclose *Skip to question 12*

Direct and Indirect Experience with COVID-19 Remedies

10. Did the remedy/remedies positively contribute to your/their treatment of COVID-19? (e.g. alleviated the symptoms, cured COVID-19) *

Mark only one oval.

- Yes
- No
- Not certain
- I prefer not to disclose *Skip to question 12*

Direct and Indirect Experience with COVID-19 Remedies

11. Does this experience with the remedy/remedies help you view it/them as valid treatment method(s) for COVID-19? *

Mark only one oval.

- Yes
- No
- Not certain
- I prefer not to disclose

Demographic Data

12. What is your current gender identity? *

Mark only one oval.

- Man *Skip to question 14*
- Woman *Skip to question 14*
- I prefer to self-identify *Skip to question 13*
- I prefer not to disclose *Skip to question 14*

Demographic Data

13. Please specify the gender identity/identities you identify with in the box below *

Demographic Data

14. What ethnicity/ethnicities do you identify with? Select all that apply *

Check all that apply.

- [ ] Aboriginal/Indigenous
- [ ] Black
- [ ] East or Southeast Asian
- [ ] Latin, Central, and South American
- [ ] Middle Eastern
- [ ] South Asian
- [ ] White
- [ ] I prefer to self-identify
- [ ] I prefer not to disclose

Demographic Data

15. If applicable, please specify the ethnicity/ethnicities you identify with in the box below. If not applicable, press the "Next" button below.

Demographic Data

16. What is the highest level of education you have ever achieved? *

Mark only one oval.

- ◯ Some high-school *Skip to question 18*
- ◯ High-school diploma *Skip to question 18*
- ◯ College diploma *Skip to question 18*
- ◯ Bachelor's degree *Skip to question 18*
- ◯ Master's degree *Skip to question 18*
- ◯ PhD, JD, or MD *Skip to question 18*
- ◯ I prefer to specify *Skip to question 17*
- ◯ I prefer not to disclose *Skip to question 18*

Demographic Data

17. Please specify the highest level of education you have achieved *

_____

Personal Traits

18. I sometimes perform little rituals to bring good luck.

Mark only one oval.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Somewhat Agree
- ◯ Neutral
- ◯ Somewhat Disagree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ I prefer not to disclose

19. I do not want to lose things that bring me good luck.

Mark only one oval.

- Strongly Agree
- Agree
- Somewhat Agree
- Neutral
- Somewhat Disagree
- Disagree
- Strongly Disagree
- I prefer not to disclose

20. I must admit that I am a superstitious person sometimes.

Mark only one oval.

- Strongly Agree
- Agree
- Somewhat Agree
- Neutral
- Somewhat Disagree
- Disagree
- Strongly Disagree
- I prefer not to disclose

21. People who know me would say that I am a superstitious person.

Mark only one oval.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Somewhat Agree
- ◯ Neutral
- ◯ Somewhat Disagree
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ I prefer not to disclose

Conclusion

The purpose of this research was to establish unexplored relationship between unproven COVID-19 remedies and superstitious beliefs. More specifically, we want to answer the following: "Have certain unproven remedies for the COVID-19 pandemic stemmed from superstitious beliefs among Canadian university and college undergraduate students from 2020 to 2022?"

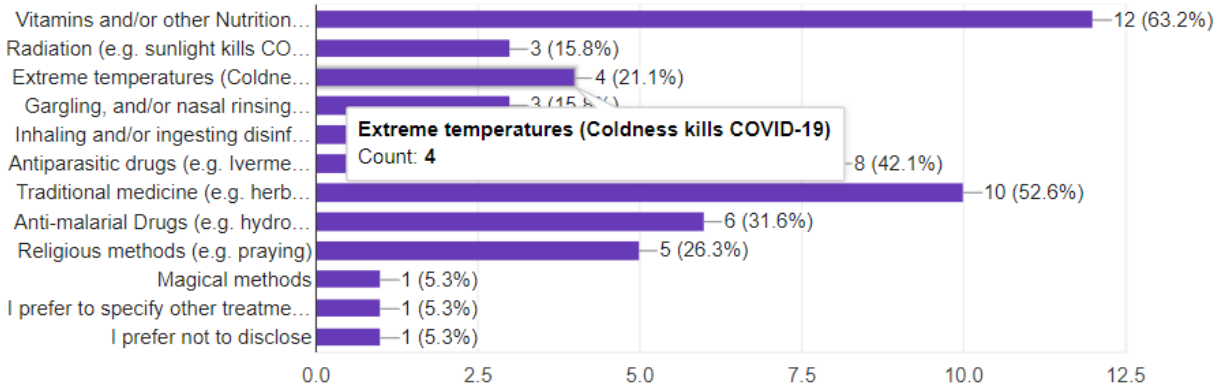
Again, thank you for spending your time completing this survey.

Feel free to leave any comments about the topic, questionnaire, research, etc in the box below.

22. Enter your comments below

Appendix B

Respondent's answers to the question: "Which of the following remedies would you rate as effective treatment methods for COVID-19?"



Appendix C

Respondents' answers to the question: "What ethnicity/ethnicities do you identify with?"