# ABSTRACT

## Objectives

This study set out to test whether and how the Canadian public health workforce differed from the Canadian general population in their political attitudes, worldviews and policy preferences related to the COVID19 pandemic.

## Methods

Nearly identical surveys were fielded to the Canadian public health workforce through leading public health associations and to the general population through a commercial online quota sample.

## Results

The Canadian public health workforce demonstrates systematically more left-wing political, defines public health problems more in social terms. The public health workforce somewhat preferred keeping schools open to allowing more COVID19 transmission while the general population had the opposite preference. The public health workforce strongly preferred

## Conclusion

## INTRODUCTION

In the following, we present the results of the first survey of the demographic characteristics and political attitudes of a sample of Canada’s public health workforce. There are two objectives. The first is to improve public understanding of the demographic characteristics of Canada’s public health workforce. The Chief Public Health Officer identified limited knowledge in this area as an important problem in her 2021 annual report (2021). The second is to improve our understanding of the tensions that exist for Canadian public health officials as technical experts working in highly politicized environments. Specifically, public health officials are expected to provide expert, non-partisan and non-political advice to non-expert, but elected politicians.

The field of public health has been entangled with politics and ideology from its inception. Early theories of the propagation of disease and illness were selected and discarded based on the type of social reform they implicated (Hamlin 1995). Efforts to expand water fluoridation and to reduce tobacco use generated concerns about public health initiatives reducing individual liberties (Beauchamp 1980; Gamson 1961; Carstairs and Elder 2008). While these initiatives have strong ethical foundations in that they seek to maximize welfare and distribute life chances equally, these are not the only ethical commitments people adhere to in society. This necessarily engenders value conflict and politics, which public health must take seriously to be successful (Fafard, Cassola, and de Leeuw 2022)/

To develop our hypotheses, we relied on two theoretical perspectives that have been used to study the intersection of politics, ideology, science and public health. First, we start with a theory of risks, developed by Douglas and Wildavsky (1983). This theory, rooted in functional anthropology argues that risks serve the social purpose of reinforcing preferred forms of social organization. Groups must make fundamental choices about the degree to which they will be organized on a hierarchical-egalitarian dimension and on an individualist-collectivist dimension. This theoretical approach has been used extensively to study public opinion and regulatory forms in the fields of water fluoridation (Perrella and Kiss 2015), the HPV vaccine (Kahan et al. 2010) and drinking water quality (Koehler et al. 2018).

In addition, we draw on previous studies of public health as a profession to test hypotheses about whether there are political divisions *within* public health. Tengland (2010) argues that there are two distinct goals within public health: disease prevention and health promotion. In his eyes, disease prevention, had a narrow and medical conception of health as the absence of disease while the latter had a more holistic, positive conception of health that implied social and political reform for egalitarian ends. Given the foregoing, we tested four primary hypotheses.

H1: The Canadian public health workforce will demonstrate more egalitarian and less individualistic attitudes than the general population.

H2: The Canadian public health workforce will be divided in worldviews between those in health promotion positions and those in other public health positions.

H3: The public health workforce will prefer stricter COVID19 measures than the general population

# METHODS

We developed a questionnaire with input and approval from the Canadian Public Health Association. Because there is no publicly available sampling frame from which we could contact public health professionals, we used the membership of Canada’s leading public health associations as a proxy.[[1]](#footnote-2) Specifically, the CPHA, the provincial public health associations (including Santé Publique du Québec), the Public Health Physicians of Canada and the Canadian Association of Public Health Inspectors distributed invitations to participate in the survey to their members. At the same time, a nearly identical survey was fielded to a representative online panel of Canadian respondents. Here, quota sampling was used to match the gender and regional distribution of the sample to the most recent population estimates provided by Statistics Canada. The survey was fielded between February 16th and March 19th, 2021, at the end of the second wave of the COVID19 pandemic

Obtaining the sample of the public health workforce was not straightforward. The survey was fielded in the middle of the pandemic which meant that potential respondents were occupied with more important matters and less likely to respond. Distributing the invitation to participate through the public health associations meant that it was not always clear how many participants received the invitation and how many invitations were distributed, making proper calculations of a response rate impossible. Moreover, because there are no other publicly available studies of the population of Canada’s public health workforce (a gap which this study seeks to fill), it is nearly impossible to validate the representativeness of this portion of the study. However, the CPHA did provide a distribution of provincial membership which can be compared with the sample as a validation strategy. Overall, the regional distribution of respondents reporting membership in the CPHA mirrors the regional distribution of CPHA members (40% of the CPHA’s members and 39% of the sample’s CPHA respondents are from Ontario). The only significant deviation is in the west (35% of the CPHA’s membership but 44% of the sample’s CPHA respondents are from Manitoba west).

By contrast, sampling the general population was straightforward with minor deviations from the demographics of the general population. Overall, our sample of the general population is older than the general population (27% of the sample but 17% of the population are over 65), richer (26% of the sample but only 8% of the population report household income greater than $100,000), less francophone (10% of the sample but 21% of the census report French as their mother tongue), more rural (32% of the sample but only 19% of the population report living in a rural area) and much more educated (41% of the sample but only 19% of the general population report having a university degree). While there are some significant differences on these demographic measures, our measure of sample respondents’ intention to get the COVID19 vaccine closely mirrored other reports from the same time. 77% (95% CI +/-1.8%) of the study sample of the general population reported intending to get vaccinated, close to two other survey which reported 81% (95%CI +/- 3%) and 82% (No CI reported).[[2]](#footnote-3)

# RESULTS

Our first analysis is to compare the sample of the Canadian public health workforce with census data of Canada’s workforce. To do so, we gathered comparable demographic data from the 2021 census data for Canadians reporting any employment income, providing information as to how the public health workforce might differ from the overall Canadian workforce. The results are in Table 1.

*Table 1*

Overall, our sample of the public health workforce is more female (75% compared to 48% of the general workforce), more educated (96% have a university degree or more compared to 41% in the general workforce) and wealthier (67% with incomes over $100,000 compared with 49% in the general workforce) than our sample of the general population.

To test H1, that public health respondents will hold more egalitarian and less individualistic worldviews than the general population, we asked respondents a series of questions to measure both their self-reported ideology on a single-dimension left-right scale as well as a battery of questions designed to measure their commitments to egalitarianism, hierarchism and individualism. Figure 1 shows the average score on each item for the general population and the public health sample, where each item’s responses have been scaled from 0 to 1 and such that a 1 represents a typically right-wing (hierarchical, anti-egalitarian or individualistic) position and 0 a typically left-wing (anti-hierarchical, egalitarian or communitarian) position. Significant differences are evident on every item. The public health workforce demonstrates solidly more left-wing ideological commitments and worldviews than the general population. In separate regressions reported in the supplementary material, these differences remained after introducing demographic controls for age, gender, income, education, and rural-urban residency. This suggests H1 is confirmed.

Figure 1

## Public Health Preferences By Public Health Field

Next we test H2, that there are differences *within* Canada’s public health workforce. Survey respondents in the public health survey were invited to indicate the focus of their position. Respondents could select from four options: Health promotion (e.g., smoking cessation, healthy eating, social determinants of health), Health protection (e.g., surveillance and outbreaks, water quality protection, food quality protection), Epidemiology (e.g. disease surveillance) and emergency preparedness and response. The vast majority (83%) of our respondents were in the first two fields, health promotion or health protection. As emphasized in the introduction, we expect that those in the field of health promotion would have more left-wing positions because of health promotion’s tendency to define problems and solutions in terms of social reforms. First, we tested for differences in ideology and worldviews between those who selected health promotion as their field and all others. We used the same measures as to test H1. Results are in Figure 3. Here, it is again evident that there are differences in worldviews, with the largest differences being attitudes to stricter punishments, First Nations rights and a respect for authority. Public health workers who work in the field of health protection tend to have a more conservative ideology, are more in favour of free markets and support a greater deference to authority than those who work in health promotion.That said, while those in public health fields other than health promotion are more conservative than those in health promotion, they are hold generally left-wing views. Overall, however, they tend to be left-wing; they only fall on the conservative side of the spectrum (average scores greater than 0.5) on two of the 11 items.

It is also perhaps noteworthy that the two items where the two groups of public health professionals agree are on the need to limit choices to protect people and in opposition to the belief that job creation should be left to the private sector. The former might be seen to be a fundamental premise of all public health initiatives (Wiley, Berman, and Blanke 2013; Jones and Bayer 2007). The latter is consistent with European evidence that there exists a divide between high-skilled public and private sector professsionals where the former support more interventionist and redistributive economic policy than do the latter (Tepe 2012).

Figure 3

## Policy Preferences and Trade-Offs Controlling for Demographics and Ideology

While there are discernible differences in worldviews, ideology and issue definition between the general population and the public health workforce and within the public health workforce, it remains to be seen whether there are differences at the level of attitudes toward specific policies. To test this, we examine correlates of support for a series of policy recommendations that emerged in the COVID19 pandemic, namely, mandatory vaccinations, fines for people not wearing masks and the forced closure of bars and restaurants. Respondents were invited to indicate their agreement, from strongly disagree to strongly agree. The results are in Figure 5 and show that overall, despite differences in worldviews and ideology, there was a striking alignment in policy preferences between the public health sample and the sample of the general population. The only difference between the two groups was perhaps counter-intuitive and contrary to H4. Specifically, the general population was more likely to support mandatory vaccines than were the public health workforce.

Figure 5

We tested support for COVID19 mitigation measures in a second set of questions presented which required respondents to choose between two alternatives. In order, respondents asked to choose between a COVID19 mitigation strategy that involved costs to the population or whether y preferred to avoid those costs, accepting a greater spread of COVID19. Respondents were asked to choose between COVI19 mitigation and other desirable outcomes, specifically, mitigating economic decline, providing reprieves from social isolation, reprieves from social isolation for seniors or ensuring that schools remained open. Forced choice survey questions such as these are often preferred as measures to avoid problems of agreement bias where respondents are more likely to simply agree with statements presented to them (Schuman and Presser 1996).



, Here starker differences emerge, specifically in relation to the question of stopping the decline of the economy or to keep schools open. Two findings are notable. First, public health professionals are significantly more likely to choose to prioritize stopping the transmission of COVID19 at the expense of economic decline, although they were *more* likely to prioritize keeping schools open than to stop transmission of COVID19. Thus, in one domain, public health professionals preferred to privilege stopping COVID19 transmission, but in another domain, they preferred to accept the risk of greater transmission. The evidence here permits us to speak of values dictating preferred trade-offs because when self-reported ideology is entered into the model for choosing between economic decline and stopping transmission of COVID19, the public health officials do not differ from the general population. This suggests that public health professionals preference for stopping COVID19 at the expense of economic activity is largely a product of their own ideology.

Second, although there is some evidence that public health professionals were more inclined to make different trade-offs, overall, the effect is much smaller than the observed effect of self-reported ideology. In the full model for keeping schools open, the coefficient for public health respondents was 0.13 (SE 0.02). By contrast, the coefficient for ideology, scaled from 0 to 1, was 0.32 (SE 0.02).

This analysis has both strengths and weaknesses. To our knowledge, this is the first attempt to survey the worldviews and ideology of the public health workforce in Canada. However, there are several limitations to our analysis. First, the sample size of public health professionals was rather small, which may make it hard to detect differences. On the other hand, one of the reasons for the small sample size was that it was fielded at a time when public health professionals in Canada were under extreme pressure. In some ways, this could be seen as much as a feature as a bug. Public health respondents and the general population were surveyed about their views on public health measures *during* a public health crisis. Second, because we know so little about the size and composition of the public health workforce it was impossible to reach out to them directly. Therefore we partnered with public health associations to distribute the survey to their members. However, membership is these associations is not mandatory and some groups, physicians, public health inspectors, are likely underrepresented in our sample of the public health workforce.

# CONCLUSION

# DATA AVAILABILITY

In keeping with best practices for research reproducibility, a dataset containing anonymized individual responses and reproducible code producing these analyses is available at http://github.com/lispop/public-health-canada.html

# REFERENCES

Bachrach, Peter, and Morton S. Baratz. 1962. “Two Faces of Power.” *American Political Science Review* 56 (04): 947–52. https://doi.org/10.2307/1952796.

Baumgartner, Frank R, and Bryan D Jones. 2010. *Agendas and Instability in American Politics, Second Edition*. University of Chicago Press. http://books.google.ca/books?id=0WtEOcK\_Y8wC&printsec=frontcover&dq=intitle:Agendas+and+instability+in+American+politics&hl=&cd=1&source=gbs\_api.

Beauchamp, D E. 1980. “Public Health and Individual Liberty.” *Annual Review of Public Health* 1 (1): 121–36. https://doi.org/10.1146/annurev.pu.01.050180.001005.

Carstairs, Catherine, and Rachel Elder. 2008. “Expertise, Health, and Popular Opinion: Debating Water Fluoridation, 1945–80.” *Canadian Historical Review* 89 (3): 345–71. https://doi.org/10.3138/chr.89.3.345.

Chief Public Health Officer of Canada. 2021. “A Vision To Transform Canada’s Public Health System: The Chief Public Health Offcer of Canada’s Report on the State of Public Health in Canada 2021.” Ottawa: Public Health Agency of Canada. https://www.canada.ca/content/dam/phac-aspc/documents/corporate/publications/chief-public-health-officer-reports-state-public-health-canada/state-public-health-canada-2021/cpho-report-eng.pdf.

Doan, Alesha, and Dan Wood. 2003. “The Politics of Problem Definition: Applying and Testing Threshold Models.” *American Journal of Political Science* 47 (4): 640–53. https://doi.org/10.1111/1540-5907.00045.

Douglas, M, and A Wildavsky. 1983. *Risk and Culture: An Essay on the Selection of Technical and Environmental Dangers*. Berkely and Los Angeles, California: University of California Press. http://books.google.com/books?hl=en&lr=&id=rXrGbnMg63YC&oi=fnd&pg=PP8&dq=risk+and+culture&ots=dUZ8DsvOiO&sig=d\_RSJ6ExXZ64O4jrweLBB6Y-NDI.

Fafard, Patrick, Adèle Cassola, and Evelyne de Leeuw, eds. 2022. *Integrating Science and Politics for Public Health*. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-98985-9.

Gamson, William A. 1961. “The Fluoridation Dialogue: Is It an Ideological Conflict?” *The Public Opinion Quarterly* 25 (4): 526–37.

Hamlin, Christopher. 1995. “Finding a Function for Public Health: Disease Theory or Political Philosophy?” *Journal of Health Politics, Policy and Law* 20 (4): 1025–31. https://doi.org/10.1215/03616878-20-4-1025.

Jones, Marian Moser, and Ronald Bayer. 2007. “Paternalism & Its Discontents: Motorcycle Helmet Laws, Libertarian Values, and Public Health.” *American Journal of Public Health* 97 (2): 208–17. https://doi.org/10.2105/AJPH.2005.083204.

Kahan, D M, D Braman, G L Cohen, and J Gastil. 2010. “Who Fears the HPV Vaccine, Who Doesn’t, and Why? An Experimental Study of the Mechanisms of Cultural Cognition.” *Law and Human Behaviour* 34 (January): 501–16.

Kahan, Dan M, Hank Jenkins-Smith, and Donald Braman. 2011. “Cultural Cognition of Scientific Consensus.” *Journal Of Risk Research* 14 (2): 147–74. https://doi.org/10.1080/13669877.2010.511246.

Kiss, Simon, Erick Lachapelle, and Eric Montpetit. 2020. “Beyond Region and Ideology: Cultural Theory and Risk Perception in Canada.” *Canadian Journal of Political Science / Revue Canadienne de Science Politique*, April.

Koehler, Johanna, Steve Rayner, Jacob Katuva, Patrick Thomson, and Rob Hope. 2018. “A Cultural Theory of Drinking Water Risks, Values and Institutional Change.” *Global Environmental Change* 50 (May): 268–77. https://doi.org/10.1016/j.gloenvcha.2018.03.006.

Lachapelle, E, É Montpetit, and J P Gauvin. 2014. “Public Perceptions of Expert Credibility on Policy Issues: The Role of Expert Framing and Political Worldviews.” *Policy Studies Journal* 42 (4). https://doi.org/10.1111/psj.12073/pdf.

MacAulay, Margaret, Patrick Fafard, Adèle Cassola, and Michèle Palkovits. Forthcoming. “When Science Leads: Understanding ‘Follow the Science’ Rhetoric in Government Communication about COVID-19 Public Health Policy".” *Policy & Politics*.

Perrella, Andrea ML, and Simon J. Kiss. 2015. “Risk Perception, Psychological Heuristics and the Water Fluoridation Controversy.” *Canadian Journal of Public Health* 106 (4): e197–203.

Pralle, S. 2006. “Timing and Sequence in Agenda-Setting and Policy Change: A Comparative Study of Lawn Care Pesticide Politics in Canada and the US.” *Journal of European Public Policy*, January. http://www.informaworld.com/index/757932104.pdf.

———. 2009. “Agenda-Setting and Climate Change.” *Environmental Politics* 18 (5): 781–99.

Ripberger, J T, and H C Jenkins-Smith. 2011. “How Cultural Orientations Create Shifting National Security Coalitions on Nuclear Weapons and Terrorist Threats in the American Public.” *PS: Political Science & Politics* 44 (4): 716–19.

Ripberger, Joseph T., Kuhika Gupta, Carol L. Silva, and Hank C. Jenkins‐Smith. 2014. “Cultural Theory and the Measurement of Deep Core Beliefs Within the Advocacy Coalition Framework.” *Policy Studies Journal* 42 (4): 509–27. https://doi.org/10.1111/psj.12074.

Rochefort, David A., and Roger W. Cobb. 1994. *The Politics of Problem Definition: Shaping the Policy Agenda*. University Press of Kansas.

Savoie, Donald. 1999. *Governing From the Centre : The Concentration of Power in Canadian Politics*. Toronto: University of Toronto Press.

Schuman, Howard, and Stanley Presser. 1996. *Questions and Answers in Attitude Surveys: Experiments on Question Form, Wording, and Context*. SAGE.

Song, Geoboo. 2014. “Understanding Public Perceptions of Benefits and Risks of Childhood Vaccinations in the United States.” *Risk Analysis* 34 (3): 541–55. https://doi.org/10.1111/risa.12114.

Song, Geoboo, Carol L Silva, and Hank C Jenkins-Smith. 2014. “Cultural Worldview and Preference for Childhood Vaccination Policy.” *Policy Studies Journal* 42 (4): 528–54. https://doi.org/10.1111/psj.12076.

Tengland, Per-anders. 2010. “Health Promotion or Disease Prevention: A Real Difference for Public Health Practice?” *Health Care Analysis : HCA* 18 (3): 203–21. https://doi.org/10.1007/s10728-009-0124-1.

Tepe, Markus. 2012. “The Public/Private Sector Cleavage Revisited: The Impact of Government Employment on Political Attitudes and Behaviour in 11 West European Countries.” *Public Administration* 90 (1): 230–61. https://doi.org/10.1111/j.1467-9299.2011.01961.x.

Wiley, Lindsay F., Micah L. Berman, and Doug Blanke. 2013. “Who’s Your Nanny?: Choice, Paternalism and Public Health in the Age of Personal Responsibility.” *The Journal of Law, Medicine & Ethics* 41 (s1): 88–91. https://doi.org/10.1111/jlme.12048.

# Tables and Figures

| **Variable** | **Label** | **Value** | **Sample** | **Labour Force** |
| --- | --- | --- | --- | --- |
| Age | Age Category (2), R Age | 25-54 | 85 | 77 |
| Age | Age Category (2), R Age | 55-64 | 15 | 23 |
| High Income | Dichotomous variable, R household > $100,000 | Over $100,000 | 67 | 49 |
| High Income | Dichotomous variable, R household > $100,000 | Under $100,000 | 33 | 51 |
| Francophone | Dichotomous variable, R is francophone | Francophone | 6 | 22 |
| Francophone | Dichotomous variable, R is francophone | Not Francophone | 94 | 78 |
| Rural | Dichotomous variable, R lives in a rural neighborhood | Not Rural | 60 | 81 |
| Rural | Dichotomous variable, R lives in a rural neighborhood | Rural | 40 | 19 |
| Degree | Dichotomous variable, R has university degree | Degree | 96 | 31 |
| Degree | Dichotomous variable, R has university degree | No Degree | 4 | 69 |
| Female | Dichotomous variable, R is female | Female | 75 | 48 |
| Female | Dichotomous variable, R is female | Not Female | 25 | 52 |
| Province | Province of Residence | Alberta | 11 | 12 |
| Province | Province of Residence | British Columbia | 14 | 14 |
| Province | Province of Residence | Manitoba | 17 | 4 |
| Province | Province of Residence | New Brunswick | 2 | 2 |
| Province | Province of Residence | Newfoundland and Labrador | 1 | 1 |
| Province | Province of Residence | Nova Scotia | 3 | 3 |
| Province | Province of Residence | Ontario | 40 | 39 |
| Province | Province of Residence | Prince Edward Island | 2 | 0 |
| Province | Province of Residence | Quebec | 5 | 23 |
| Province | Province of Residence | Saskatchewan | 3 | 3 |

*Table 1:Demographic characteristics of public health sample with 2021 census data for Canadians with employment income.*

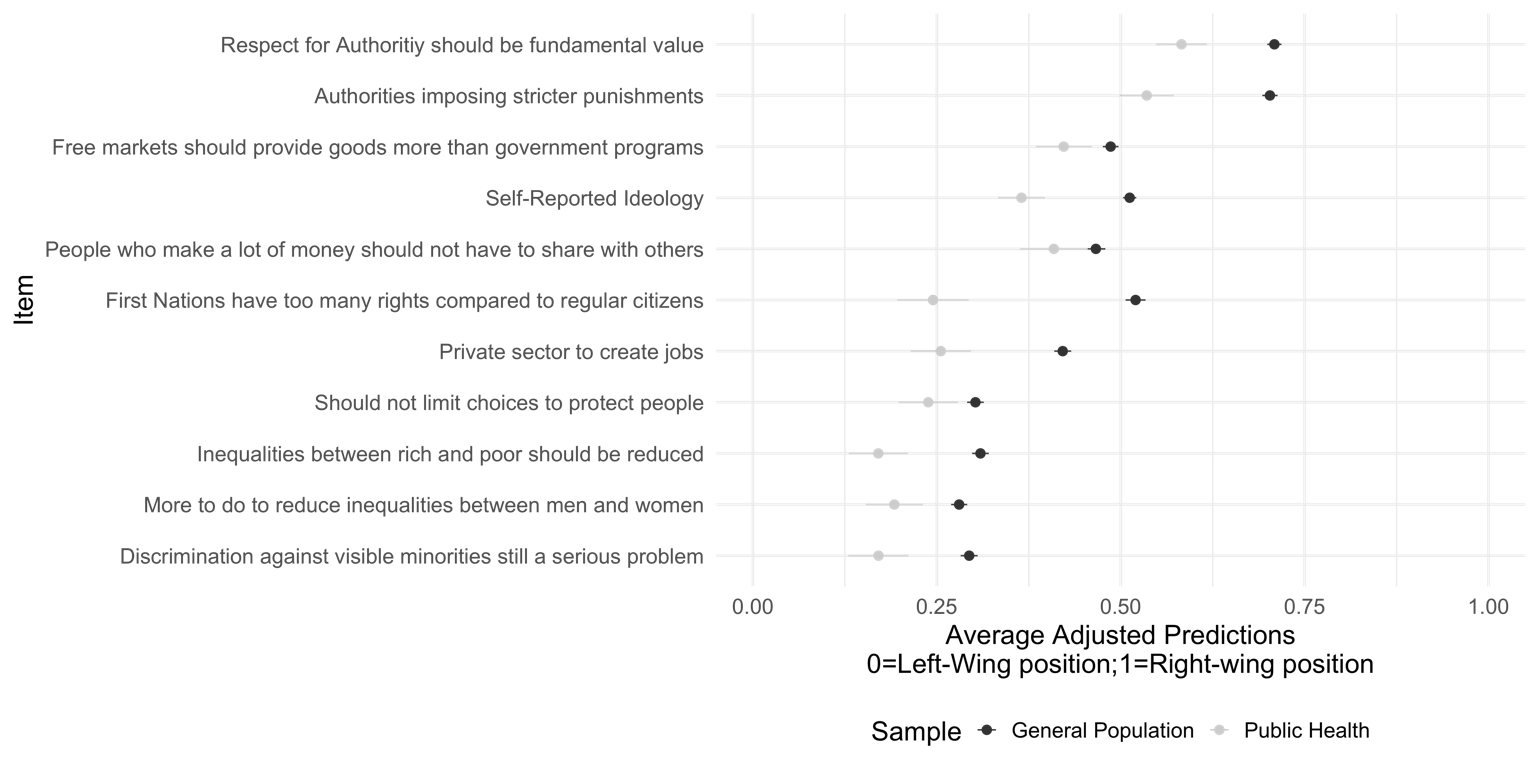


Figure 1: This figure shows the average score (with 95% CI) on the self-reported ideology and worldview measures for the general population and the public health sample. Scores have been re-scaled such that 1 is a conservative (pro-hierarchical, anti-egalitarian and anti-indvidualist)

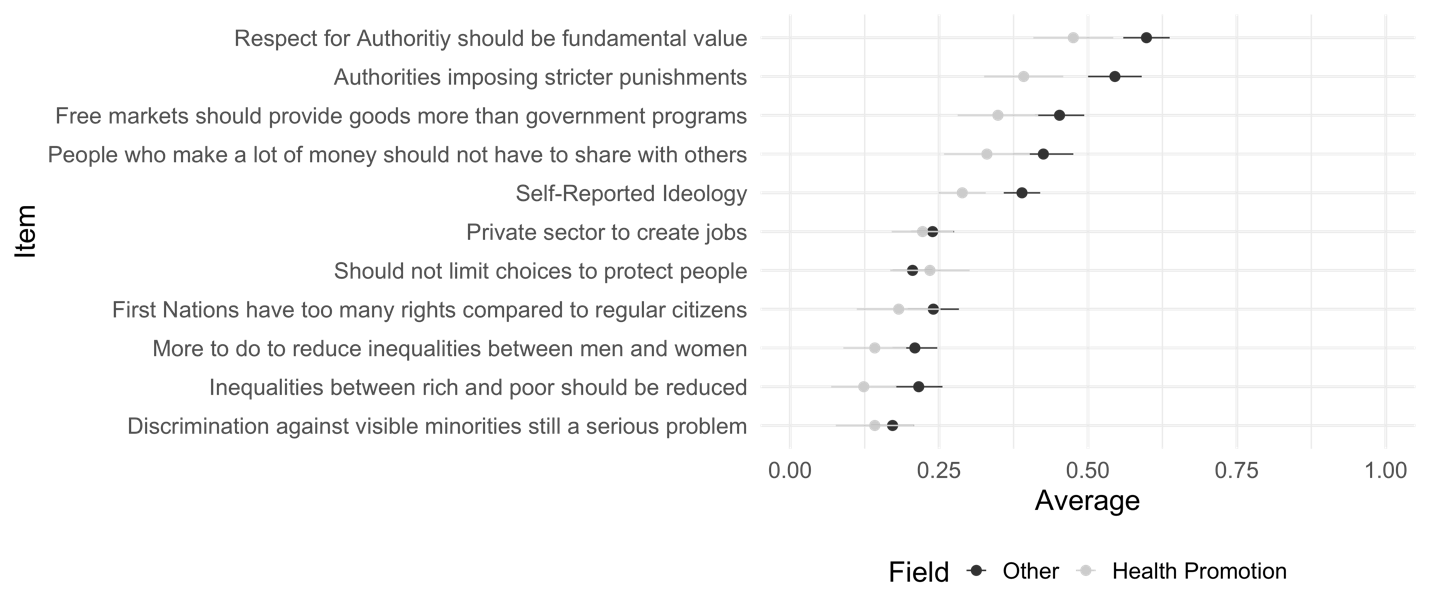


Figure 2: Ideology and worldviews by public health field, health promotion versus other (health protection, epidemiology and emergency preparedness). Item scores have been scaled 0 (liberal, egalitarian, anti-individualist, anti-hierarchical) to 1 (conservative, anti-egalitarian, hierarchical and individualist).

A graph with a bar chart

Description automatically generated

Figure 4: Most important public health problems after COVID19 by public health field (health promotion versus health protection, epidemiology and emergency preparedness). Statistics from Fisher’s Exact Test of differences are reported for those comparisons with differences significant at p<0.1.

A graph with white lines

Description automatically generated

Figure 5: Support for COVID19 intervention policies by sample, public health workforce versus general population. Responses scaled so that 1 indicates strong agreement with a stringent, anti-COVID19 policy. 0 indicates strong disagreement with a stringent anti-COVID19 policy.

|  | **Stop Economic Decline** | | | | **Reprieve from Social Isolation** | | | | **Keep schools open** | | | | **Reprieve from Social Isolation for Seniors** | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model 1** | **Model 2** | **Model 3** | **Model 4** | **Model 5** | **Model 6** | **Model 7** | **Model 8** | **Model 9** | **Model 10** | **Model 11** | **Model 12** | **Model 13** | **Model 14** | **Model 15** | **Model 16** |
| SamplePublic Health | -0.06\*\* | -0.08\*\*\* | -0.02 | -0.06\* | 0.00 | -0.02 | 0.03 | 0.01 | 0.09\*\*\* | 0.07\*\* | 0.12\*\*\* | 0.11\*\*\* | 0.02 | 0.00 | 0.04 | 0.00 |
|  | (0.02) | (0.02) | (0.02) | (0.03) | (0.02) | (0.02) | (0.02) | (0.03) | (0.02) | (0.02) | (0.02) | (0.03) | (0.02) | (0.02) | (0.02) | (0.03) |
| degree |  | -0.01 | 0.00 | 0.00 |  | 0.00 | 0.01 | 0.01 |  | 0.01 | 0.01 | 0.01 |  | -0.01 | -0.01 | -0.01 |
|  |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |
| rich |  | 0.02 | 0.01 | 0.01 |  | 0.01 | 0.00 | 0.00 |  | 0.02 | 0.01 | 0.01 |  | 0.01 | 0.00 | 0.00 |
|  |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |
| female |  | -0.02 | -0.01 | -0.01 |  | -0.02 | -0.01 | -0.01 |  | -0.03\* | -0.02 | -0.02 |  | 0.01 | 0.01 | 0.01 |
|  |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |
| old2 |  | -0.06\*\*\* | -0.06\*\*\* | -0.07\*\*\* |  | -0.07\*\*\* | -0.06\*\*\* | -0.07\*\*\* |  | -0.04\*\* | -0.04\*\* | -0.04\*\* |  | -0.04\*\* | -0.04\*\* | -0.05\*\*\* |
|  |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |
| rural |  | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 | 0.00 |  | 0.03\* | 0.03\* | 0.03\* |  | 0.02 | 0.02 | 0.02 |
|  |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |  | (0.01) | (0.01) | (0.01) |
| Ideology |  |  | 0.42\*\*\* | 0.42\*\*\* |  |  | 0.33\*\*\* | 0.33\*\*\* |  |  | 0.32\*\*\* | 0.32\*\*\* |  |  | 0.25\*\*\* | 0.25\*\*\* |
|  |  |  | (0.03) | (0.03) |  |  | (0.03) | (0.03) |  |  | (0.03) | (0.03) |  |  | (0.03) | (0.03) |
| SamplePublic Health × old2 |  |  |  | 0.10\* |  |  |  | 0.04 |  |  |  | 0.01 |  |  |  | 0.09\* |
|  |  |  |  | (0.04) |  |  |  | (0.04) |  |  |  | (0.04) |  |  |  | (0.04) |
| Num.Obs. | 2196 | 2177 | 2177 | 2177 | 2196 | 2177 | 2177 | 2177 | 2196 | 2177 | 2177 | 2177 | 2196 | 2177 | 2177 | 2177 |
| R2 | 0.004 | 0.017 | 0.116 | 0.118 | 0.000 | 0.013 | 0.077 | 0.077 | 0.008 | 0.015 | 0.067 | 0.067 | 0.000 | 0.007 | 0.047 | 0.049 |
| R2 Adj. | 0.003 | 0.014 | 0.113 | 0.115 | 0.000 | 0.011 | 0.074 | 0.074 | 0.008 | 0.012 | 0.064 | 0.063 | 0.000 | 0.004 | 0.044 | 0.045 |
| \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001 | | | | | | | | | | | | | | | | |

Table 2: OLS regressions of COVID19 Trade-offs as a function of sample, demographics (degree status, high-income status, sex, age) and ideology. Dependent variable has been scaled 0 (support for stopping COVID19, 1 support for other policy goal)

| **Sample** | **Average** |
| --- | --- |
| General Population | 0.42 |
| Public Health | 0.49 |

Table 3: T-test of difference in means showed a t-value of 3.55 on 245 degrees of freedom (p <0.01)



Table 4: OLS regressions of support for decisive role for scientific evidence as a function of group membership, trust in government and self-reported ideology.

# Online Supplementary Material

| **Region** | **n CPHA** | **n Sample** | **Percent CPHA** | **Percent Sample** |
| --- | --- | --- | --- | --- |
| Ontario | 278 | 78 | 44 | 40 |
| West | 246 | 89 | 39 | 46 |
| Atlantic | 53 | 15 | 8 | 8 |
| Quebec | 52 | 10 | 8 | 5 |
| North | 9 | 3 | 1 | 2 |

Table A5: Regional distribution of CPHA membership and self-reporteed CPHA members in surveyed sample.

| **Variable** | **Label** | **Value** | **Sample** | **Census** |
| --- | --- | --- | --- | --- |
| Age | Dichotomous variable, R is 65+ | Over 65 | 27 | 17 |
| Age | Dichotomous variable, R is 65+ | Under 65 | 73 | 83 |
| High Income | Dichotomous variable, R household > $100,000 | Over $100,000 | 26 | 8 |
| High Income | Dichotomous variable, R household > $100,000 | Under $100,000 | 74 | 92 |
| Francophone | Dichotomous variable, R is francophone | Francophone | 10 | 21 |
| Francophone | Dichotomous variable, R is francophone | Not Francophone | 90 | 79 |
| Rural | Dichotomous variable, R lives in a rural neighborhood | Not Rural | 68 | 81 |
| Rural | Dichotomous variable, R lives in a rural neighborhood | Rural | 32 | 19 |
| Degree | Dichotomous variable, R has university degree | Degree | 41 | 19 |
| Degree | Dichotomous variable, R has university degree | No Degree | 59 | 81 |
| Female | Dichotomous variable, R is female | Female | 51 | 51 |
| Female | Dichotomous variable, R is female | Not Female | 49 | 49 |
| Province | Province of Residence | Alberta | 11 | 12 |
| Province | Province of Residence | British Columbia | 12 | 13 |
| Province | Province of Residence | Manitoba | 4 | 4 |
| Province | Province of Residence | New Brunswick | 2 | 2 |
| Province | Province of Residence | Newfoundland and Labrador | 2 | 1 |
| Province | Province of Residence | Nova Scotia | 3 | 3 |
| Province | Province of Residence | Ontario | 39 | 38 |
| Province | Province of Residence | Prince Edward Island | 0 | 0 |
| Province | Province of Residence | Quebec | 24 | 23 |
| Province | Province of Residence | Saskatchewan | 3 | 3 |

Table A6: This table comparisons the sample of the general population with census data along several demographic characteristics.

|  | **Self-Reported Ideology** | **Inequalities between rich and poor should be reduced** | **Discrimination against visible minorities still a serious problem** | **More to do to reduce inequalities between men and women** | **Free markets should provide goods more than government programs** | **People who make a lot of money should not have to share with others** | **Should not limit choices to protect people** | **Private sector to create jobs** | **Authorities imposing stricter punishments** | **Respect for Authoritiy should be fundamental value** | **First Nations have too many rights compared to regular citizens** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample (Public Health) | -0.15\*\*\* | -0.14\*\*\* | -0.12\*\*\* | -0.09\*\*\* | -0.06\*\* | -0.06\* | -0.06\*\* | -0.17\*\*\* | -0.17\*\*\* | -0.13\*\*\* | -0.28\*\*\* |
|  | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.03) |
| Degree Status (Degree) | -0.02\* | 0.01 | -0.02 | 0.00 | 0.00 | -0.06\*\*\* | -0.06\*\*\* | -0.03\* | -0.04\*\*\* | -0.03\*\* | -0.05\*\*\* |
|  | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| Income (Over $100,000) | 0.02\* | 0.07\*\*\* | 0.03\* | 0.03\* | 0.06\*\*\* | 0.06\*\*\* | -0.02 | -0.01 | 0.01 | 0.03\*\* | 0.04\*\* |
|  | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.02) |
| Gender (Female) | -0.03\*\* | -0.04\*\*\* | -0.07\*\*\* | -0.09\*\*\* | -0.05\*\*\* | 0.00 | -0.02\* | -0.04\*\*\* | 0.01 | 0.00 | -0.04\*\* |
|  | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| Rural Resident | 0.00 | 0.02 | 0.01 | 0.02 | 0.04\*\* | 0.04\*\* | 0.01 | 0.01 | 0.00 | 0.01 | 0.02 |
|  | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| Num.Obs. | 2165 | 2165 | 2165 | 2165 | 2165 | 2165 | 2165 | 2165 | 2165 | 2165 | 2165 |
| R2 | 0.051 | 0.043 | 0.038 | 0.047 | 0.050 | 0.025 | 0.032 | 0.049 | 0.079 | 0.065 | 0.080 |
| R2 Adj. | 0.048 | 0.041 | 0.035 | 0.044 | 0.047 | 0.022 | 0.029 | 0.046 | 0.077 | 0.062 | 0.078 |
| \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001 | | | | | | | | | | | |

Table 7: Results of OLS regressions of ideology and worldview items on sample membership, controlling for demographics.



Comments on Figure 2

* This is a very complex figure that will need to be reworked for publication.
* The X and Y axes need better titles, the font is very small, etc.
* It seems to me that the X axis needs to be reversed and/ or individual item checkedcarefully:
  + As presented here, this suggests that the PH workforce is more likely than the general population to support free markets ... have concerns about rights for First Nations ... believe the private sector should create jobs. This is deeply counter-intuitive.
  + The problem may also lie in the descriptors–some imply direction (e.g.,“support for free markets over government programs”) but others do not suggest direction (e.g., “private sector to create jobs”)
* More substantively if memory serves, the ‘ideology’ item is ‘not like the others’:
  + For one thing, the word tells us nothing about the question put to respondents. But I seem to recall that it was a composite measure (if not an otherwise different metric imported from elsewhere).
  + The description is a mix of description and methods. I suggest moving the following sentence into the manuscript itself, and perhaps even into a methodological appendix available as supplementary material:
    - *Scores have been re-scaled such that 1 is a conservative (pro-hierarchical, anti-egalitarian, anti-individualist)*

Comment for p. 17

*A central theme during the management of the COVID19 pandemic has been the tension between decision-making by those with scientific expertise in the domain of public health but who lack democratic legitimacy and elected politicians who lack expertise. At times, public health professionals and members of the public have demanded that “experts make the decisions” and that policies should be “evidence-based”. And others have acknowledged that this is not so simple.*

I do not think this captures the nature of the debate:

* In a few places, notably Alberta, the decision by the government to strongly emphasize that policy choices were ‘just following the science’ when combined with the use of the regulatory authority of the CMOH, led some people to conclude that the CMOH was a decision-maker. This was amplified when folks unhappy with various restriction got organized and began to systematically criticize the government and even took the CMOH to court. This does make it a ‘who decides’ question. But in most provinces and most countries, either the government did not sustain a ‘follow the science’ narrative and/or they did not rely on the statutory authority of the CMOH quite as much, or they took active steps to make it clear that it was the politicians who were deciding, not officials.

I suggest recasting it as:

“A recurring debate during much of the COVID-19 pandemic was the role of scientific evidence in the making of government policy and, by extension, the role of the top public health and science advisors to government. This debate was strongest in those jurisdictions where politicians repeatedly returned to the mantra that policy choices were ‘just following the science’ which, in addition to being simply not true was an exercise in blame avoidance and, in parliamentary democracies, fundamentally at odds with the constitutional convention of ministerial responsibility (MacAulay et al. Forthcoming). This is a small example of a much larger debate about the role that scientific evidence does or should play in the making of public health policy (Fafard, Cassola, and de Leeuw 2022).”

1. 12 respondents of the final public health sample were students, a category of membership with the CPHA. They were excluded from the analysis. [↑](#footnote-ref-2)
2. Exact tables are in supplementary material. [↑](#footnote-ref-3)