Works Cited – Academic Literature & News Articles

Behavioural Science-Informed Strategies for Increasing COVID-19 Vaccine Uptake in Children and Youth. (2021). Ontario COVID-19 Science Advisory Table. https://doi.org/10.47326/ocsat.2021.02.50.1.0

Betsch, C., Schmid, P., Heinemeier, D., Korn, L., Holtmann, C., & Böhm, R. (2018). Beyond confidence: Development of a measure assessing the 5C psychological antecedents of vaccination. *PLOS ONE*, *13*(12), e0208601. https://doi.org/10.1371/journal.pone.0208601

Biasio, L. R. (2017). Vaccine hesitancy and health literacy. *Human Vaccines & Immunotherapeutics*, *13*(3), 701–702. https://doi.org/10.1080/21645515.2016.1243633

Calls_to_action_english2.pdf. (n.d.). Retrieved April 2, 2022, from https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/indigenouspeople/aboriginal-peoples-documents/calls_to_action_english2.pdf

Canada, H. (2020, December 8). *COVID-19 Vaccines: Authorized vaccines* [Navigation page - topic page]. https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/drugs-vaccines-treatments/vaccines.html

Chapter 6: Why Openness in Education? (n.d.). Retrieved April 2, 2022, from https://library.educause.edu/resources/2012/5/chapter-6-why-openness-in-education

- Chinese authorities say unvaccinated parents can't send children to school. (2021, July 16). *BBC News*. https://www.bbc.com/news/world-asia-china-57859356
- COVID-19: Popularity plummets for Dr. Bonnie Henry, Adrian Dix: Poll. (n.d.). Vancouversun. Retrieved April 3, 2022, from https://vancouversun.com/news/local-news/covid-19popularity-plummets-for-dr-bonnie-henry-adrian-dix-poll

- Credible Sources to Share. (n.d.). ScienceUpFirst. Retrieved April 3, 2022, from https://www.scienceupfirst.com/learn-more/
- Cyril, S., Smith, B. J., Possamai-Inesedy, A., & Renzaho, A. M. N. (2015). Exploring the role of community engagement in improving the health of disadvantaged populations: A systematic review. *Global Health Action*, *8*, 10.3402/gha.v8.29842. https://doi.org/10.3402/gha.v8.29842
- Dubé, E., Laberge, C., Guay, M., Bramadat, P., Roy, R., & Bettinger, J. A. (2013). Vaccine hesitancy. *Human Vaccines & Immunotherapeutics*, 9(8), 1763–1773. https://doi.org/10.4161/hv.24657
- *Fighting fake news in the classroom*. (n.d.). Https://Www.Apa.Org. Retrieved April 3, 2022, from https://www.apa.org/monitor/2022/01/career-fake-news
- "Get the shot, now!" Disentangling content-related and social cues in physician-patient communication-Benjamin Brummernhenrich, Regina Jucks, 2019. (n.d.). Retrieved April 2, 2022, from https://journals.sagepub.com/doi/full/10.1177/2055102919833057
- Goldenberg, M. J. (2021). Vaccine hesitancy: Public trust, expertise, and the war on science. University of Pittsburgh Press.
- Gomez Zermeño, M., & Aleman de la Garza, L. (2020). Open laboratories for social innovation:
 A strategy for research and innovation in education for peace and sustainable
 developmentSustainable development is an issue of high relevance for all countries, and
 universities play a fundamental role in promotin. *International Journal of Sustainability in Higher Education, ahead-of-print*. https://doi.org/10.1108/IJSHE-05-2020-0186

- Government of Canada, N. S. and E. R. C. of C. (2021, March 3). NSERC Encouraging vaccine confidence in Canada. https://www.nserc-crsng.gc.ca/Promoter-Promotion/VaccineConfidence_eng.asp
- Government of Canada, S. C. (2020, October 22). *Primary health care providers, 2019*. https://www150.statcan.gc.ca/n1/pub/82-625-x/2020001/article/00004-eng.htm

Grasso, O. G., Kiko Llaneras, Mariano Zafra, Daniele. (2021, December 15). *Guide to Spain's Covid-19 vaccination drive for children*. EL PAÍS English Edition.
https://english.elpais.com/society/2021-12-15/guide-to-spains-covid-19-vaccination-drive-for-children.html

- Griffith, J., Marani, H., & Monkman, H. (2021). COVID-19 Vaccine Hesitancy in Canada:
 Content Analysis of Tweets Using the Theoretical Domains Framework. *Journal of Medical Internet Research*, 23(4), e26874. https://doi.org/10.2196/26874
- Hanushek, E. A., & Woessmann, L. (n.d.). The Economic Impacts of Learning Losses. 24.

Health Literacy Tool Shed. (n.d.). Retrieved April 3, 2022, from

https://healthliteracy.bu.edu/aahls

Herd immunity and COVID-19 (coronavirus): What you need to know. (n.d.). Mayo Clinic. Retrieved April 3, 2022, from https://www.mayoclinic.org/diseasesconditions/coronavirus/in-depth/herd-immunity-and-coronavirus/art-20486808

Home. (n.d.). 19 to Zero. Retrieved April 3, 2022, from https://www.19tozero.ca

Immunization Primary and Community Care Mapping (immPACC). (2021). *COVID-19 Immunization Toolkit*. Retrieved April 3, 2022, from

https://covidtoolkit.ca/immunization-primary-and-community-care-mapping-immpacc/

- *IMPACT : Canadian Immunization Monitoring Program, ACTive* | *immunizecanada*. (2021). Retrieved April 3, 2022, from https://immunize.ca/resources/impact-canadianimmunization-monitoring-program-active
- International standards for lobbying regulation. (2015). Retrieved April 3, 2022, from https://lobbyingtransparency.net/
- Jang, H., Rempel, E., Roth, D., Carenini, G., & Janjua, N. Z. (2021). Tracking COVID-19 Discourse on Twitter in North America: Infodemiology Study Using Topic Modeling and Aspect-Based Sentiment Analysis. *Journal of Medical Internet Research*, 23(2), e25431. <u>https://doi.org/10.2196/25431</u>
- Kennedy, J. (2020). Vaccine Hesitancy: A Growing Concern. *Pediatric Drugs*, 22(2), 105–111. https://doi.org/10.1007/s40272-020-00385-4
- Kumar, D., Chandra, R., Mathur, M., Samdariya, S., & Kapoor, N. (2016). Vaccine hesitancy:
 Understanding better to address better. *Israel Journal of Health Policy Research*, 5(1), 2.
 https://doi.org/10.1186/s13584-016-0062-y
- Lavigne, S. E. (n.d.). Vaccine hesitancy: Root causes and possible solutions. *Canadian Journal of Dental Hygiene*, *55*(2), 79–82.
- MacDonald, N. E. & SAGE Working Group on Vaccine Hesitancy. (2015). Vaccine hesitancy: Definition, scope and determinants. *Vaccine*, 33(34), 4161–4164. https://doi.org/10.1016/j.vaccine.2015.04.036
- Machingaidze, S., & Wiysonge, C. S. (2021). Understanding COVID-19 vaccine hesitancy. *Nature Medicine*, 27(8), 1338–1339. https://doi.org/10.1038/s41591-021-01459-7

- Madhi, S. A., & Rees, H. (2018). Special focus on challenges and opportunities for the development and use of vaccines in Africa. *Human Vaccines & Immunotherapeutics*, 14(10), 2335–2339. https://doi.org/10.1080/21645515.2018.1522921
- Martin, L. R., & Petrie, K. J. (2017). Understanding the Dimensions of Anti-Vaccination
 Attitudes: The Vaccination Attitudes Examination (VAX) Scale. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine*, 51(5), 652–660.
 https://doi.org/10.1007/s12160-017-9888-y
- Muhajarine, N., Adeyinka, D. A., McCutcheon, J., Green, K. L., Fahlman, M., & Kallio, N.
 (2021). COVID-19 vaccine hesitancy and refusal and associated factors in an adult population in Saskatchewan, Canada: Evidence from predictive modelling. *PLOS ONE*, *16*(11), e0259513. https://doi.org/10.1371/journal.pone.0259513
- Murphy, R. (2022, January 5). Rex Murphy: Justin Trudeau's blind hatred of anti-vaxxers. *National Post*. https://nationalpost.com/opinion/rex-murphy-justin-trudeaus-blind-hatred-of-anti-vaxxers
- News ·, A. C. · C. (2022, March 25). Winnipeg students learning the skills needed to deal with online misinformation, disinformation / CBC News. CBC. <u>https://www.cbc.ca/news/canada/manitoba/winnipeg-students-learning-the-skills-needed-to-deal-with-online-misinformation-disinformation-1.6396749</u>

News ·, K.D.C. (2020, October 5). Calls for cultural safety training for health-care staff renewed after Joyce Echaquan's death | CBC News. CBC. https://www.cbc.ca/news/indigenous/cultural-safety-training-joyce-echaquan-1.57484

- News ·, C. B. C. (2013, July 31). Aboriginal children used in medical tests, commissioner says / CBC News. CBC. <u>https://www.cbc.ca/news/politics/aboriginal-children-used-in-medical-</u> tests-commissioner-says-1.1318150
- Norman, A. (2019). Ask me about my uterus: A quest to make doctors believe in women's pain. PublicAffairs.
- Oduwole, E. O., Pienaar, E. D., Mahomed, H., & Wiysonge, C. S. (2019). Current tools available for investigating vaccine hesitancy: A scoping review protocol. *BMJ Open*, 9(12), e033245. https://doi.org/10.1136/bmjopen-2019-033245
- Porter, C. (2020, June 5). The Top Doctor Who Aced the Coronavirus Test. *The New York Times*. <u>https://www.nytimes.com/2020/06/05/world/canada/bonnie-henry-british-</u> columbia-coronavirus.html

Qin, C. X., Moore, L. W., Anjan, S., Rahamimov, R., Sifri, C. D., Ali, N. M., Morales, M. K., Tsapepas, D. S., Basic-Jukic, N., Miller, R. A., van Duin, D., Santella, R. N., Wadei, H. M., Shah, P. D., Gage, N., Malinis, M., Aslam, S., Todesco, E., Werbel, W. A., ... Segev, D. L. (2021). Risk of Breakthrough SARS-CoV-2 Infections in Adult Transplant Recipients. *Transplantation*, *105*(11), e265–e266. https://doi.org/10.1097/TP.0000000000003907

- Science / Building Student Success—B.C. Curriculum. (n.d.). Retrieved April 3, 2022, from https://curriculum.gov.bc.ca/curriculum/science
- *SitRep_K-12_February2022.pdf.* (n.d.). Retrieved April 2, 2022, from http://www.bccdc.ca/Health-Info-

Site/Documents/COVID_sitrep/K12_Situation_Report/SitRep_K-12_February2022.pdf

- Society, C. P. (n.d.). *Surveillance / Canadian Paediatric Society*. Retrieved April 3, 2022, from https://cps.ca/en/impact
- Spain's Galicia to make Covid vaccine compulsory and fine those who refuse it up to €60K.
 (2021, February 23). *The Local Spain*. https://www.thelocal.es/20210223/spains-galicia-to-make-covid-vaccine-compulsory-and-fine-those-who-refuse-it-up-to-60k/
- Stevenson, A., & Li, C. (2021, December 6). In Its War on Covid-19, China Calls on 'Little Inoculated Warriors.' *The New York Times*.

https://www.nytimes.com/2021/12/06/business/china-covid-vaccine-children.html

- Svendsen, M. T., Bak, C. K., Sørensen, K., Pelikan, J., Riddersholm, S. J., Skals, R. K., Mortensen, R. N., Maindal, H. T., Bøggild, H., Nielsen, G., & Torp-Pedersen, C. (2020). Associations of
 - health literacy with socioeconomic position, health risk behavior, and health status: A large national population-based survey among Danish adults. *BMC Public Health*, 20(1), 565. https://doi.org/10.1186/s12889-020-08498-8
- UBC CCEL on Instagram: "*O*Health Equity & Vaccine Hesitancy *O* The Covid-19 pandemic has highlighted existing inequities in health. Learn more about health equity, " (n.d.). Instagram. Retrieved April 2, 2022, from https://www.instagram.com/p/CWrXZp4Bibj/
- Wallace, B. I., Kenney, B., Malani, P. N., Clauw, D. J., Nallamothu, B. K., & Waljee, A. K.(2021). Prevalence of Immunosuppressive Drug Use Among Commercially Insured US

Adults, 2018-2019. JAMA Network Open, 4(5), e214920.

https://doi.org/10.1001/jamanetworkopen.2021.4920

WHO WE ARE. (n.d.). 19 to Zero. Retrieved April 3, 2022, from https://www.19tozero.ca/who-

we-are

Willis, D. E., Andersen, J. A., Bryant-Moore, K., Selig, J. P., Long, C. R., Felix, H. C., Curran,

G. M., & McElfish, P. A. (2021). COVID-19 vaccine hesitancy: Race/ethnicity, trust, and fear. *Clinical and Translational Science*, *14*(6), 2200–2207.

https://doi.org/10.1111/cts.13077

Works Cited - Conferences and Interviews

Disclaimer: Due to the private nature of declaring vaccinations, some interviewees preferred to stay anonymous. We were privileged to interact with researchers, industry professionals, and decision-making parents and listen to diverse perspectives.

Blakney, A. (2022). UBC VLC x LTS Let's Talk Vaccines. Vancouver, BC; Let's Talk Science.

- Dubé, E. (2021). Vaccine Hesitancy in the Information Age. Vancouver, BC; UBC Department of Microbiology and Immunology.
- Gingras, A. (2021). Vaccines 101: The Role of Vaccines in the COVID-19 Pandemic. In *Vaccines 101*. Vancouver, BC; UBC Vaccine Literacy Club.
- Golubeva, D. (2022). UBC VLC x LTS Let's Talk Vaccines. Vancouver, BC; Let's Talk Science.
- Gommerman, J. (2021). Vaccines 101: The Role of Vaccines in the COVID-19 Pandemic. In *Vaccines 101*. Vancouver, BC; UBC Vaccine Literacy Club.
- Haans, J. (2022). UBC VLC x LTS Let's Talk Vaccines. Vancouver, BC; Let's Talk Science.
- Huyser, K. (2021). Vaccines 101: The Role of Vaccines in the COVID-19 Pandemic. In *Vaccines 101*. Vancouver, BC; UBC Vaccine Literacy Club.

Ng, D. (2022). UBC VLC x LTS Let's Talk Vaccines. Vancouver, BC; Let's Talk Science.

- King, D. (2021). Vaccine Hesitancy in the Information Age. Vancouver, BC; UBC Department of Microbiology and Immunology.
- Muhajarine, N. (2021). Vaccines 101: The Role of Vaccines in the COVID-19 Pandemic. In *Vaccines 101*. Vancouver, BC; UBC Vaccine Literacy Club.
- Sadarangani, M. (2021). Vaccine Hesitancy in the Information Age. Vancouver, BC; UBC Department of Microbiology and Immunology.
- Sankar, K. (2021). Vaccine Hesitancy in the Information Age. Vancouver, BC; UBC Department of Microbiology and Immunology.
- Interviewee 1. Graduate student at UBC MBIM Vaccine Hesitancy Symposium (2021)
- Interviewee 2. Staff at Pacific Immigration Resources Society (2022)
- Interviewee 3. Researcher at BC Children's Hospital Research Institute (2022)
- Interviewee 4. Researcher at BC Children's Hospital Research Institute (2022)
- Interviewee 5. Associate Professor of Teaching at UBC Department of Anesthesiology,
- Pharmacology, & Therapeutics (2022).
- Interviewee 6. Parent residing in the lower mainland (2022).
- Interviewee 7. Parent residing in the lower mainland (2022).
- Interviewee 8. Parent residing in the lower mainland (2022).
- Interviewee 9. Parent residing in Vancouver Island (2022).

Appendix 1 – Glossary

Anti-vaxxer - An informal and emotionally-loaded term with strong negative connotations describing someone who is opposed to vaccinations, often vocally.

Agency - A fundamental dimension of social perception and health psychology, agency focuses on the self. In terms of vaccinations, individuals who prioritize agency evaluate their personal risks and benefits of receiving the COVID-19 vaccines (e.g. lowering risks of severe COVID-19, securing a vaccine passport to visit restaurants). Agency is directly related to communion.

Big Tech - The most dominant technology companies in the global marketplace accessibly via social media platforms such as Facebook, Instagram, Twitter, YouTube. Misinformation can be widely shared through these above platforms if incentivized.

Big Pharma - Major multinational pharmaceutical companies collectively as an industry (e.g. Johnson & Johnson, Pfizer) built on profit-driven models, rather than people-driven.

Calculation - The individual engagement in extensive information searching, and objective evaluation of risks of infection versus vaccination. One of the "Five C's" that determine vaccine hesitancy and uptake.

Confidence - The level of trust in effectiveness and safety, the systems which regulate and deliver vaccines, and the motives of those who establish and implement vaccine policies. One of the "Five C's" that determine vaccine hesitancy and uptake.

Collective Responsibility - The extent to which an individual is willing to protect others by personally receiving vaccinations, to contribute to herd immunity. One of the "Five C's" that determine vaccine hesitancy and uptake.

Complacency - The perception that risks of vaccine-preventable diseases are low, rendering vaccines nonurgent and unnecessary. One of the "Five C's" that determine vaccine hesitancy and uptake.

Communion - A fundamental dimension of social perception and health psychology, communion focuses on the collective. In terms of vaccinations, individuals who prioritize communion evaluate their community's risks and benefits (e.g. protecting vulnerable people such as family members on immunosuppressive drugs). Communion is directly related to agency.

Convenience - The availability and accessibility of vaccines. One of the "Five C's" that determine vaccine hesitancy and uptake.

Disinformation - Information intended to mislead, bias, or deceive.

Epistemic trust - The ability to evaluate and appraise incoming information in a social context as accurate, reliable, and personally relevant, in order for the information to be incorporated into personal schemas and knowledge domains.

Health Canada - The federal level of government in Canada that approves vaccines, and provides resources and supports Canadians in maintaining and improve health, while respecting personal choices and circumstances that arise.

Herd Immunity - Or community immunity. Herd immunity protects the whole community by reducing disease spread and transmission, when a sufficient proportion of a community (or herd) develops immunity. It is critical in a COVID-19 context because many vulnerable individuals rely on herd immunity to be protected.

Immunization - The process of acquiring immunity to a pathogen, often following vaccination. Often used interchangeably with "vaccination", although it is more specific to the physiological responses to developing immunity.

Infodemic - Defined according to the WHO, an infodemic is an excess of information with false or misleading information through online and print media, circulating overtop a disease outbreak. It encourages risk-taking behaviours that jeopardize individual and community health.

Misinformation - False or misleading information.

Open Science - The movement to make scientific research and its dissemination accessible to members of the public and all other researchers in the field. Open science is concept of creating transparent and accessible knowledge networks, creating increased transparency, participation, cooperation, accountability, and reproducibility for research.

Provincial Health Officer (PHO) - Outlined in the Public Health Act of BC, the PHO is the senior public health official for BC responsible for monitoring the provincial populational health, and providing independent advice to the ministers and public officials on public health issues.

Scientism - The philosophical view that only science can render truth about the universe, rather than viewing 'science' as a study of nature and the knowledge obtained through this study.

Tri-Council of Research - Composed of the Canadian Institutes of Health Research (CIHR), Social Sciences and Humanities Research Council (SSHRC), and the Natural Sciences and Engineering Research Council (NSERC), the Tri-Council of Research are three federal bodies that fund ongoing research in Canada.

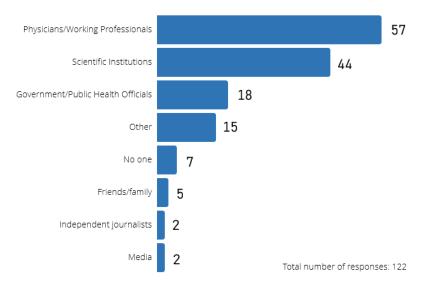
Vaccination - The process of giving or receiving a vaccine. A vaccine can be administered through a needle, a nasal spray, or other formats. There are currently six Health Canada approved COVID-19 vaccines.

Appendix 2 – Research Ethics

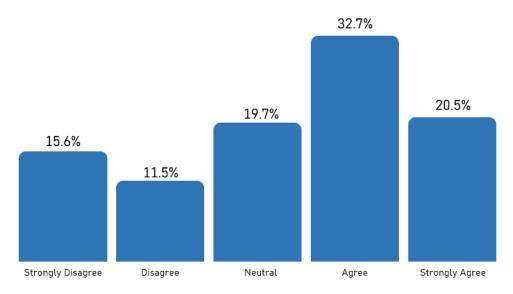
To ensure our research was conducted ethically, members of our group completed the TCPS applied research guidelines from the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2), consulted with the UBC Centre for Community Engaged Learning, and adopted several principles when creating and disseminating surveys, including Informed Consent, Confidentiality and Anonymity, and Feedback and Transparency.



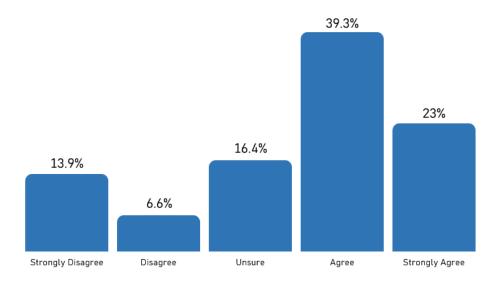
Who do you trust the most for information regarding COVID-19 Vaccines?



Do you believe vaccine producers are interested in your health?



Do you trust pharmaceutical companies to provide safe and effective vaccines?



Have logistical factors (i.e., distance, clinic hours, time needed to get to clinic, wait at the clinic, or other costs) caused a delay for you or your child when getting vaccinated?

