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Self-reported outcomes, choices and discrimination among a global COVID-19 unvaccinated cohort

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INTRODUCTION

Since COVID-19 was declared a pandemic by the World Health Organization (WHO) in March 2020, there have been conflicting views among health authorities and in the published literature about the risks posed by SARS-CoV-2 to healthy populations that have not been COVID-19 injected. Additionally, health authorities and the media have frequently suggested that such unvaccinated populations pose a significant risk of infection to the COVID-19 vaccinated and vulnerable.

For example, a study published in the preprint server *MedRxiv* found less severe outcomes among fully vaccinated COVID-19 patients requiring hospitalisation, compared with those not vaccinated, yet the risk of in-hospital death was greater among the vaccinated than unvaccinated (Mielke et al 2022). A global study (68 countries) by Subramanian & Krishna (2021) found a strong tendency for countries classified as “low transmission” countries to have low rates of COVID-19 ‘vaccine’ coverage (<20%), the reverse being the case for “high transmission” countries.

The UK REACT study (DHSC 2021) reported that of 98,000 volunteers studied those who were double vaccinated COVID-19 were three times less likely to test positive by PCR than those who were unvaccinated (1.21% vs 0.4%, respectively). However, the data on which such findings are based cannot demonstrate a causative relationship with vaccination owing to numerous behavioural and other confounding factors between the two groups. Furthermore, data on cases and deaths relied upon by UK authorities have been shown to be spurious owing to mis-categorisation of vaccination status (Fenton et al, 2021).

There have been very few studies that either assess the health outcomes of unvaccinated populations, or compare matched unvaccinated and vaccinated populations. One such study, by Lyons-Weiler and Thomas (2020), of a paediatric patient population at an integrative clinic in Portland, Oregon, found that the health status of unvaccinated children exceeded that of those subject to the routine childhood vaccination program in the USA. However, the journal that published the study, the *International Journal of Environmental*

Research and Public Health, was forced to retract the study 8 months following publication given the implications of its findings.

There is a significant population of individuals and communities around the world that have not been persuaded that COVID-19 'genetic vaccines' (notably the widely used mRNA or adenoviral vector based injections, sometimes referred to simply as vaccines in this paper for simplicity) are either sufficiently safe or effective to justify mass roll-out into healthy populations. This is represented by the fact that over one-third of the world's population has yet to be COVID-19 vaccinated, the majority of these being in low-income countries (Our World In Data, 2022).

In response to such concerns, a UK citizen-led cooperative, the Control Group Cooperative (CGC) (*vaxcontrolgroup.com*), was formed in July 2021 to represent the interests of individuals and families around the world who have chosen to not receive COVID-19 'vaccines.' Among the aims of the CGC is to evaluate long-term health outcomes among the COVID-19 vaccine-free, as well as linking its members to country support networks and online community groups. Participants who join the 'control group' may obtain an ID card (Fig. 1), in the relevant language. The card includes the statement that the individual is part of a SARS-CoV-2 Control Group and "must not be vaccinated". Many members have reported that these ID cards have been successful in allowing travel, preventing forced vaccination (vaccination without informed consent) or avoiding the loss of liberties, such as access to venues otherwise limited to COVID-19-vaccinated individuals.

Figure 1. CGC control group ID card (example).

When joining or becoming a member of the CGC, subscribers are asked to participate in a survey (see Methods). It is the survey findings over the first five months of operation from a specific cohort of subscribers to the CGC that forms the primary subject of this paper.

We, the authors of the present work, are entirely independent of the CGC and have received no funding to undertake it. Since mid-2021, we have collaborated on a diverse range of scientific and medical issues as part of our work with the Health & Humanities Committee (co-chaired by two of the authors: Dr Naseeba Kathrada and Robert Verkerk PhD) of the non-profit World Council for Health (*worldcouncilforhealth.org*).

METHODS

This survey is based on self-reported data among self-selected individuals from around the world who have subscribed to the CGC 'control group' project (*vaxcontrolgroup.com*). All respondents on which the present analysis is based completed an online survey (see Supplementary Information) on the CGC website on a monthly basis over 5 consecutive months (October 2021 to February 2022 inclusive). This period included the time during which, in most parts of the world, omicron replaced the delta variant as the dominant, circulating variant of SARS-CoV-2.

The cohort (n = 18,497) that is the subject of this analysis is a sub-group comprising 6.2% of the 297,618 people who had registered on the website by the end of February 2022 and provided data on a monthly basis over the first 5 consecutive months of the survey. Comparison of findings from this cohort with selected responses from the less complete but entire survey data set of CGC (that includes some 305,000 respondents from around the world at the time of writing), suggests that this smaller data set is representative of the full dataset.

The online survey includes some initial profile questions (Supplementary Information; Annex 1) that were answered on registration followed by a further series of questions (Supplementary Information; Annex 2) answered by respondents on a monthly basis thereafter. Recruitment of respondents was entirely organic and relied on respondents being made aware of the CGC project through largely alternative media outlets, given censorship on mainstream media and social media channels.

It is important to recognise that because the cohort represents a self-selected, as opposed to randomly selected, sample, the findings cannot be directly compared with other observational studies based on self-reported data based on randomly selected subjects.

However, what the survey aimed to do is gather insights about health outcomes, choices and discrimination experienced by the marginalised sub-population of people from diverse socio-economic backgrounds, ethnicities and cultures who have elected to exercise their right of refusal of COVID-19 injections.

As a self-reported survey, the interpretation of results in this paper has focused primarily on providing perspectives on the responses of an unvaccinated population to a variety of factors. Accordingly, central to this 'look and see' approach are the proportion of respondents who have given particular responses to the questions provided.

Given not all questions have been answered by all respondents, the denominators for the proportional analyses vary considerably according to how many relevant answers are provided and where these are unexpected, explanation is given in the tables or figures. Some analyses involve just a subset of the respondents (e.g. menstruating, menopausal and post-menopausal women aged 20 to 69) and, again, the denominator is stated.

SURVEY FINDINGS

Characterising the cohort

a. Geographic location

The vast majority (98.8%) of non-COVID-19 injected participants were from 6 major continents or regions (Table 1), most being from Europe (40%), with the next largest constituents from Oceania (principally Australia and New Zealand) and North America (USA and Canada), 27% and 25%, respectively.

Table 1. Continental distribution of respondents in cohort.

Region	*n*	%
Africa	171	0.9%
Asia	555	3.0%
Europe	7442	40.2%
North America	4657	25.2%
Oceania	4982	26.9%
South America	576	3.1%
Unknown	114	0.6%
TOTAL (*n*)	18383	100.0%

The geographical distribution of respondents in the self-selected cohort is shown in Fig. 2.

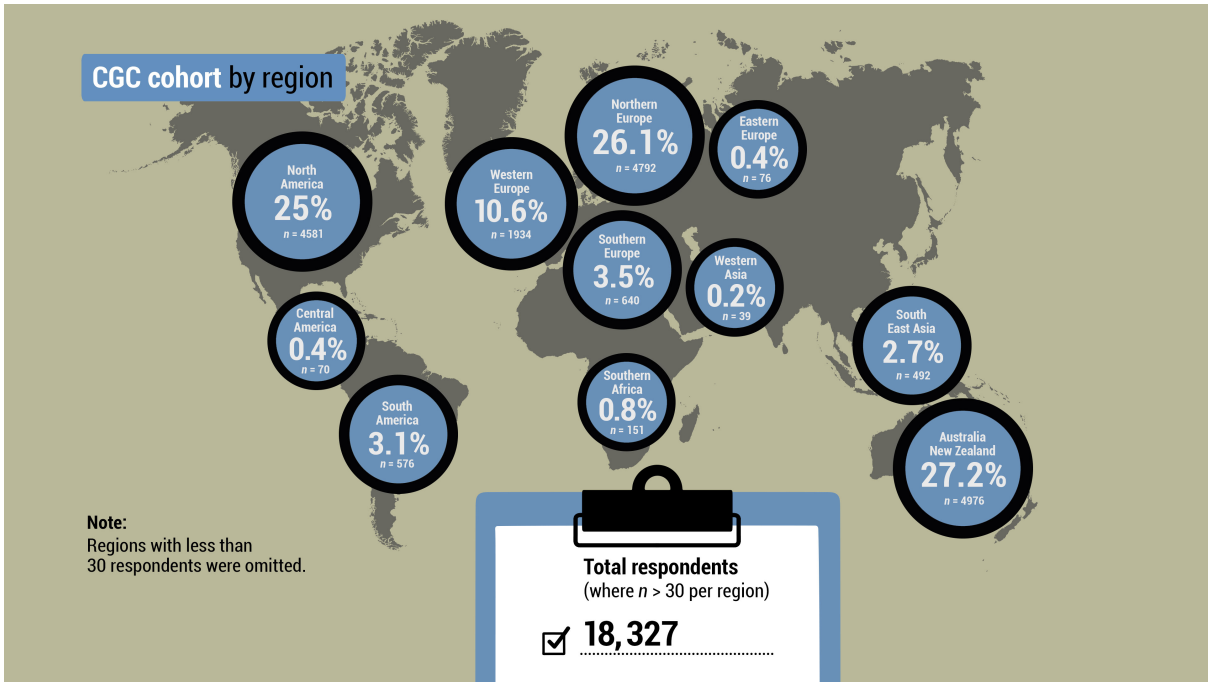

Figure 2. Regional distribution of the 'vax control group' (VGC) survey cohort.

b. Reported age groups and biological sex

The age distribution of the cohort is shown in Figure 3. Overall, of the respondents who disclosed their biological sex (96.3%), 57% of respondents were female and 43% male. The age groups with the greatest numbers of respondents were middle-aged and accordingly would generally be regarded by health authorities as highly susceptible to COVID-19 disease.

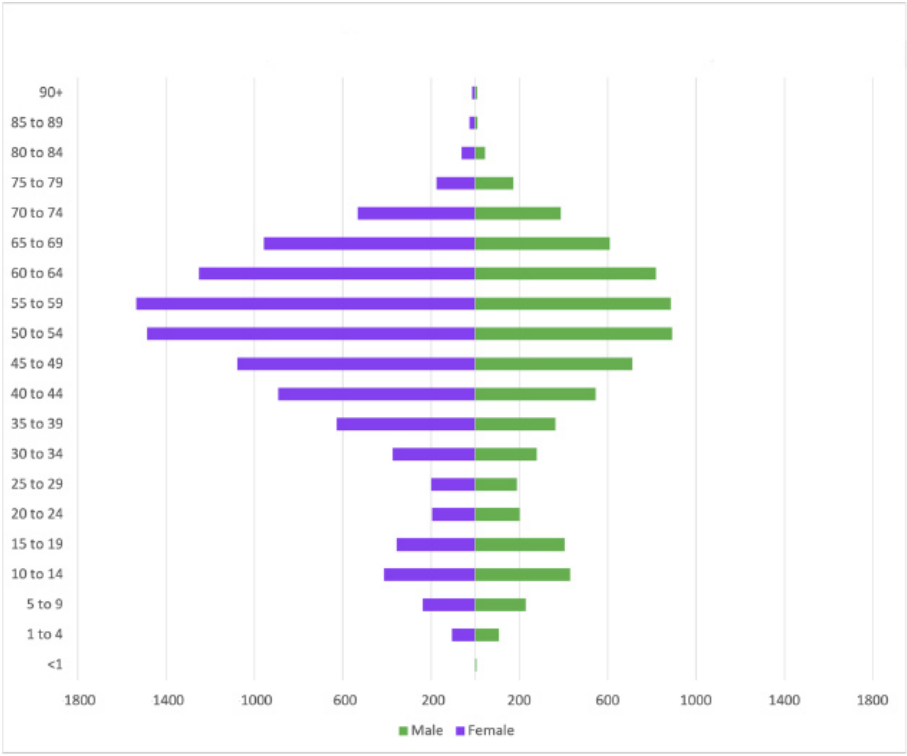

Figure 3. Age and biological sex distribution of cohort.

c. Blood group

The blood groups and rhesus factors were reported by 51% of respondents, with expected variations between regions and almost twice as many females rather than males disclosing data (Table 2). Given prevalence of Caucasian ethnicities, the relative order of blood groups (most common to least common) was as expected, as follows:

O+ > A+ > O- > B+ > A- > AB+ >B- >AB-

Table 2. Blood group by biological sex of cohort.

Blood group	Female	(%)	Male	(%)	Undisclosed biological sex	(%)	Total
A-	436	(7.0)	182	(5.8)	6	(8.6)	**624**
A+	1,778	(28.7)	901	(28.5)	24	(34.3)	**2,703**
AB-	71	(1.1)	33	(1.0)	0	(0.0)	**104**
AB+	265	(4.3)	141	(4.5)	2	(2.9)	**408**
B-	145	(2.3)	56	(1.8)	0	(0.0)	**201**
B+	598	(9.7)	294	(9.3)	5	(7.1)	**897**
O-	665	(10.7)	359	(11.4)	5	(7.1)	**1,029**
O+	2,235	(36.1)	1,196	(37.8)	28	(40.0)	**3,459**
Total with known blood groups	**6193**		**3162**		**70**		**9,425**
Rather not Disclose	**1,383**		**1,289**		**538**		**3,210**
Unknown	**2,946**		**2,842**		**74**		**5,862**

d. Primary reason for not electing to receive COVID-19 'vaccine'

Table 3 lists, in descending order of frequency, the most important reasons given by cohort respondents for deciding against COVID-19 injection. Respondents were able to select multiple reasons if they felt them to be of equal importance, hence *n* = 54,152.

Table 3. Frequency among cohort where each reason was reported to be the single most important reason for declining COVID-19 'vaccination'.

Reasons for not being covid vaccinated	Number of respondents who considered each reason the most important	%
Prefer natural medicine interventions	9,084	16.8
Distrust of pharmaceutical interventions	8,896	16.4
Distrust of government information	8,888	16.4
Poor/limited trial study data	8,841	16.3
Fear of long-term adverse reactions	8,348	15.4
Fear of short-term adverse reactions	6,216	11.5
Medical complications	2,376	4.4
Previous vaccine injuries	1,503	2.8
Total	**54,152**	**100.0**

The survey results suggest that five reasons were of almost equal significance (with only 1.4% variance), namely preference for natural medicine interventions, distrust of pharmaceutical companies, distrust of government information, insufficient trial data and concerns over long-term adverse reactions. Only 7% of respondents gave either medical complications or concerns stemming from previous vaccine injuries as the primary reasons for COVID-19 'vaccine' avoidance.

e. History of past vaccination

Approximately one-third of the cohort reported having been vaccinated as a child, while another one-third reported having not received any vaccine within the last 5 years (Table 4).

Table 4. Reported vaccination history for cohort

Reported vaccination history	N	%
As a child	5,405	29.2
In Last 12 months	912	4.9
Less than 5 years ago	2,837	15.3
More than 5 years ago	6,246	33.8
Never Vaccinated	782	4.2
Rather not Disclose	2,315	12.5
Total	**18,497**	**100.0**

The age groups from 20 years through to 84 years had the smallest proportions (2.0-2.9%) reporting that they had never been vaccinated. Conversely, the youngest age group (ages 0-19 years) reported by far the highest rate of not having received any vaccine (15.9%) (Table 5).

Table 5. Reported vaccination history by age group

	Age group (% in each group)									
Reported vaccination history	**0-19**	**%**	**20-49**	**%**	**50-64**	**%**	**65-84**	**%**	**85+**	%
As a child	494	20.0	1,957	33.5	2,131	30.0	810	26.8	11	17.5
More than 5 years ago	313	12.7	1,956	33.4	2,755	38.8	1,200	39.8	19	30.2
Less than 5 years ago	567	23.0	858	14.7	967	13.6	436	14.4	9	14.3
Rather not Disclose	492	20.0	671	11.5	811	11.4	327	10.8	12	19.0
In Last 12 months	206	8.4	238	4.1	273	3.8	185	6.1	9	4.8
Never Vaccinated	392	15.9	170	2.9	157	2.2	60	2.0	3	4.8
Total	**2,464**		**5,850**		**7,094**		**3,018**		**63**	

f. Future vaccination choices

Nearly two-thirds of the cohort (64.2%) reported that they would refuse all future vaccines of any type, with about one-fifth (22.5%) choosing to not disclose their choices (Fig. 4). Only 1.3% reported an interest in receiving flu vaccinations and less than 5% reported that they would receive 'holiday vaccinations'. The choices were generally similar regardless of age group.

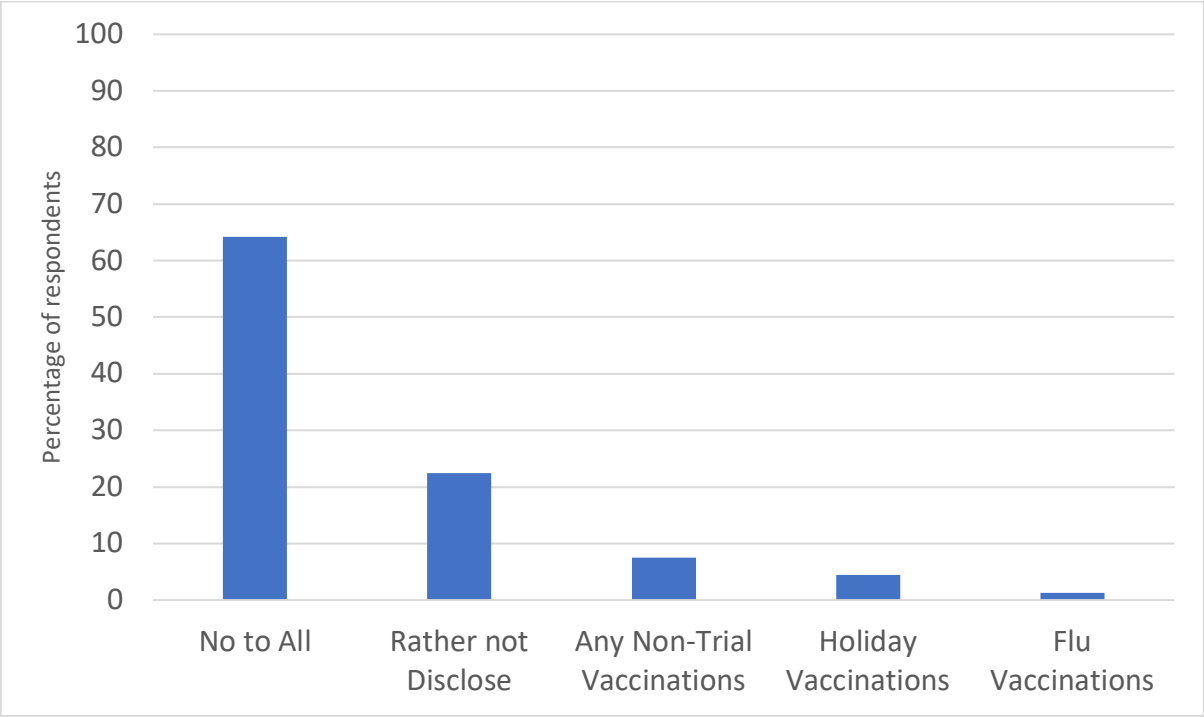

Figure 4. Responses to future vaccination choices for all age groups in cohort.

g. Willingness to donate blood

Around 60% of non-COVID-19 vaccinated respondents, regardless of their blood group, indicated their willingness in donating blood, these numbers being approximately three times greater than those unwilling to do so or not disclosing a clear preference one way or another (Fig. 5).

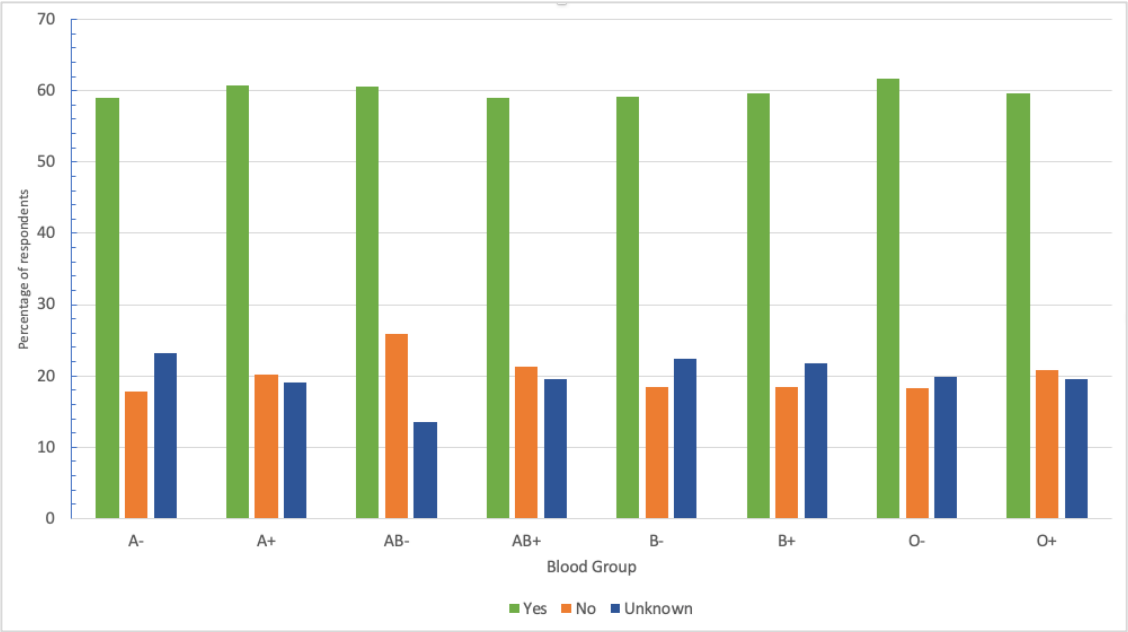

Fig. 5. Percentage of respondents reporting willingness or otherwise to donate blood.

Reported outcomes, choices and attitudes

a. Respondents who reported COVID-19 during survey period

Respondents between the ages of 20 and 49 years reported the greatest incidence of COVID-19 disease (~10-12%), with females consistently reporting slightly more often than males regardless of age group, this likely reflecting the female bias of the cohort. Those aged 70 and over reported the lowest incidence of COVID-19 disease (4.0% females, 3.7% males) (Fig. 6).

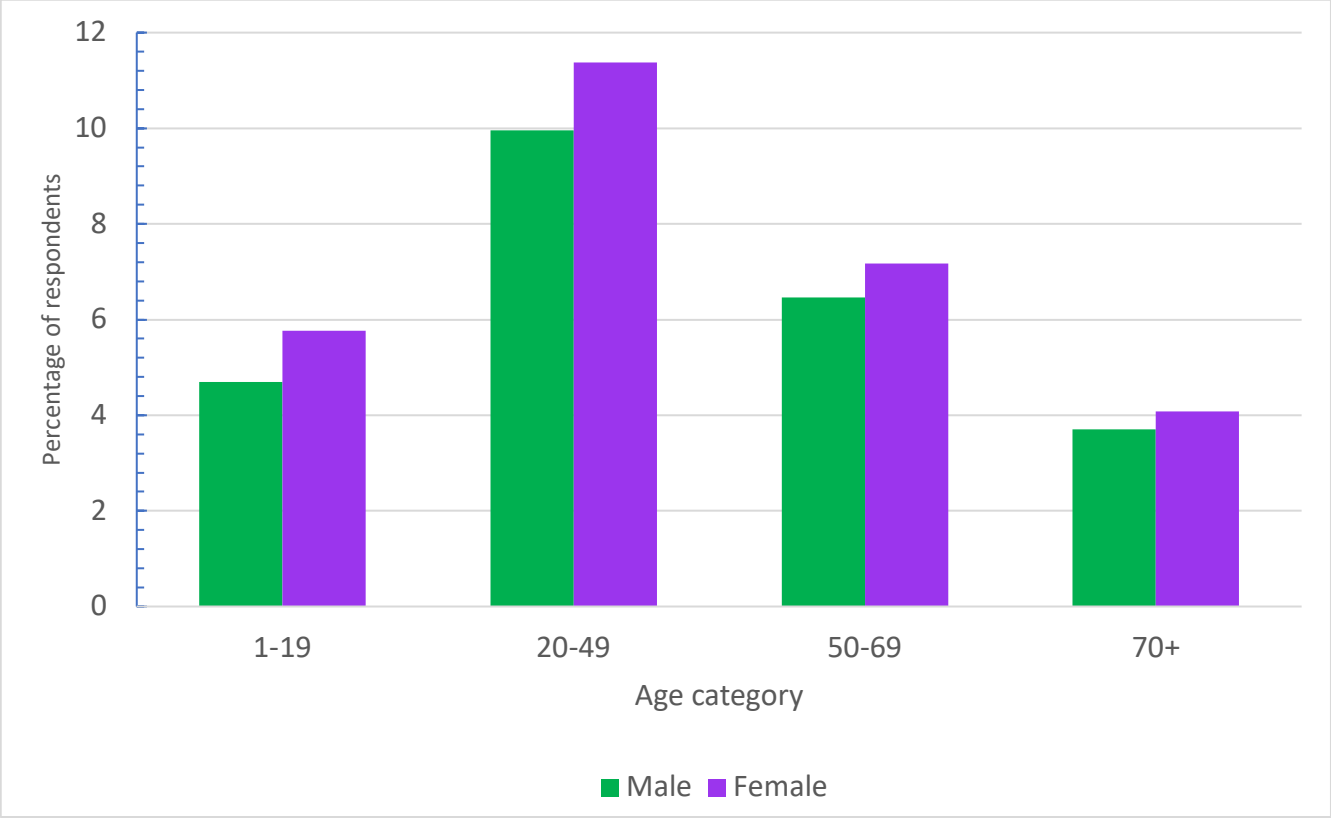

Figure 6. Percentage of respondents reporting COVID-19 disease, by age group and biological sex during study period.

b. Respondents who reported not experiencing, or at least not being sure of experiencing, COVID-19 disease

Over 80% of respondents over the age of 70 and almost 80% between 1 and 19 years were either sure they had not experienced symptomatic COVID-19 disease or were not sure if they had or had not (implying any symptoms were likely to be have been mild and transient). Around three quarters of the age bands between 20 and 49 and 50 to 69 similarly reported no COVID-19 disease (Fig. 7).

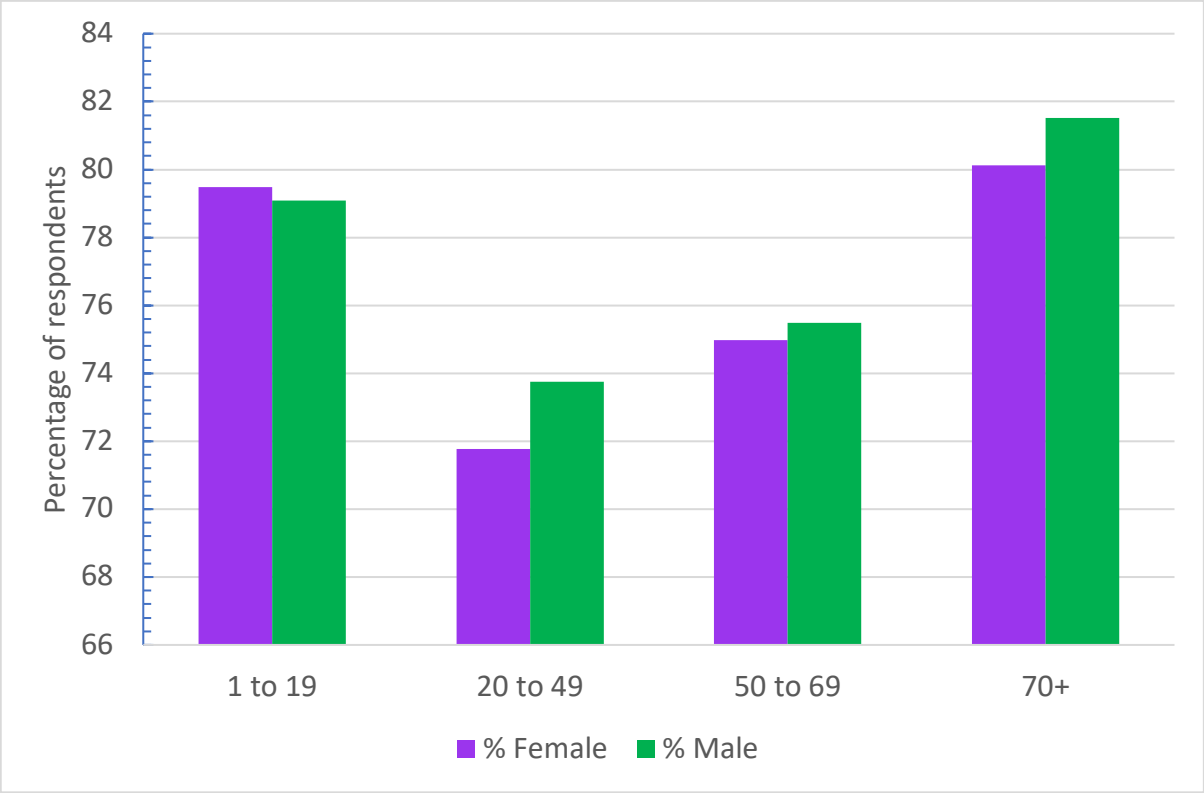

Figure 7. Respondents reporting that they had not had COVID-19 disease or were not sure if they had experienced the disease.

Additionally, 11.6% of the respondents aged 50 to 69 chose not to disclose their past or current COVID-19 disease status, this choice to not disclose status being considerably lower in other age groups (2.0 - 3.5%).

c. *Reported COVID-19 antigen testing outcomes*

Nearly 20% of respondents aged 50 to 69 reported having received one or more positive tests while also experiencing symptoms, with only 1.9% in this same age range reporting positivity in the absence of symptoms (Fig. 8).

Those over 70 reported the lowest rate of positive tests, with all age groups reporting much greater rates of positivity with, rather than without, symptoms (Fig. 8).

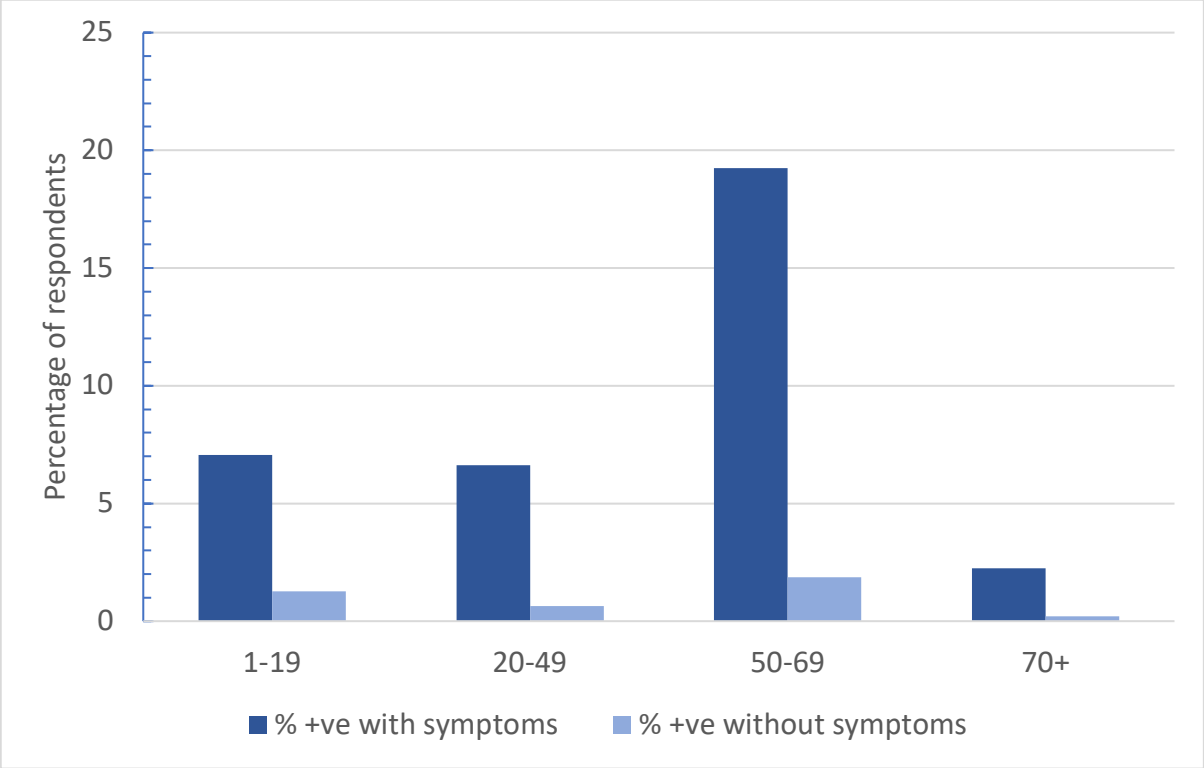

Figure 8. Percentage of respondents reporting positive antigen tests both with and without COVID-19 symptoms.

d. SARS-CoV-2 neutralising antibody outcomes

Over 1 in 5 (23.5%) respondents between the ages of 50 and 69 reported having been being positive for SARS-CoV-2 (neutralising) antibodies during the survey period, although only 8.3% of these were confirmed with positive serology tests.

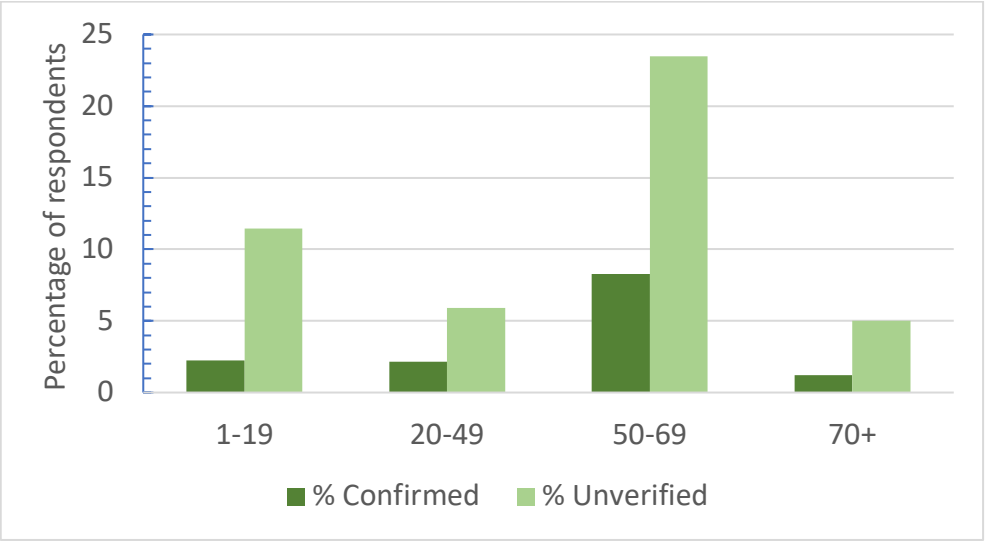

Figure 9. Reported positive serology (SARS-CoV-2 neutralising antibodies) by age group.

Confirmed or unverified presence of SARS-CoV-2 antibodies were reported least often by the oldest age band, the over 70s, which also had the lowest reported incidence of COVID-19 disease (Fig. 6).

e. Reported COVID-19 disease by age group and month

The greatest incidence of reported COVID-19 disease was in January 2022, with a clear escalation which mirrors the generalised, global displacement of the dominant circulating SARS-CoV-2 variant from delta to omicron, especially during the European winter (where respondent numbers were greatest) (Fig. 10).

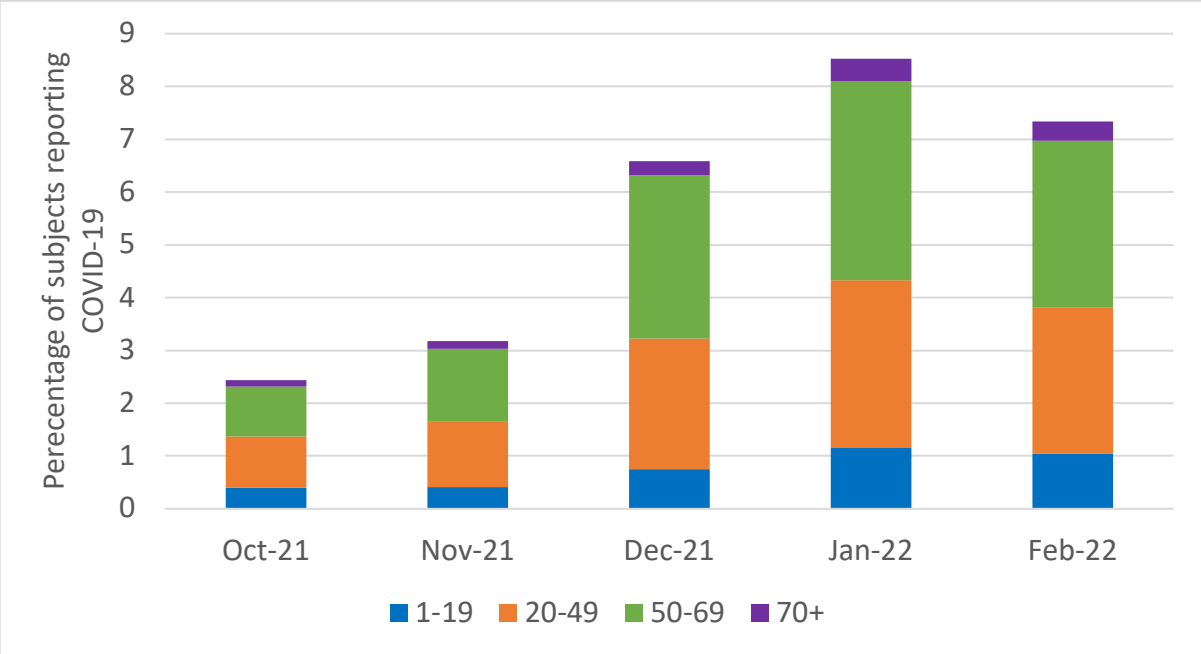

Figure 10. Reported COVID-19 disease over 5 months of survey showing proportion in each of four age bands.

In terms of age bands, the 50 to 69 years age range reported the highest incidence of COVID-19 disease (12.3% of respondents), followed by the 20 to 49 year group (10.7%), with considerably lower reporting (1.3 -3.8%) of suspected or confirmed COVID-19 disease among both the youngest and oldest age bands (Fig. 11).

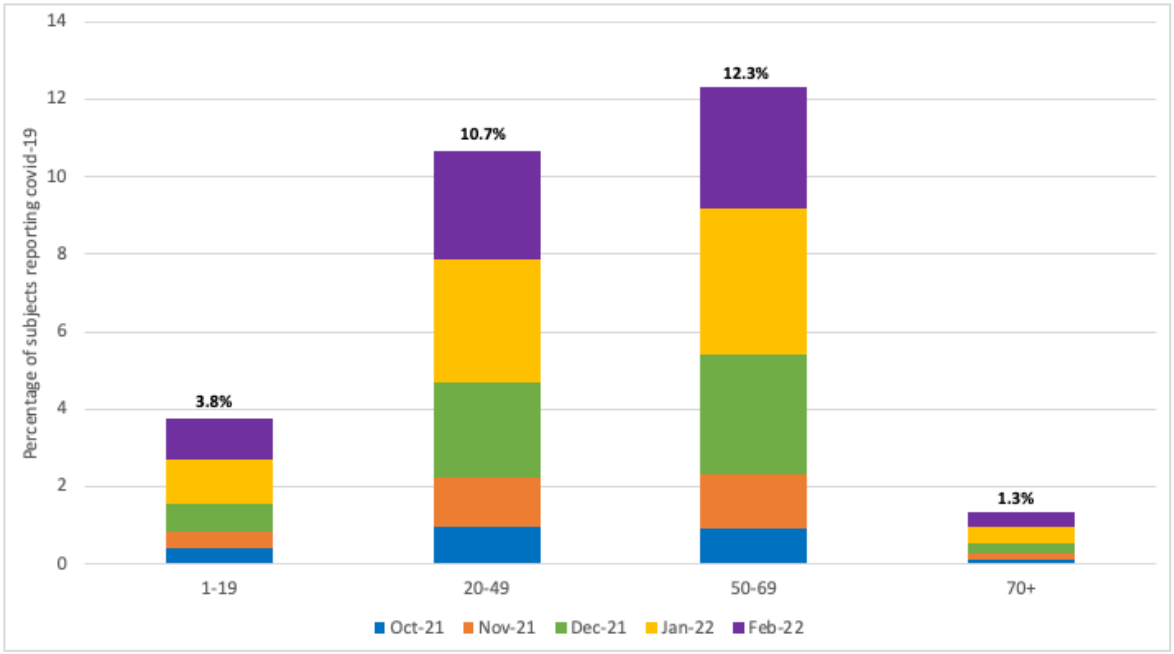

Figure 11. Reported COVID-19 disease by age band during the 5 months of survey.

f. Severity of COVID-19 symptoms

One quarter (25.1%) of the survey cohort reported some symptomatic disease (*n* = 4636) at some stage during the survey period, most (~14%) being mild, around 8% reportedly moderate and just 2% with severe disease (Fig. 12). Some 3% reported asymptomatic disease. The 50 to 69 age band reported the highest incidences of disease of all severities (Fig. 12)

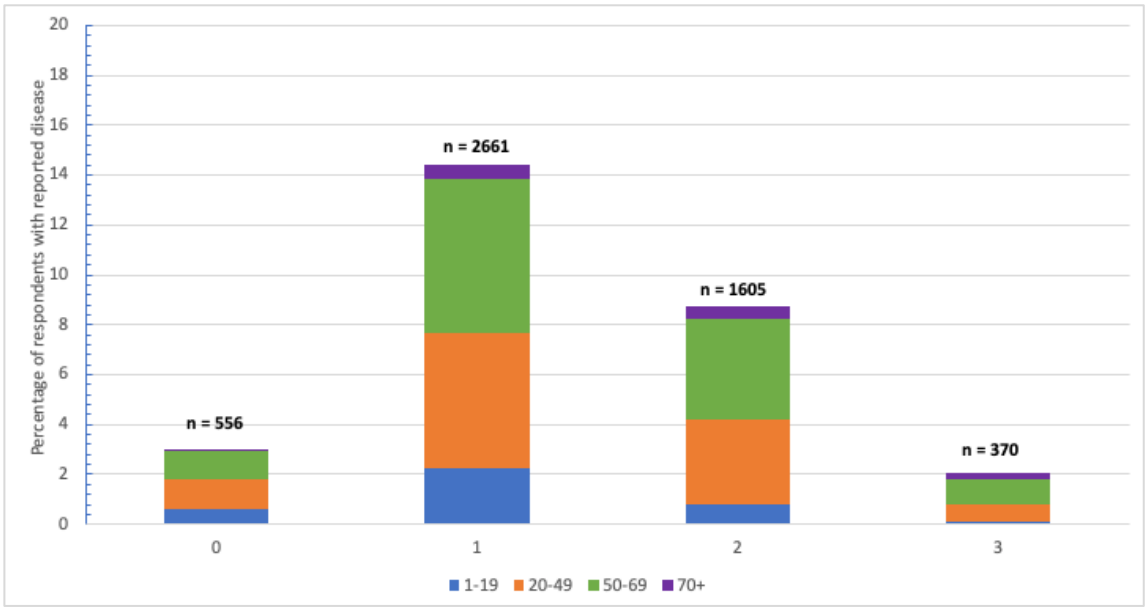

Figure 12. Reported severity of COVID-19 disease among those with known or suspected SARS-CoV-2 infection as a proportion of the survey cohort.

When patients reporting COVID-19 symptoms were asked for how long they were sick or unwell, of those who answered (n= 4496), 54% indicated they were sick for less than a week, 20% between 1 and 2 weeks and 11% for over 3 weeks (Table 6).

Table 6. Reported duration of sickness following suspected or known SARS-CoV-2 infection.

Health status	*n*	%
Generally Well	649	14.4
Sick < 1 Week	2440	54.3
Sick 1-2 Weeks	902	20.1
Sick 3 Weeks+	505	11.2
Total	**4496**	**100.0**

g. Symptoms in relation to age

'Fatigue' was the most commonly reported symptom of COVID-19 disease, closely followed by 'cough' and 'muscle or body pain'. Symptom ranking by frequency of reports is shown in Table 7.

Table 7. Ranking symptoms by reporting frequency during survey period

Symptom	Qty Reports	Ranking
Fatigue	4786	1
Cough	4305	2
Muscle or Body Aches	4296	3
Fever	3613	4
Loss Of Taste	1846	5
Loss Of Smell	1791	6
Difficulty Breathing	1346	7
Diarrhoea	915	8

Most symptoms were reported among the 50 to 69 year age band, with between one and 3 symptoms being most commonly reported in all age classes. In the youngest age class (1-19 years), there were proportionately fewer respondents reporting 4 to 6 symptoms compared with the other three age classes (Fig. 13).

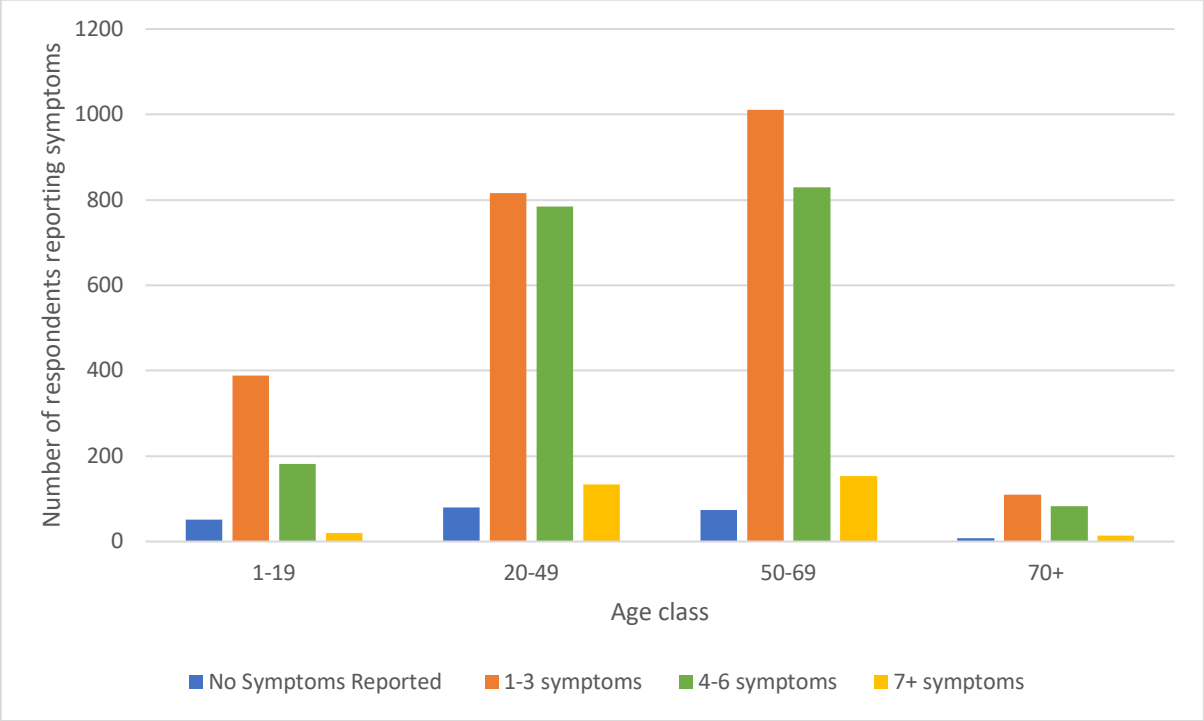

Figure 13. Number of COVID-19 symptoms reported by age band among those with suspected or known COVID-19 disease.

There was relatively little variation in the frequency of reporting of the 8 different symptoms, as shown in Figure 14.

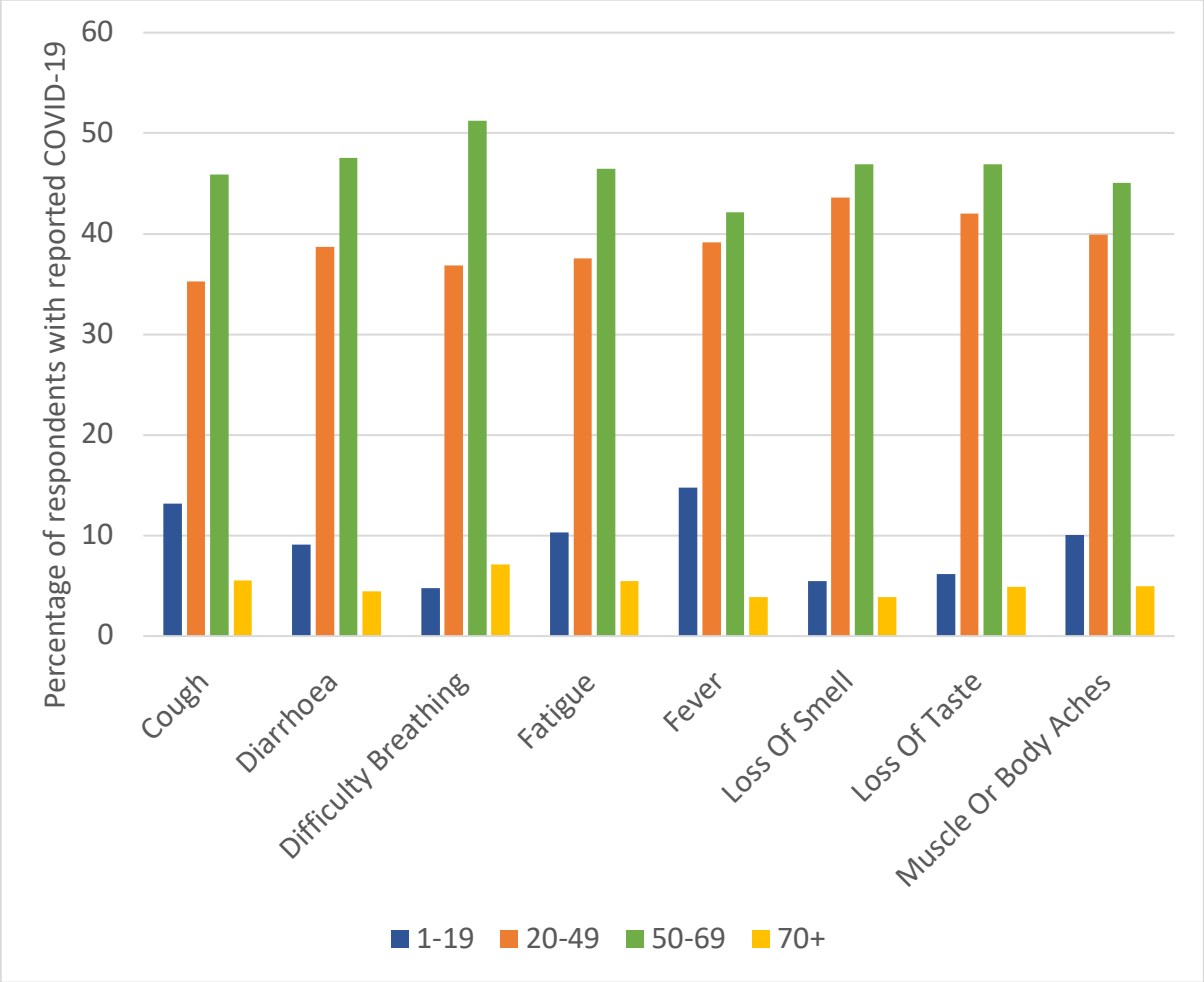

Figure 14. Symptoms reported by respondents in 4 age bands with known or suspected COVID-19 disease.

h. Reported within-household transmission

Over twice (2.2-fold) the number of respondents with suspected or known SARS-CoV-2 infection indicated that other family members within the same household had also suffered COVID-19 disease, compared with those who did not report disease. However, of these, nearly one-third (31%, n = 1435) indicated no other family members in the same household had become ill.

i. Hospitalisations

Only 74 respondents out of the 5196 (1.4%) who reported suspected or known SARS-CoV-2 infection also reported that they were hospitalised following infection. Therefore, outpatient or inpatient hospitalisation was reported in just 0.4% of the full survey cohort. Of these, 15 were outpatient only, another 15 were hospitalised for less than 3 days, 26 were hospitalised between 3 and 7 days, 11 for between 7 and 14 days and only 10 for more than 14 days.

These figures represent an overestimate as in some cases, a single individual made more than one visit to hospital.

j. Self-administered treatments among COVID-19 patients

The majority of respondents with suspected or confirmed COVID-19 engaged in self-administered treatments using vitamins (C, D), minerals (zinc) and off-label medications (ivermectin [IVM] and hydroxychloroquine [HCQ]) during the 5-month survey period.

Vitamins C, D and zinc were the most common self-administered treatments reported, with some 71% of the survey cohort (n = 3701 out of 5196) reporting regular usage. Self-administration of these treatments or supportive nutrients was much lower in a hospital setting than at home and declined in frequency as symptom severity increased (Fig. 15).

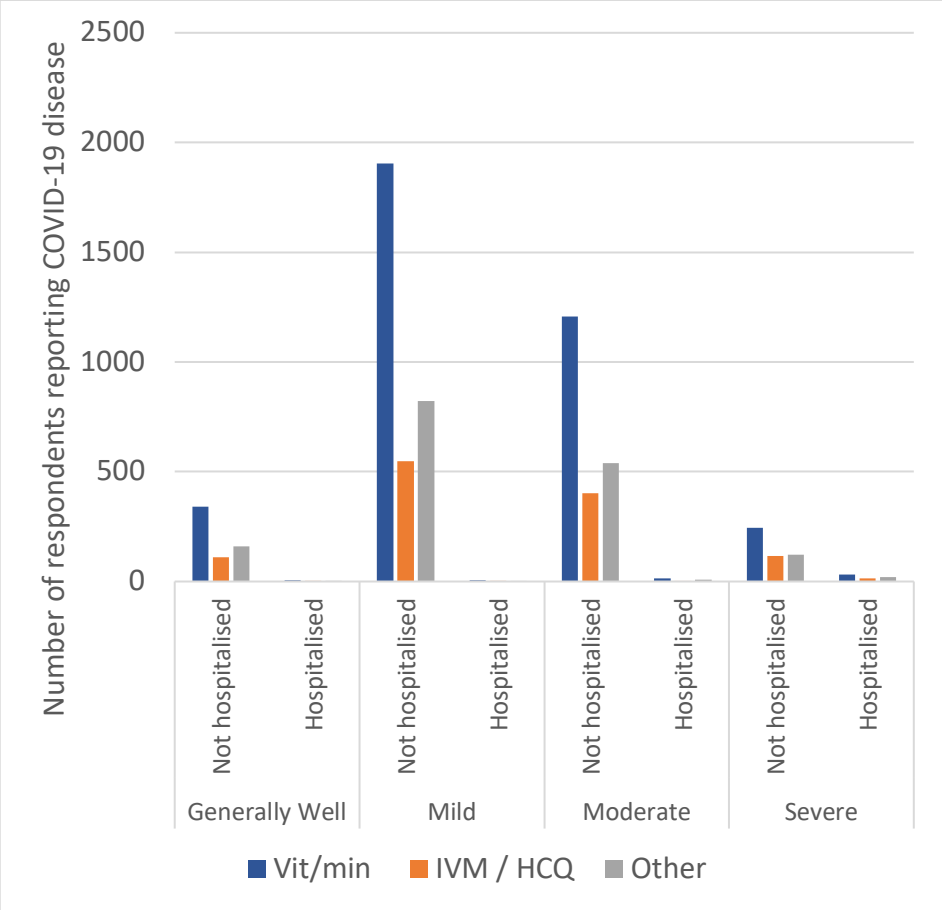

Figure 15. Respondents reporting COVID-19 disease who self-administered vitamins C and D and zinc (=Vit/min), off-label medications (ivermectin [IVM] or hydroxychloroquine [HCQ]) (=IVM/HCQ), or other products or medications (=Other) during the survey period.

k. Dietary supplement use among cohort

Sixty four percent of all respondents reported taking vitamin C, vitamin D, zinc or quercetin, or any combination of these, routinely during the survey period for preventative purposes (Fig. 16).

Among those taking supplements, vitamin D was most commonly consumed (53.3% of respondents), closely followed by vitamin C (51.7%), in turn followed by zinc (42.4%), with quercetin being the least used (15.5%) of the four.

Supplement use in North America (USA and Canada) exceeded other parts of the world (Fig. 16).

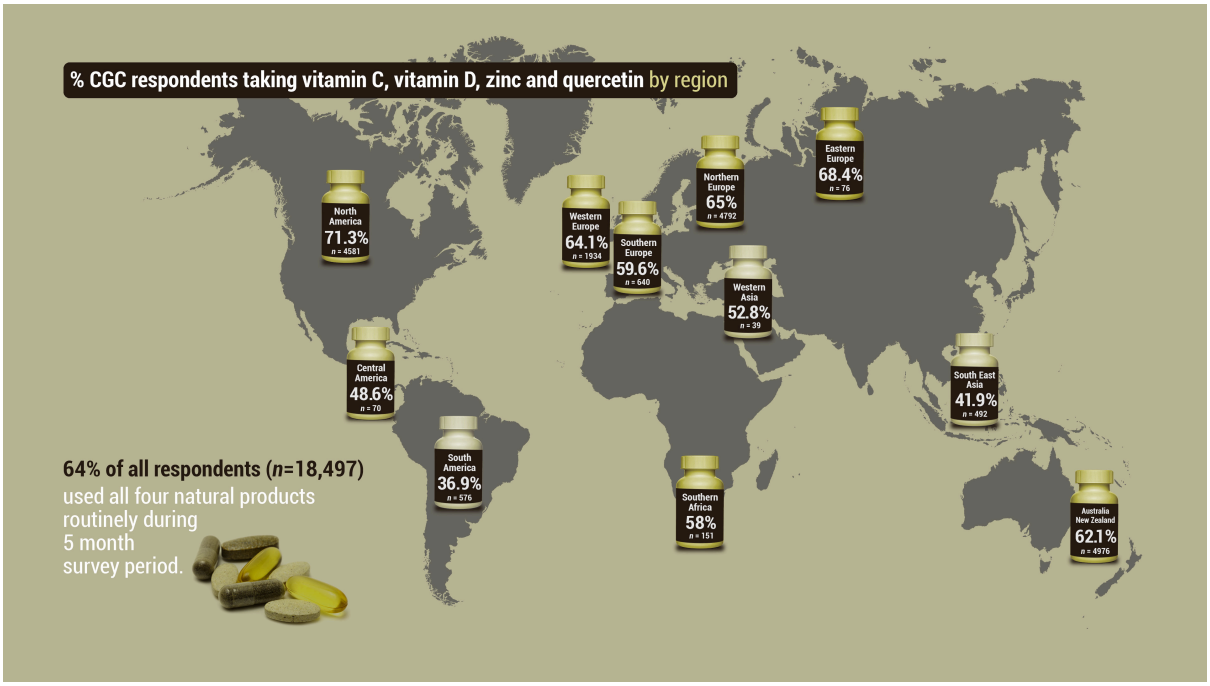

Figure 16. Distribution of CGC respondents routinely taking specific dietary supplements (vitamin C, vitamin D, zinc or quercetin) for prevention.

l. Mental health

Around 4 in 10 respondents in the survey cohort, regardless of age, reported sustained mild or moderate mental health issues through the duration of the survey. Half this number reported severe mental health issues (Fig. 17).

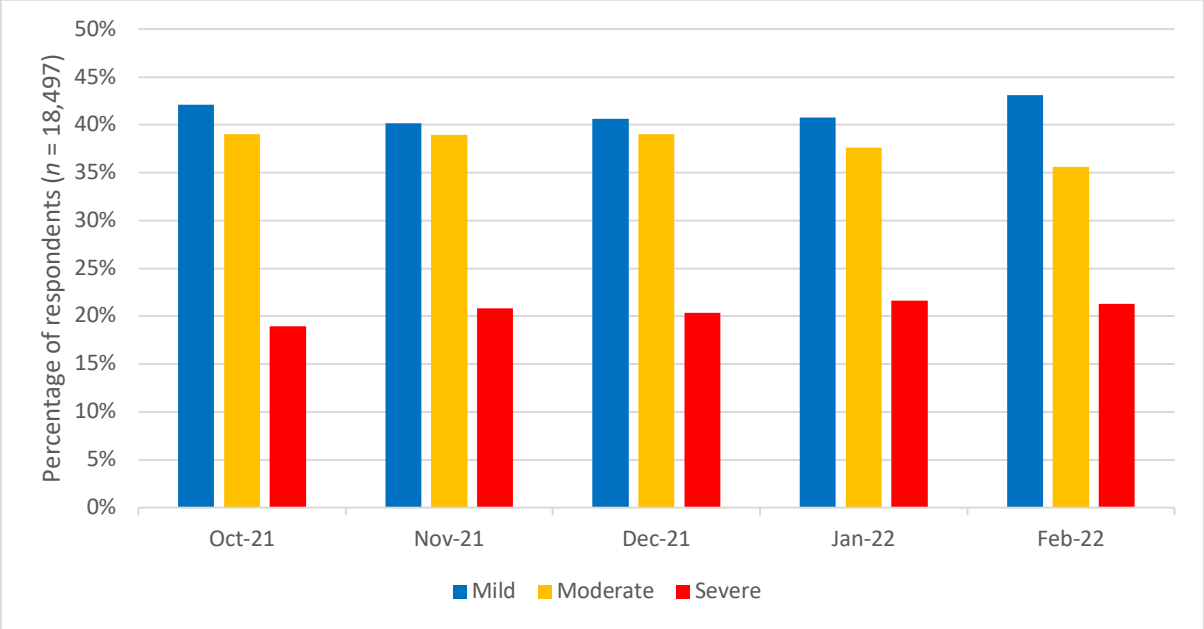

Figure 17. Percentage of cohort reporting mild, moderate or severe mental issues during each month of the survey.

Over the 5-month survey period, around half the respondents reported sustained mild mental health issues throughout the survey's duration, the reports being highest for the oldest and youngest age bands. Reports of moderate mental health issues dropped to around 3 to 4 in 10, with reports then being higher among the intermediate age bands. About 2 in 10 in each age band reported severe, sustained mental health issues (Fig. 18).

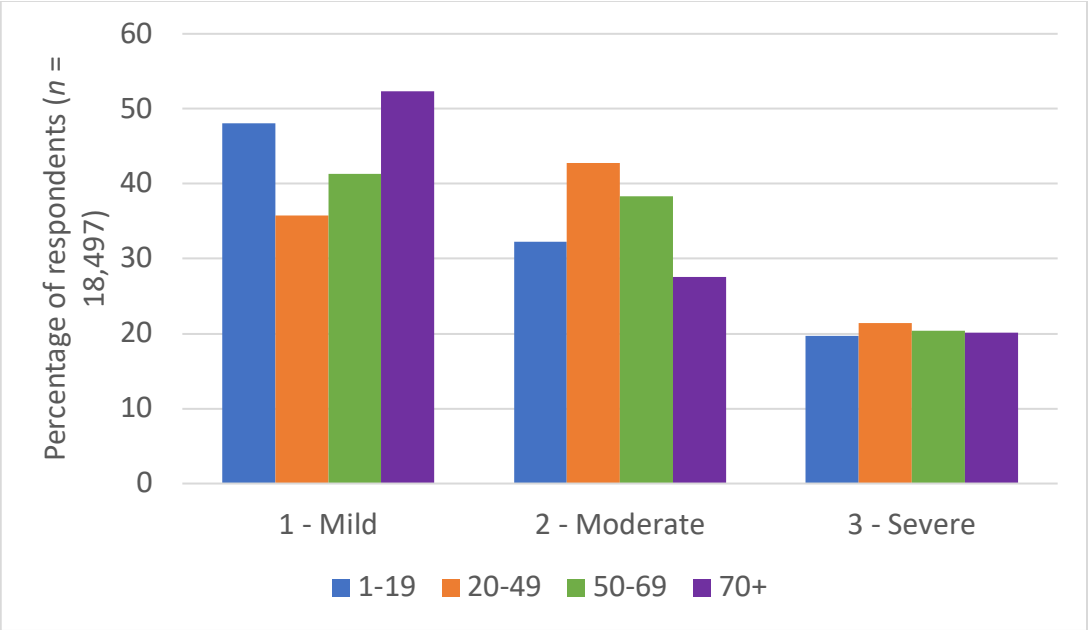

Figure 18. Proportion of respondents reporting mental health issues by age band.

m. *Bleeding abnormalities*

There were significant numbers of reports of unusual bleeding among the non-COVID-19 'vaccinated' women in the cohort, particularly those in the age band, representing the highest proportion of menstruating women, ages 20 to 49 (Fig. 19). The most commonly reported named menstrual abnormality was irregular periods (1,210 reports) among the 20 to 49 year age band, this representing 36% of women in the age band.

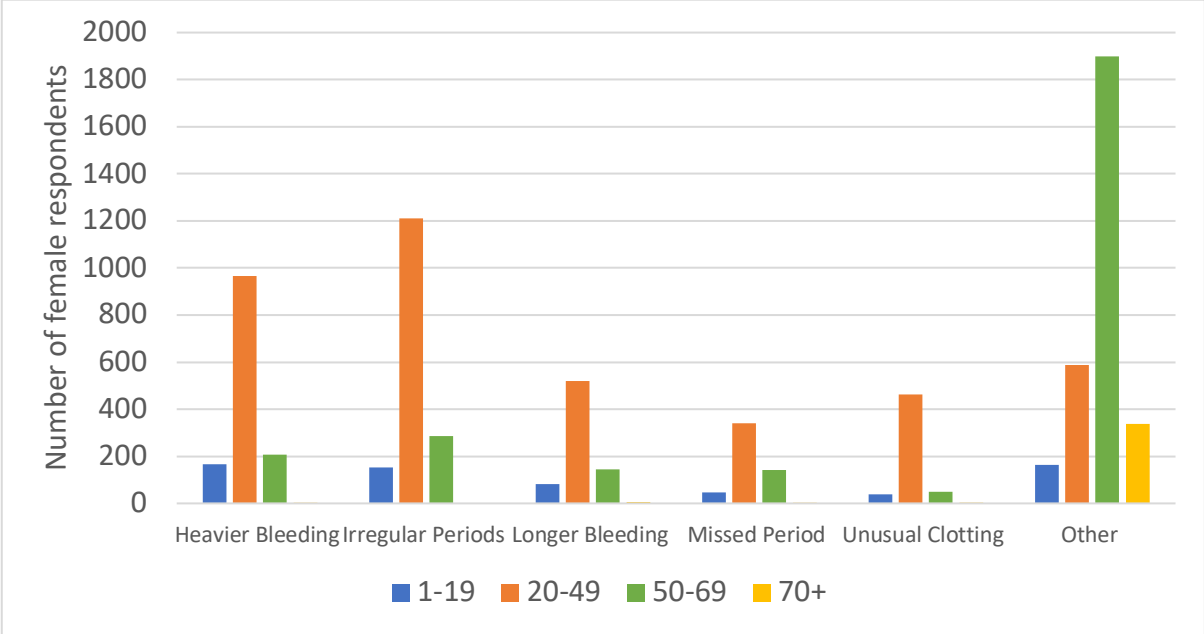

Figure 19. Number of female respondents reporting menstrual or other bleeding abnormalities

Additionally, 12.0% of female respondents reported unusual nosebleeds during the course of the survey, compared with 4.7% of men. This difference between females and males was even more pronounced for reports of unspecified unusual bruising, which was reported by 12.7% of females, but just 1.7% of males (all age groups).

n. Mask wearing

In October and November 2021 (before the omicron variant surge around the world became dominant) there were only slight variations associated with different durations of mask wearing, despite those who never wore masks having the lowest rates of COVID-19 symptom reports.

In December 2021 through to February 2022 inclusive, however, there was an apparent

and clear association between those reporting never wearing a mask and those experiencing the lowest rates of suspected or known COVID-19 disease. These data provide no information on any causal association between mask wearing and COVID-19 disease incidence given the wide range of uncontrolled behavioural and confounding factors likely to be involved.

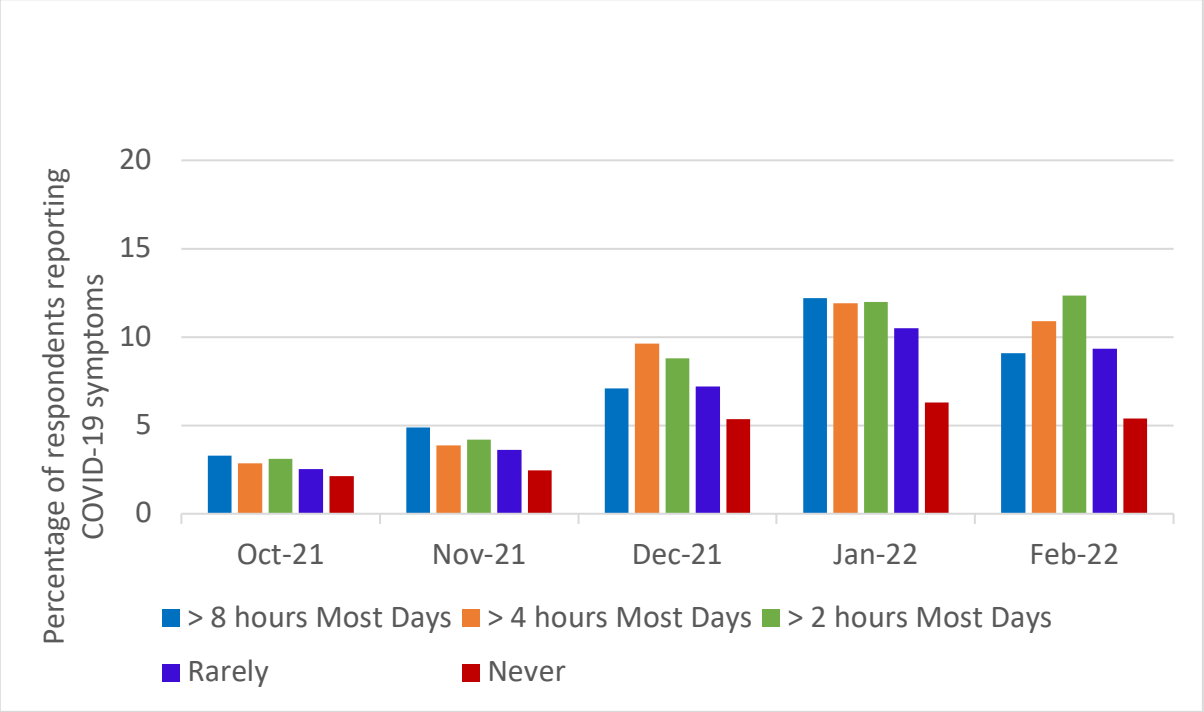

Figure 20. Percentage of respondents with known or suspected COVID-19 disease according to their mask wearing habit over the 5 months of the survey.

o. Job losses

Job losses among the survey cohort were determined as a proportion of the respondents reporting loss of employment during the survey period, using as the denominator the numbers in the cohort between the ages of 20 and 69 inclusive (the primary working age range) (Fig. 21).

The greatest reported job losses in relation to the numbers of respondents in each region were reported in Australia and New Zealand (n = 1,097; 29% of respondents). This rate was over double that reported in North America (n = 467; 13%), and much greater than that from the areas with the next highest losses, namely Southern Europe (n = 73; 13%) and South East Asia (n = 39; 12%).

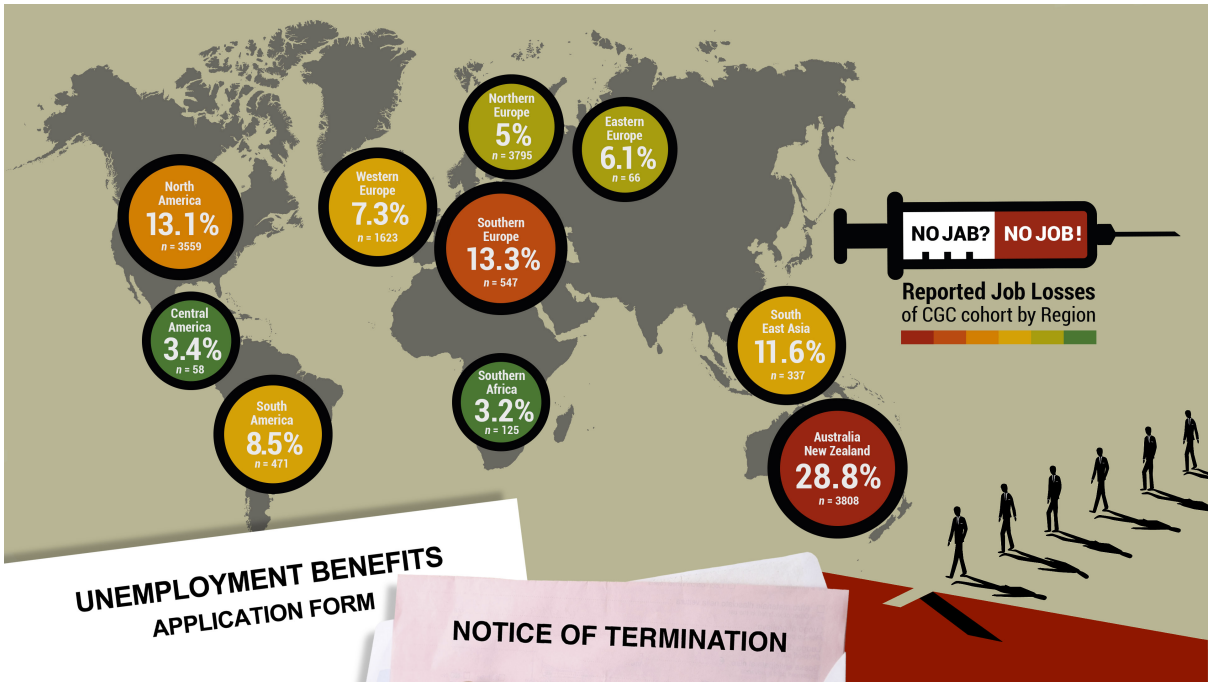

Figure 21. Job losses in different regions among the COVID-19 unvaccinated survey cohort as a proportion of respondents of working age (20 to 69 years).

Among the occupations affecting job losses, teachers were the most common, followed by nurses, those declared as self-employed, support workers and social workers.

p. Discrimination

The survey requested information about whether respondents had faced discrimination personally by members of society, or by their state (country).

Between 20% and nearly 50% of respondents, depending on region, reported being personal targets of hate, implying victimisation, owing to their COVID-19 vaccination status (Fig. 22). Proportionately, rates of such victimisation were highest in Southern Europe and South America and lowest in Western Asia and Southern Africa (although the number of respondents in these latter regions were substantially lower).

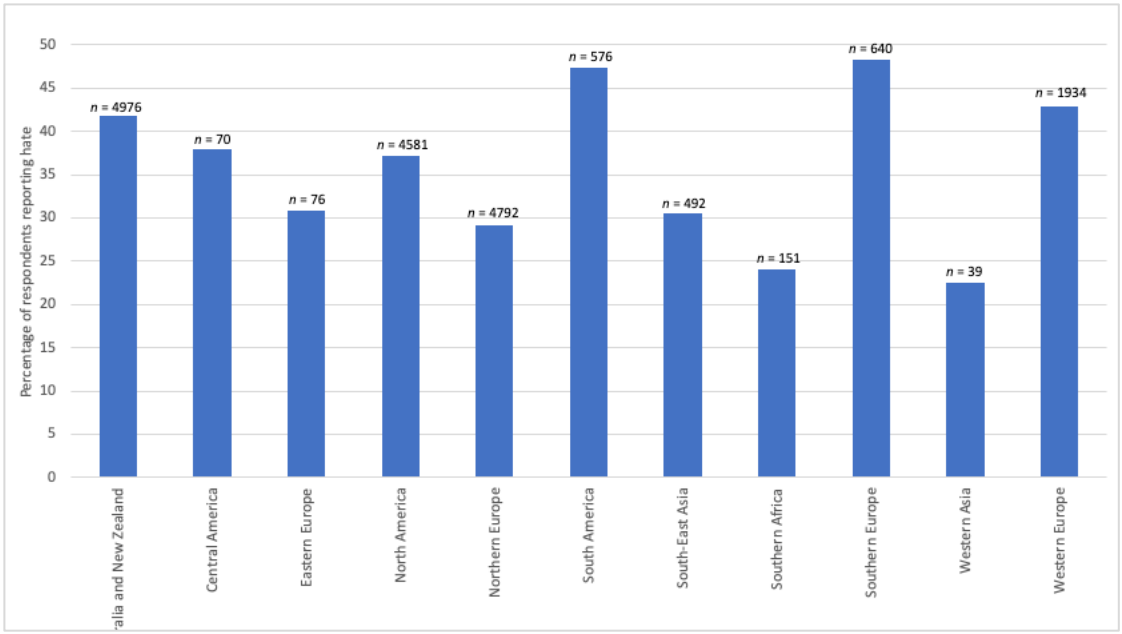

Figure 22. Percentage of respondents by region reporting hate or victimisation during the 5-month survey period.

Respondents reported feeling even more victimised by their respective states, with rates among respondents being greatest in Southern Europe (61%), Western Europe (59%), Australia and New Zealand (57%) and South America (57%) (Fig. 23).

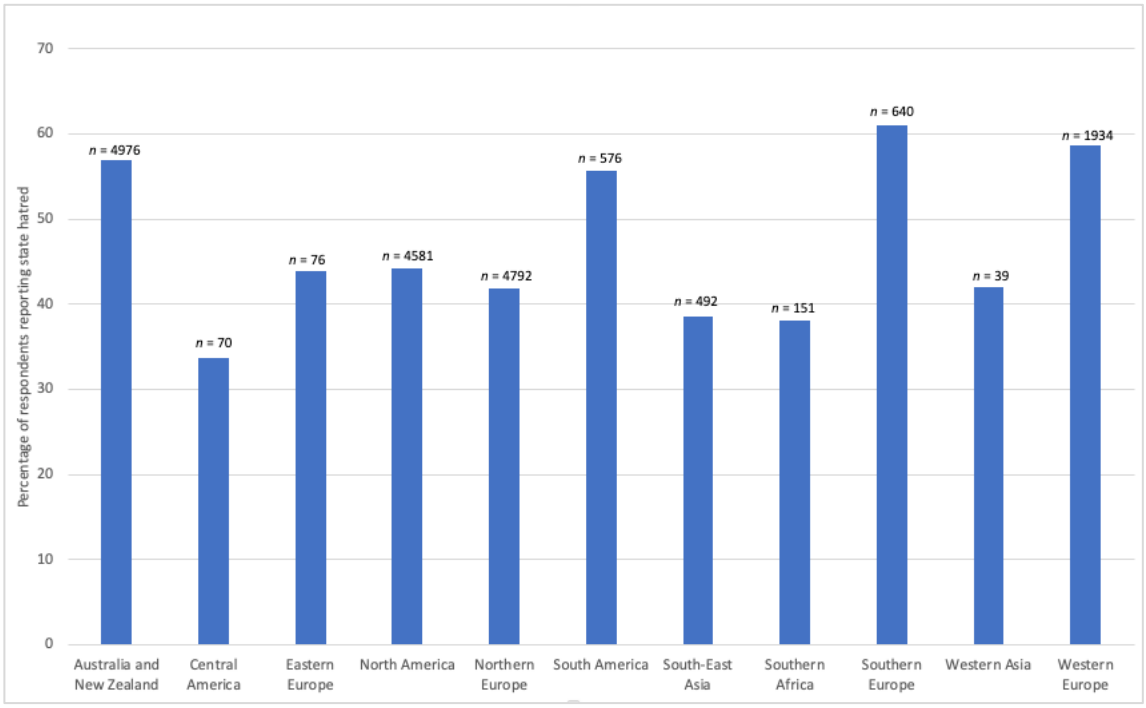

Figure 23. Reported state victimisation of 'unvaccinated' respondents.

DISCUSSION

As soon as COVID-19 intra-muscular genetic vaccines were issued with emergency use authorisation by national regulatory authorities towards the end of 2020, coercive pressure was placed on populations to receive the injections, starting with the oldest age groups and those deemed most vulnerable to severe COVID-19 disease. These genetic vaccines all utilised either the mRNA (Pfizer, Moderna) or adenoviral vector (e.g. AstraZeneca, Johnson & Johnson, Serum Institute of India, Gamaleya Institute) platform (Heinz and Stiasny, 2021).

Large numbers of people in different parts of the world have chosen to avoid the injections. Such dissenters have been widely stigmatised and marginalised by mainstream society, being referred to variously as "anti-vaxxers" or "conspiracy theorists". At the time of writing, Our World in Data (2022), which consolidates data from official country sources, suggests that 35% of the world population has yet to receive any COVID-19 injections, this number rising to 84% in low-income countries. The same database suggests 77% of the population of the African continent, equating to over 1 billion people, and nearly 31% of Europeans, equating to some 232 million people, have yet to receive any COVID-19 vaccines. Some 22% of Americans (73 million), 14% of Canadians (5.3 million) and 13% of Australians (3.3 million) have reportedly not yet received COVID-19 vaccines (Our World in Data, 2022).

The CGC is a grassroots, UK-based, internationally active organisation that came into being in mid-2021 to help support this substantial group of COVID-19 unvaccinated people who had already been subject to victimisation, stigmatisation, discrimination or marginalisation by mainstream society, especially in industrialised countries. By contrast, mainstream society immediately backed, in the absence of robust scientific evidence, global mass vaccination with what were initially experimental products reliant on novel platforms that had never before been tested at scale.

CGC respondents in the survey gave various reasons for declining COVID-19 injection, including distrust of health authorities, governments or the pharmaceutical industry, insufficient evidence of safety or effectiveness, or concerns over injuries or potential adverse reactions, for which the manufacturers typically have indemnity in the event of compensation for injuries resulting from vaccination.

Since the mass roll-out of experimental products was initiated in late 2020, the products have been found to deliver very little protection against transmission of the current, dominant, circulating, omicron variant (Amanatidou et al, 2022). This means the products do not fulfil the widely accepted purpose of a vaccine, which is to induce herd immunity by triggering an immune response that fully neutralises or sterilises the pathogen so preventing transmission. The World Health Organization (WHO) updated its description of 'herd immunity' on 31 December 2020, stating: "*WHO supports achieving 'herd immunity' through vaccination, not by allowing a disease to spread through any segment of the population, as this would result in unnecessary cases and deaths*" (WHO, 2020). Additionally, immunologic effectiveness even against disease was found to wane rapidly, within a few months (Israel et al, 2021; Ferdinands et al, 2022) implying that those relying on COVID-19 injections would

need to consent to regular, e.g. 6-monthly, exposure to the injections, a regimen that had yet to be subject to any safety trials.

There is a growing body of evidence that suggests that individuals reliant on naturally-acquired immunity develop broader-based and more robust immunity to SARS-CoV-2 than those reliant on vaccine-induced immunity (Gazit et al, 2021; Turner et al, 2021; Cohen et al, 2021). Such naturally-acquired immunity is likely to play a key role in dampening the host-pathogen population dynamics of the virus that appears to have been new to humanity prior to 2019, as well as reducing the risk of developing more virulent and transmissible variants (Koyama et al, 2022).

Jonathan Pugh and colleagues from the Faculty of Philosophy at the University of Oxford, argued in the *Journal of Medical Ethics* that "[w]*ithout compelling evidence for the superiority of vaccine-induced immunity, it cannot be deemed necessary to require vaccination for those with natural immunity*." (Pugh et al, 2022). It follows that discrimination against individuals who have elected to invoke natural immunity, in place of vaccine-induced immunity, would be unjust.

The data from the first 5 months of the CGC survey suggest that unvaccinated populations have not placed any significant additional burden on healthcare systems in their respective countries, as compared with those who consented to COVID-19 injections. In the UK, official data reveals that 33% of the population tested positive via either PCR or lateral flow tests during the whole pandemic, with the highest case rates occurring in late 2021 and early 2022 during the period of the CGC survey (GOV.UK, 2022). While some 25% of CGC survey respondents reported symptomatic COVID-19 disease during the 5 months of the survey, the incidence of disease does not itself indicate the burden on healthcare systems or society; this is better assessed by hospitalisation rates and mortality (there were no CGC data available for the latter).

The COVID-19 disease burden for the USA was estimated by the US Centers for Disease Control and Prevention (CDC) for the period February 2020 to September 2021 (CDC, 2022). The estimate included 124 million cases of symptomatic illness, 7.5 million hospitalisations and 921,000 deaths.

This equates, following a *pro rata* adjustment to include mean data over a 5-month period to match the survey period of CGC, an average of 10.4% of the US population had symptomatic disease, 0.6% of the US population was hospitalised, and 0.3% died with COVID-19 on their death certificate. By comparison, the self-selected, self-reported, CGC population sample reported 25% symptomatic disease (suspected or confirmed), with just 0.4% of the cohort (one-third less than the adjusted CDC estimate) being hospitalised. The CGC survey did not report on mortality given the self-reporting nature of data collection.

While the number in the CGC cohort reported to have experienced symptomatic disease is substantially greater than the CDC figures (25% versus 10.4%), this may be in part because the majority were suspected, rather than confirmed, cases, and so were more likely to have been reported. Cases manifesting as symptomatic disease were greatest among middle-aged people in the age band 50 to 69 years, which likely reflects age-dependent

manifestation of disease (Omori et al, 2020), and shielding among the oldest, most vulnerable age group.

The adjusted CDC estimates and the CGC survey data should be compared with caution as they originate from different regions of the world, they have been derived from different time periods, the CDC includes different proportions of vaccinated and unvaccinated over the 19 months of its collection, and both datasets relied on different reporting systems. However, it is of interest that the CGC cohort included a period (October 2021 to February 2022 inclusive) with the highest rates of SARS-CoV-2 infection in many parts of the world, including North America and Europe, during the first omicron wave.

Overall, the survey findings suggest there is no adequate basis on which to suggest the CGC cohort and, by extension, other health-aware populations who have elected to avoid COVID-19 injections, have represented a disproportionate burden on health systems compared with those who have received one or more injections.

To the contrary, almost 3 out of 4 respondents who had COVID-19 engaged in self-care using vitamins (D and C), minerals (notably zinc) and/or quercetin. Reported self-administration of these micronutrients, as well as ivermectin and hydroxychloroquine, dropped off dramatically for those who were hospitalised, presumably at least in part because of lack of support for use of natural products in hospital settings (a phenomenon that has been widely reported to the authors anecdotally). The percentage of populations engaging in preventative self-care using dietary supplements containing vitamins C, D, zinc or quercetin was highest in the USA at 71% of respondents, and somewhat lower, but still high (60-65%), in Europe, Australia and New Zealand.

These data compare favourably with the 47% of UK users of the Zoe app in the COVID-19 Symptom Study (n = 372,720) who reported using dietary supplements (Louca et al, 2021). This latter study found modest reductions in risk of infection (9-14%) among those routinely using vitamin D, multivitamins, omega-3 fatty acids or probiotics.

Among the most surprising findings in this COVID-19 unvaccinated cohort were the commonly reported instances of menstrual disturbances and bleeding abnormalities in women. Such disturbances have been reported in the literature in association with COVID-19 disease (e.g. Sharp et al, 2021), lifestyle changes associated with the pandemic (Bruinvels et al, 2021), and particularly following COVID-19 vaccination (e.g. Alvergne et al, 2021; Trogstad, 2022). The disturbances reported in the survey are likely to be related to COVID-19 disease, but other factors such as shedding exposure, chronic stress and changes to lifestyles caused by restrictions and related measures, as well as chronic spike protein exposure (‘spikopathy’) in domestic and occupational settings, could also have been involved.

There was a high proportion (around 40%) of respondents who reported mental health issues during the reporting period. This was in line with the effects of ongoing chronic, psychological stress associated with the pandemic, as found in other studies, 66 of which have been pooled as part of a comprehensive, global, systematic review and meta-analysis carried out by a group of Chinese researchers (Wu et al, 2021).

In this specific cohort that has placed more trust in the human immune system than in novel 'genetic vaccines', the mental health burden may be associated more to the human response to the pandemic, rather than psychological, fear-based reactions to any threat posed by the SARS-CoV-2 virus itself. This includes discrimination in the workplace, by peers or by family members, as well as victimisation by states (governments/health authorities) owing to 'unvaccinated' status.

Much of this disproportionate and discriminatory treatment is likely the result of widespread misunderstandings about, and over-stated benefits of, COVID-19 'vaccines', false claims over societal risks posed by the unvaccinated, media and state propaganda and coercion to ensure high rates of COVID-19 vaccination, institutional mandates, and the desire for in-group identity as explained by social identity theory (Scheepers and Derks, 2016).

In line with the scapegoating of those who have not consented to COVID-19 injection, it was also relevant that those respondents in the CGC survey who reported never wearing facial coverings or masks also experienced the lowest incidence of suspected or confirmed COVID-19 disease.

The scientific basis for the continued pressure on populations to receive COVID-19 'vaccines' and boosters remains elusive. There is still inadequate governmental and health authority recognition of the breadth and depth of injuries which are underreported to the Vaccine Adverse Event Reporting System (VAERS) in the USA (refer to OpenVAERS [www.openvaers.com] for summaries), the Medicines and Healthcare products Regulatory Agency (MHRA) Yellow Card system in the UK, EudraVigilance in Europe, and similar national reporting systems elsewhere.

Research by a German insurance company, BKK ProVita, suggested in February 2022 following its own analysis of available data, that there is already a "violent alarm signal" in Germany which implies substantial underreporting of injection injuries by the responsible health authority, the Paul Ehrlich Institute. The findings allude that between 4 and 5% of those to whom COVID-19 injections have been administered are engaging, or have engaged, with treatments to deal with COVID-19 injection injuries (Deutsche Wirtschaft Nachricten, 2022), amounting to 2.5 to 3 million people in Germany (Phillips, 2022).

Unfortunately, given the desire to uphold the mainstream narrative that wrongly insinuates mass roll-out of COVID-19 vaccines is the only means of resolving the pandemic, the executive responsible for disclosing these findings, Andreas Schöfbeck, was sacked by BKK following public release of the findings (Deutsche Wirtschaft Nachricten, 2022). This is another stark reminder of the discriminatory consequences of speaking out against the mainstream narrative even where ample supporting data are available and in the public interest

Similar findings from Israel suggest the scale of COVID-19 injection injuries, and the need for medical support for those affected, is much greater than widely reported (Guetzkow, 2022).

Thus, when comparing health system burdens between COVID-19 vaccinated and ever more constrained unvaccinated ('control') populations, the short- and long-term impacts of injection-related injuries needs to be accounted for.

There has been a seemingly deliberate effort by vaccine manufacturers and associated Phase 3 clinical trial study teams to remove data that allows comparison of outcomes between COVID-19 injected and un-injected (control) populations. The release of Pfizer data (322 documents at the time of writing) following the successful legal action in the USA by Public Health and Medical Professionals for Transparency (*phmpt.org),* with which the authors are associated, will likely in time confirm the misleading nature of the safety and effectiveness claims made by health authorities and vaccine manufacturers for the current crop of COVID-19 injections.

The findings from the present survey have five main limitations; 1) the respondents are self-selected and therefore not randomly selected; 2) the data are self-reported and therefore have not been verified independently; 3) the ~18,500 participant cohort may have been biased towards the most diligent, health-conscious participants given they all completed monthly surveys (although a number of cross-checks with the main ~300,000 cohort suggests this bias is likely low); 4) there is no available comparative 'control' population that includes individuals who have consented to one or more COVID-19 vaccines of different types; and; 5) the questionnaire design is limited and does not account for multiple variables that affect health status, such as socioeconomic status, urban, peri-urban or rural residence, diet, or lifestyle.

That being said, the survey data do offer indicative or suggestive evidence that the CGC COVID-19 unvaccinated cohort prioritises self-care and has placed very little burden on healthcare systems in respective countries. It follows, then, that the marginalisation, stigmatisation, coercion of and discrimination against this population group, one that has not consented to COVID-19 injections, is neither valid nor ethical. Such discrimination and restriction of liberties based on vaccination status may fall foul of relevant national anti-discrimination laws and international treaties, such as the UN's International Covenant on Economic, Social and Cultural Rights (ICESCR, 1966), which includes fundamental rights to liberty and security of person, freedom of movement, privacy, religion and belief, freedom of expression, and peaceful assembly.

The findings also amplify the great need to ensure that well conducted observational studies are carried out in order to compare outcomes, choices and potential discrimination in COVID-19 vaccinated and unvaccinated populations.

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DECLARATION OF INTERESTS

None of the authors have any competing interests.

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SUPPLEMENTARY INFORMATION

ANNEX 1: Profile questionnaire (completed on registration)

MEDICAL CONDITIONS

- Condition
- Month/Year diagnosed
- Further details

VACCINATIONS RECEIVED

- Vaccinations received
- Date received
- Informed consent given

TREATMENTS RECEIVED

- Treatment received
- Reason for treatment
- Duration of treatment
- Further details
- Month/Year received

ALLERGIES

- Allergy
- Date diagnosed

DISCRIMINATION EXPERIENCED

- Type of discrimination
- Discrimination Body/Org
- Location (Town/City)
- Further details
- Date (dd/mm/yyyy)

PERSONAL INFORMATION

- Have you had covid-19?
- Please choose your reasons for joining the Vaccine Control Group?
    - Rather not disclose
    - Fear – short-term adverse reactions
    - Fear – long-term adverse reactions

    - Poor trial study data
    - Distrust pharma
    - Distrust of Government
    - Prefer natural medicines
    - Previous vaccine injuries
- Which future vaccination programmes are you likely to opt into?
    - Rather not disclose
    - Any non-trial vaccinations
    - Flu vaccinations
    - Holiday vaccinations
    - No to all
- When did you last have a vaccination?
    - Rather not disclose
    - In last 12 months
    - Less than 5 years ago
    - More than 5 years ago
    - As a child
    - Never vaccinated
- Which blood group are you?
    - Rather not disclose
    - Unknown
    - A+
    - A-
    - B+
    - B-
    - AB+
    - AB-
    - O+
    - O-
- Would you be happy to give blood if it was categorised as without SARS-CoV-2 vaccination?
    - Unknown
    - Yes
    - No
- What is your biological sex?
    - Female
    - Male
- In which month were you born?
- What is your occupation?
- In which year were you born?
- In which state or county do you live?
- Which is the closest town or city to where you live
- In which country do you live?

ANNEX 2: CGC online survey monthly questionnaire

WELLNESS

Have you had any of the following ailments?

- No, I have generally been well
- Tiredness/Fatigue
- Common Cold
- Vomiting and Diarrhoea (not food poisoning)
- Bronchitis
- Pneumonia
- Whooping Cough
- Shingles
- Flu
- Herpes outbreak
- More headaches than usual
- Other

SUPPLEMENTS

Which of the following supplements have you taken regularly?

- Vitamin C
- Vitamin D
- Zinc
- Quercetin
- Ivermectin (prophylactically)
- Hydroxychloroquine
- Other
- None

MASKS

Are masks mandated in your work?

- Yes
- No
- N/A

How frequently do you wear a face mask?

- Never
- Rarely
- >2 hours most day
- >4 hours most days
- >8 hours most days

TESTING

Have you EVER had a PCR test?

- No
- Yes

Have you EVER had a LATERAL FLOW test?

- No
- Yes

How frequently have you had a PCR Test this month?

- Not Tested
- Daily
- Weekly Testing
- 2+ times per week
- Special occasions only

ILLNESS

Do you think you have had Covid-19 during this month?

- No
- Yes

If you have tested positive for COVID-19, how was it diagnosed?

- Not tested positive
- Self-diagnosed
- PCR test
- Lateral flow test
- Antibody test
- LAMP/LamPORE test

What if any Symptoms did you have?

- No symptoms
- Cough
- Fever
- Muscle or body aches
- Shortness of breath/difficulty breathing
- Loss of taste
- Loss of smell
- Fatigue
- Diarrhoea
- Other

On a scale of 1 to 10 with 1 being very mild and 10 being seriously ill, how ill were you?

- Not ill with covid-19
- 1

- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Did other family members of your household become ill?

- Not applicable
- Yes, before me
- Yes, after me
- Yes, before and after me
- Not at all

What treatments did you use?

- Not applicable
- No treatments taken
- Ivermectin
- Hydroxychloroquine (HCQ)
- Vitamin C
- Zinc
- Vitamin D
- Dexamethasone
- Prescribed antibiotics
- Zelenko protocol
- Other

Other treatments taken

EXPOSURE

Are you currently living with covid-19 vaccinated individual(s)?

- Yes
- No

Do you spend more than 2 hours per day inside alongside covid-19 vaccinated individuals?

- Yes
- No

BLEEDING

What changes if any, have you noticed to your menstrual cycle?

- No changes
- Rather not disclose
- Heavier bleeding
- Longer bleeding
- Unusual clotting
- Irregular periods
- Missed period
- Other

Other menstrual changes

Have you had any more nosebleeds than usual?

- No
- Yes

Comments about nosebleeds

Have you had any more bruising than usual?

- No
- Yes

Comments about bruises

LIFESTYLE

Due to declining the COVID-19 vaccination:

Are you finding it difficult to buy food?

- No
- Yes

Are you finding it difficult to play sports?

- No
- Yes
- N/A

Are you finding it difficult to access restaurants, theatres, museums etc..?

- No
- Yes
- N/A

Other comments on how your lifestyle is being impacted

MENTAL HEALTH

How is your mental health on a scale of 1 to 10, if 10 is 'Life is great' and 1 is 'Feeling there is no hope'?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

PERSONAL SAFETY

Are you concerned that your unvaccinated status may cause you to be a target of hatred?

- No
- Yes
- N/A

Comments on feeling targeted

Are you concerned that being unvaccinated is making you a target of the state?

- No
- Yes
- N/A

EMPLOYMENT

Due to declining the COVID-19 vaccination:

Have you been pressured into leaving your job?

- No
- Yes
- N/A

Have you been suspended from your job?

- N/A
- No
- Yes – with pay
- Yes – without pay

Have you been dismissed from your job?

- No
- Yes
- N/A

Is your employment under threat?

- No
- Yes
- N/A

Is it becoming difficult to do your job because of people's attitude towards you?

- No
- Yes
- N/A

Are you finding it difficult to find employment?

- No
- Yes
- N/A