

Exploring the public's perceptions of the process of using COVID-19 immunity certificates

Report, version 1.0

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IMMUNE Research Team

<https://immunitypassportsdesign.org/>



Loughborough
University



Brunel
University
London



Arts and
Humanities
Research Council

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1. Introduction

The COVID-19 outbreak began in December 2019, and by March 2020 it became a global pandemic[1]. The first COVID-19 vaccine by Pfizer/BioNTech received emergency approval in December 2020[2], and the first immunity certificate, “Green Pass” was announced in February 2021 by Israel[3]. However, such certificates have been surrounded by controversy since the early days of the pandemic. There is an increasing amount of grey literature, academic opinion papers and original research on the topic of COVID-19 immunity certification, but little is known about people’s actual perceptions of the certification process..

The aim of this study was to explore public’s perceptions about their experiences of the immunity certification process. Specifically, we aimed to address the following two research questions: 1. What is the perceived level of confidence in performing a series of actions/tasks for demonstrating proof of immunity? 2. What is the level of agreement with a series of statements relevant to operational issues about immunity certificates? We explored the aforementioned questions both for members of the public who had previous experience in the use of immunity certificates for international travel or domestic purposes, and those who while they had proof of immunity they did not have a chance to use their certificates.

To address the aforementioned research questions we ran a UK-wide questionnaire survey. The questions of the survey were informed by the findings of a series of focus groups, participatory design workshops and interviews[4][5].

Our findings provide unique knowledge about users’ perceptions of the COVID-19 certification process. This knowledge has practical implications for improving the design of services around immunity certificates and can be used by the government, public health policy makers and the NHS to support evidence-based decisions about the implementation of immunity certificates in the United Kingdom. Finally, the results of the present survey support and validate the findings from our previous qualitative research[4] and findings from another UK-wide questionnaire survey investigating the use of immunity certificates for domestic purposes[6].

2. Methodology

Immunity certificates have been at the centre of controversy as their value polarises opinions amongst academics, policy makers and the general public. The [IMMUNE](https://immunitypassportsdesign.org/) project¹ (or Immunity Passport Service Design) funded by AHRC (UKRI COVID-19 Research Call) aims to conduct research that contributes to our understanding of immunity certificate services. As part of this

¹ <https://immunitypassportsdesign.org/>

project, we have conducted a mix of quantitative and qualitative research including an online questionnaire survey[6], interviews, focus groups and participatory design workshops[4,5]. The present study aims to complement our findings from the focus groups and participatory design workshops by exploring the public's perceptions around the process of obtaining COVID-19 immunity certificates, perceptions on operational issues around immunity certificates and concerns about the use of mobile phones to prove the COVID-19 immunity status.

The online questionnaire survey was design using the platform OnlineSurveys (*onlinesurveys.ac.uk*) and the responses were collected using Prolific (*prolific.co.uk*) on the 4th of November 2021. We gathered responses from a total of 600 individuals who were demographically representative of the UK population in terms of gender, age, and ethnicity. We excluded 28 participants who failed the attention checks, 2 incomplete responses, and 54 participant who were not fully vaccinated nor had previous COVID-19 infection. The rationale for this decision is that the present study is aimed at members of the public who are eligible to use COVID-19 immunity certificates in the UK, therefore the survey questions are only relevant for those who are immune from COVID-19. Figure 1 presents the map of our survey and the logic of rerouting respondents based on their answers. All participants were 18 or older and were compensated £0.85/person for their participation in the study. All materials including dataset, questionnaire survey and ethics approval can be accessed on OSF (<https://osf.io/ra5pu/>, DOI 10.17605/OSF.IO/RA5PU). Ethics approval was obtained from the College of Engineering, Design and Physical Sciences Research Ethics Committee at Brunel University London (Ref. 32849-LR-Oct/2021- 34580-1) on the 28th of October 2021. Informed consent was obtained from all respondents prior to the beginning of the survey. Respondents were allowed to withdraw from the survey at any time.

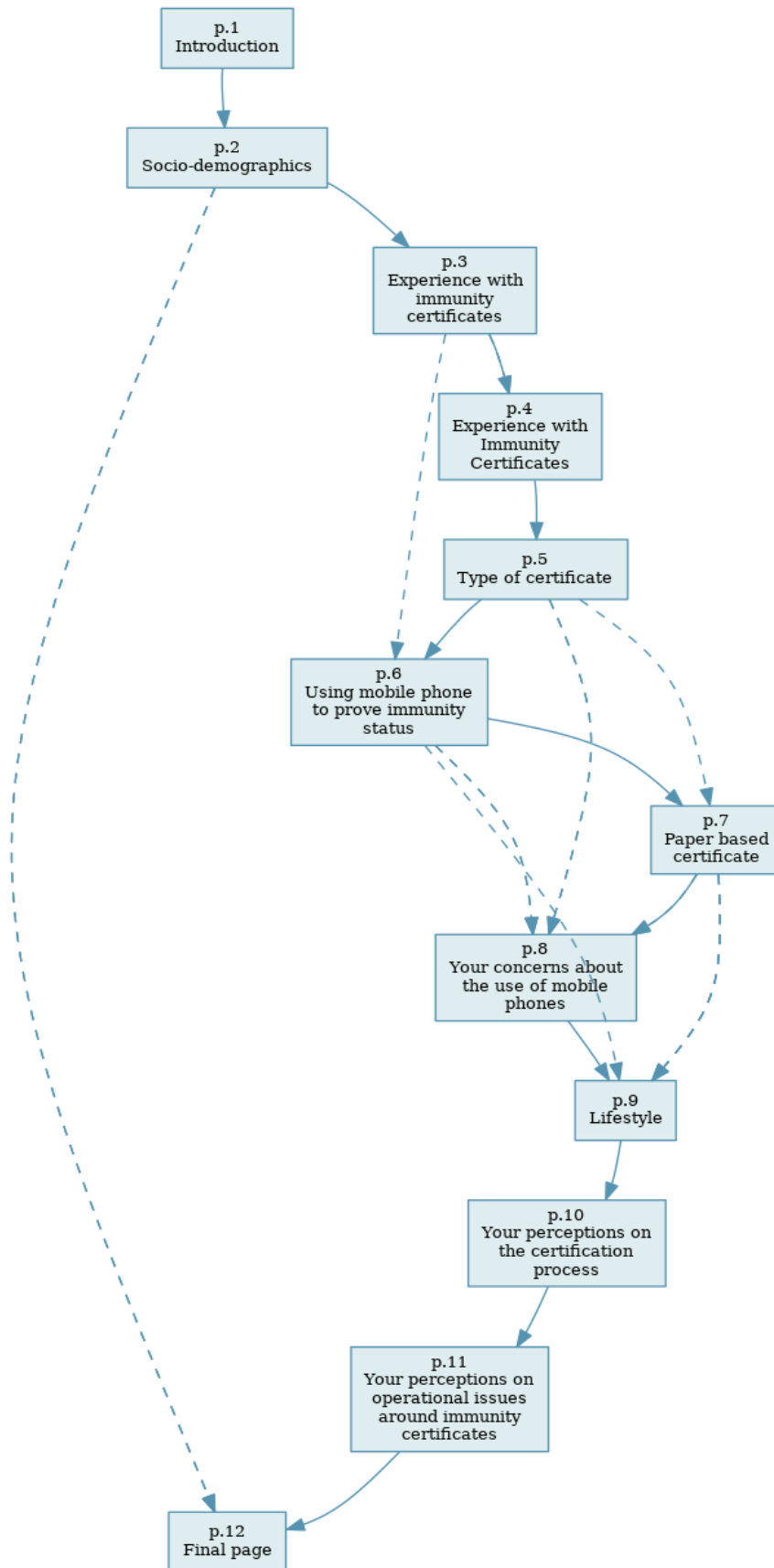


Figure 1 Survey Map

3. Key Findings

What concerns do people have about using mobile phones to prove their COVID-19 immunity status?

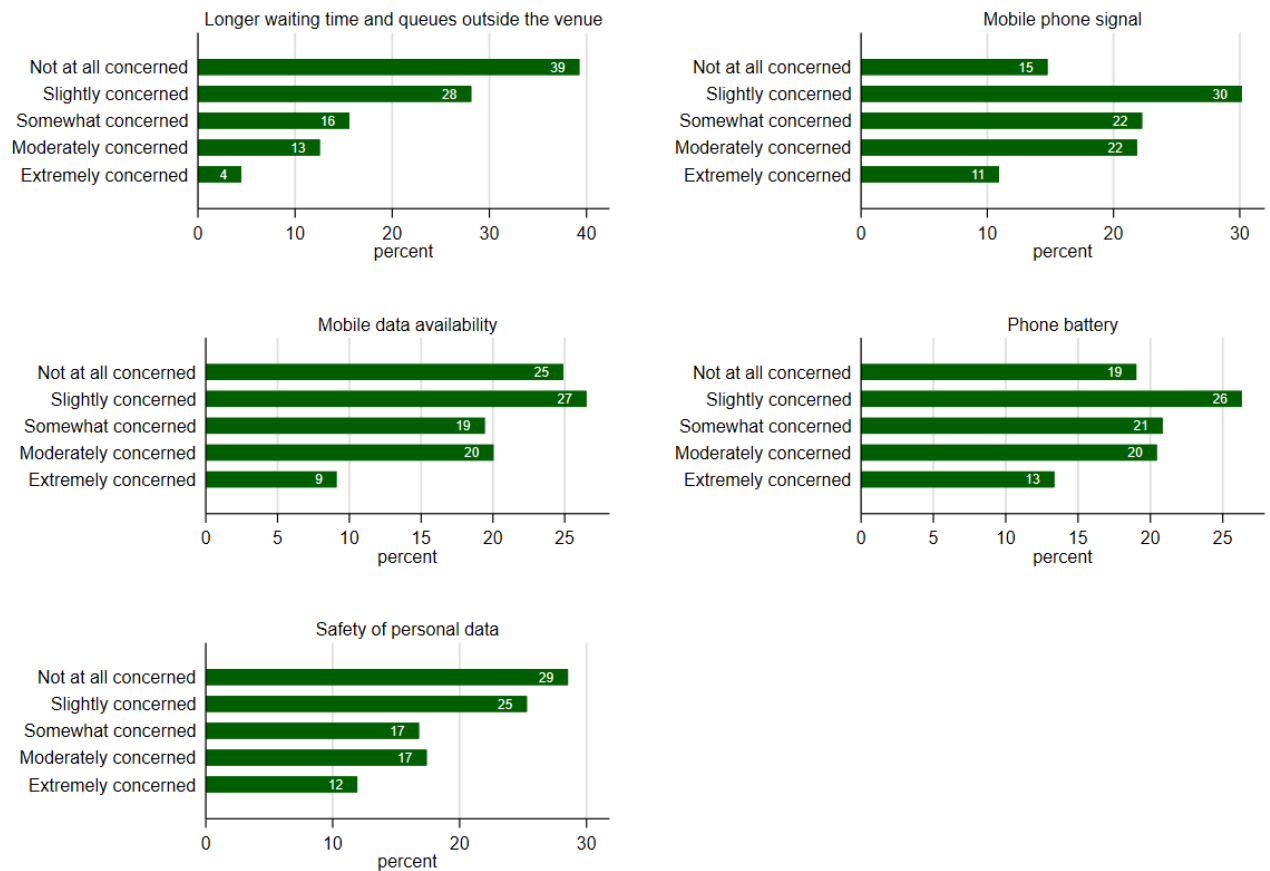


Figure 2 People’s concerns about using mobile phones (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

Most responses in Figure 2 indicate no concern or slight concern around the use of mobile phones to prove one’s COVID-19 immunity status. However, it is important to note that there is still concern around the safety of personal data, with 12% and 17% of respondents being extremely and respectively moderately concerned about their data when using mobile phones to prove their immunity status. This finding highlights one of our previous recommendations that the government should engage in health campaigns that inform the public of how their data is being handles (e.g. in the NHS app), in order to mitigate those concerns[6].

People's perceptions on the certification process: locating and understanding information

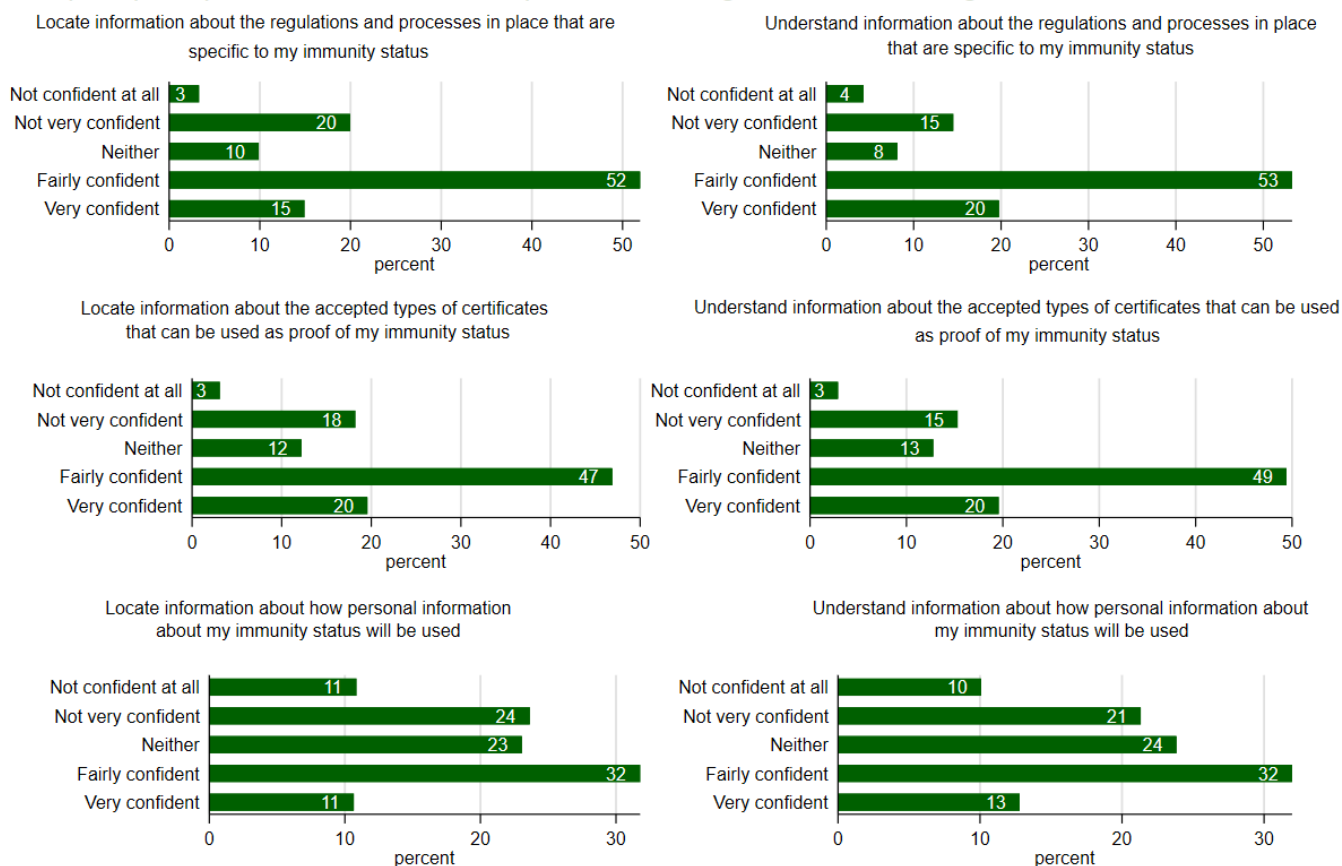


Figure 3 People's perceptions on the certification process (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

Figure 3 presents people's perceptions on the process of immunity certification and confirms some of our focus groups findings[4]. Specifically, a great part of respondents reported being fairly or very confident in understanding information related to immunity certificate processes. However, opinions were more divided when it came to locating the same information.

Similarly in Figure 4, respondents were confident in downloading, accessing, and using the NHS app to prove their COVID-19 immunity status. Most respondents were also confident in using the paper-based certificate, but not as confident in how to order the paper-based certificate. Interestingly, 16% and respectively 25% of respondents did not know who to contact with question on COVID-19 immunity certification. This observation further confirms our previous recommendation regarding the need of public health campaigns informing the public on COVID-19 immunity certificates[6].

People's perception on the certification process: using the certificate

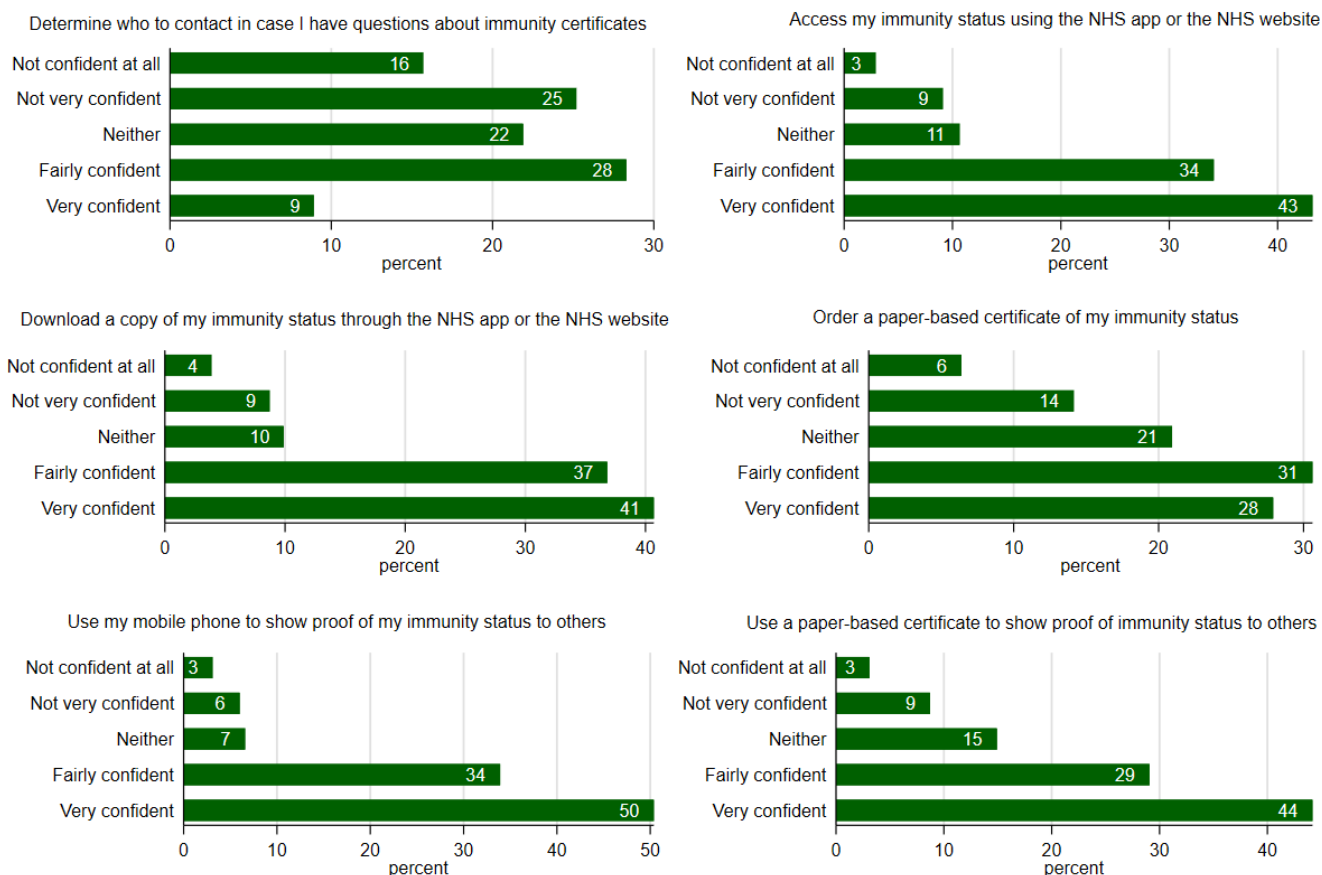


Figure 4 People's perceptions on the certification process (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

Figure 5 presents people's perceptions on the operational issues around immunity certificates, specifically the use of other health safety measures together with immunity certificates. More than half of our respondents agreed that the use of immunity certificates for domestic purposes should become compulsory (39% "Somewhat agree" and 28% "Strongly agree"), and almost half also agreed to the use of lateral flow tests (LFT) after events even if the attendee used an immunity certificate (32% "Somewhat agree" and 15% "Strongly agree").

On the other hand, not as much support was displayed for the use of masks and social distancing for individuals who possessed an immunity certificate. Almost half of the respondents showed disagreement with these measures (19% "Somewhat agree" and 29% "Strongly agree"). A common point for many respondents (46% "Somewhat agree" and 31% Strongly agree") was that feedback should be asked of the public regarding the use of immunity certificates.

People's perception on operational issues around immunity certificates

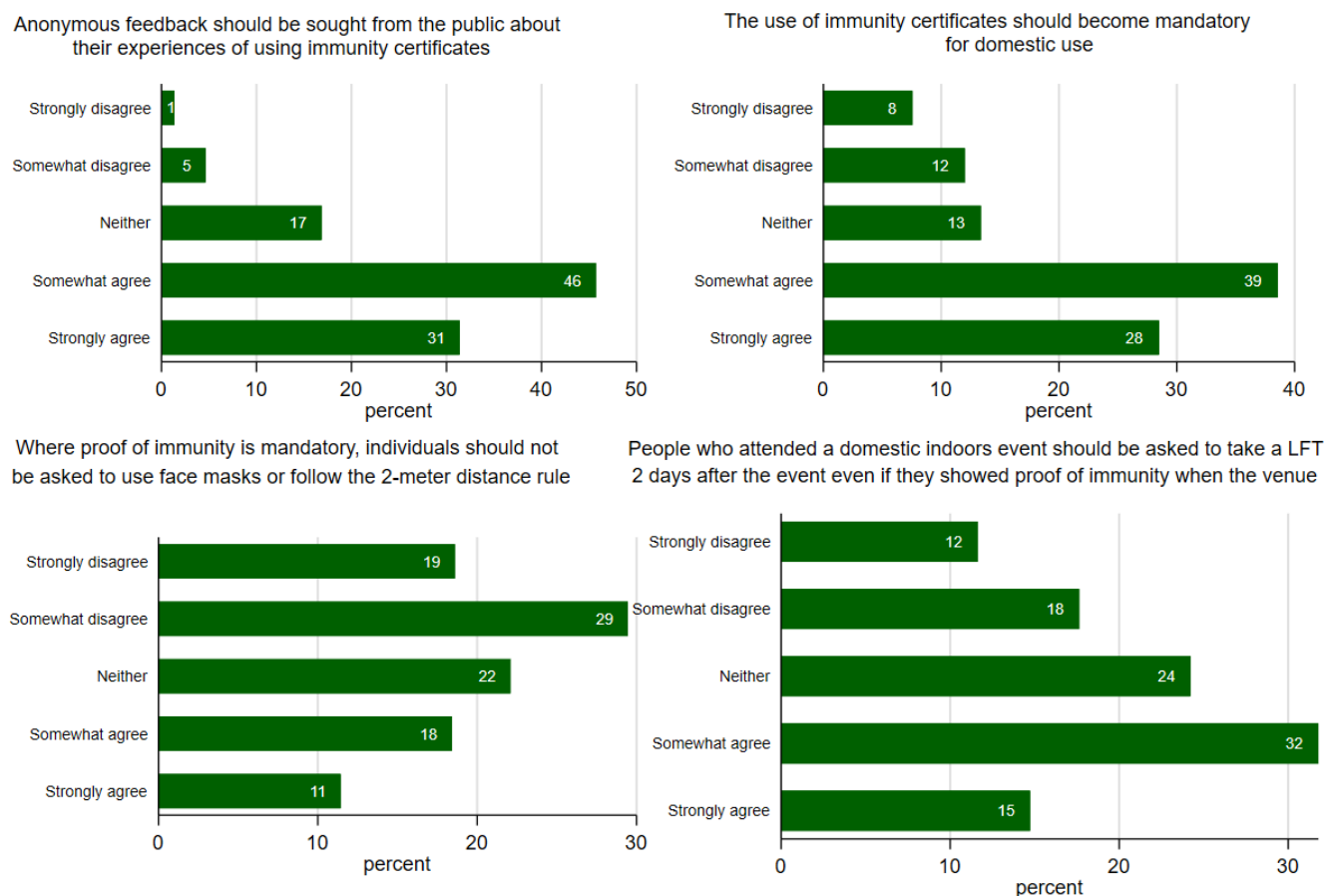


Figure 5 People's perceptions on operational issues around immunity certificates (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

Table 1 presents respondents' experience with immunity certificates. Only 17% (88) of respondents had previous experience with immunity certificates. Out of those, the majority (48.86%) used it for international travel, which was the first industry to make immunity certification compulsory. Another 37.5% only used immunity certificates domestically with the UK, and a small proportion (13.64%) used it both domestically and internationally.

Table 1 Respondents' past experience with COVID-19 immunity certificates

	Frequency	Percent
Both	12	13.64%
Domestic use (e.g. theatre, nightclub etc.)	33	37.50%
Travel (e.g. international travel)	43	48.86%
Total	88	100%

Furthermore, Figure 6 presents a comparison of the perceptions on the certification process between those who have had real life experience with COVID-19 immunity certificates and those who have not. It appears that respondents who had experience using immunity certificates are more confident in locating and understanding information on immunity certificates.

The same pattern can be observed in Figure 7, where a comparison of perceptions on the certification process including the use of certificates is presented. However, it is interesting to note that both those with experience of using immunity certificates and those without are not confident (“Not at all confident” and “Not very confident”) in determining who to contact with questions about immunity certificates. This suggests that while there is information out there on immunity certificates, it needs to be better directed so that users can access it easily.

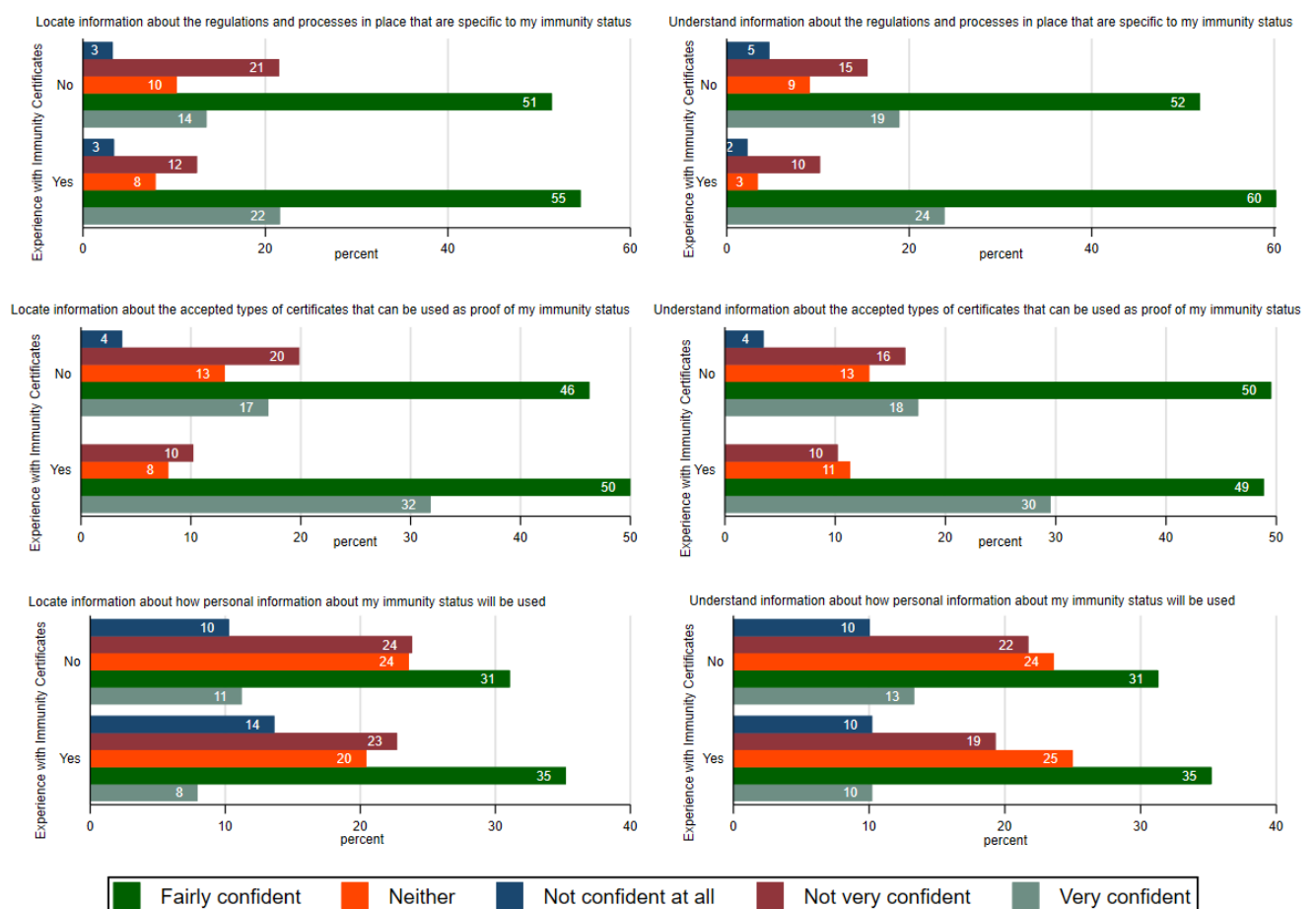


Figure 6 People's perceptions on the certification process (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

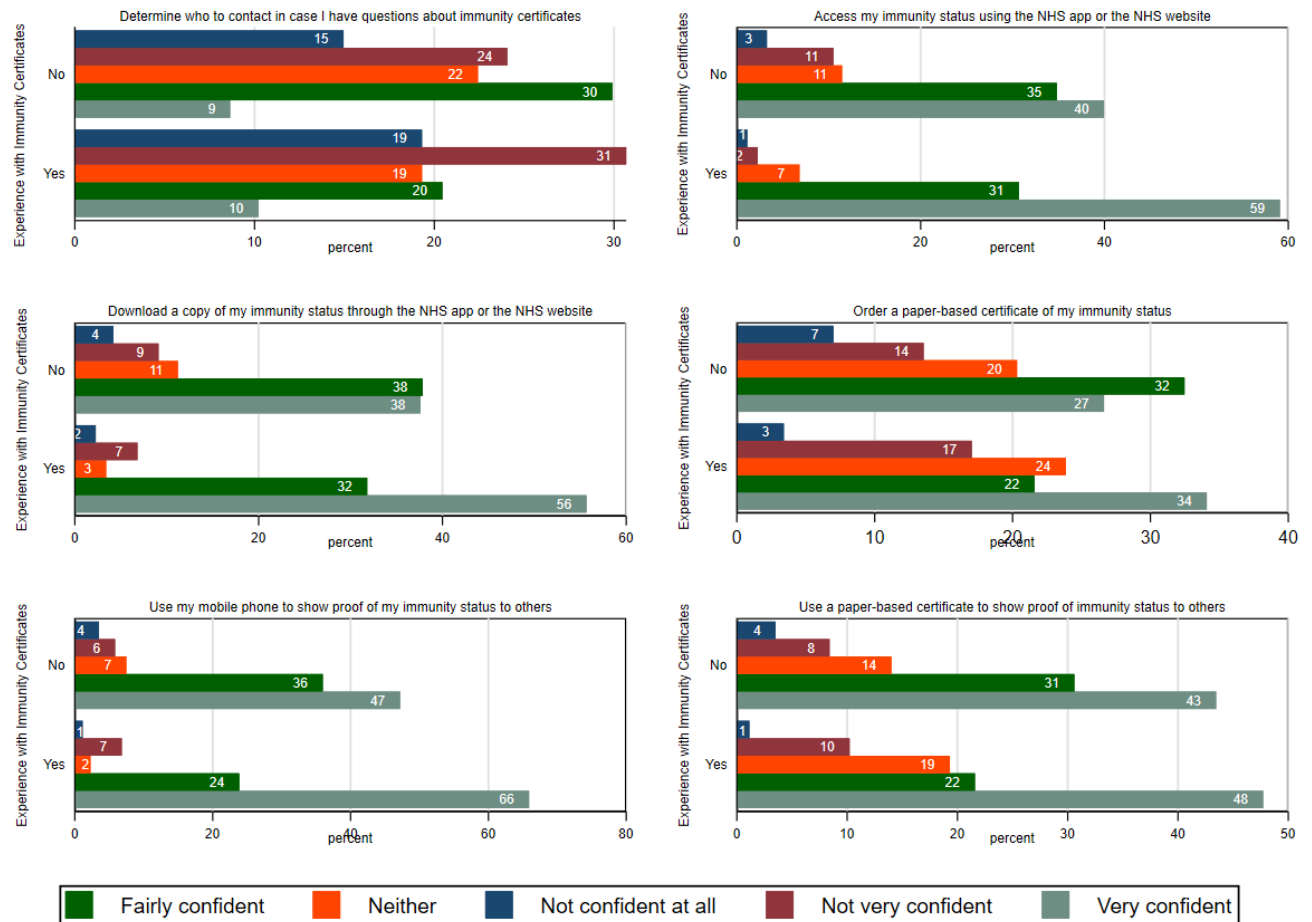


Figure 7 People's perceptions on the certification process (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

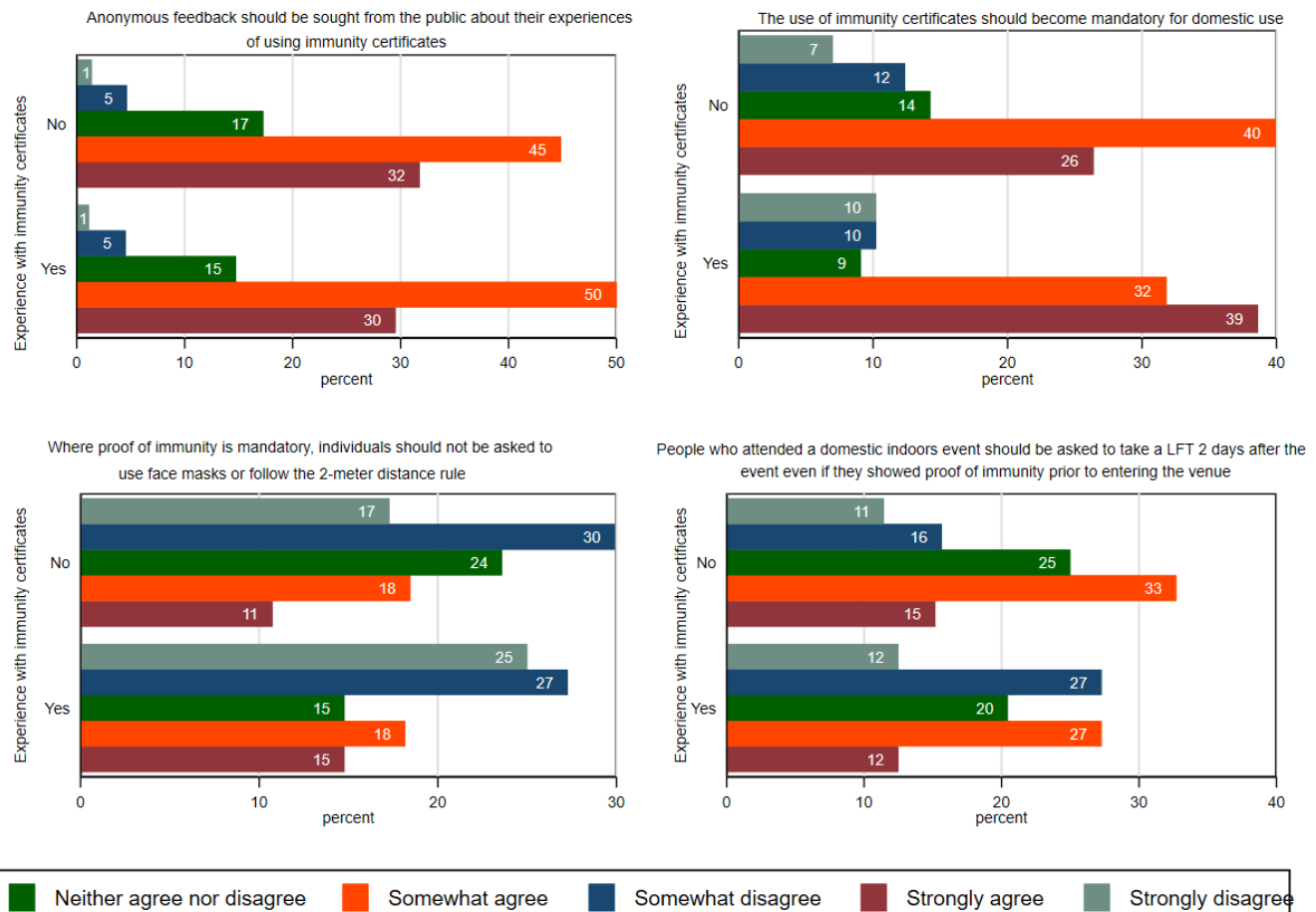


Figure 8 People's perceptions on operational issues around immunity certificates (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

Figure 9 illustrates that overall people who never used to attend plays, visit museums or galleries before the COVID-19 pandemic were more concerned about the use of mobile phones to prove their immunity status compared to those who occasionally or frequently attended such events, Figures 10 and 11 shows that people who never used to attend plays, visit museums or galleries before the COVID-19 pandemic were less confident in locating and understanding information on immunity certificates, and using immunity certificates.

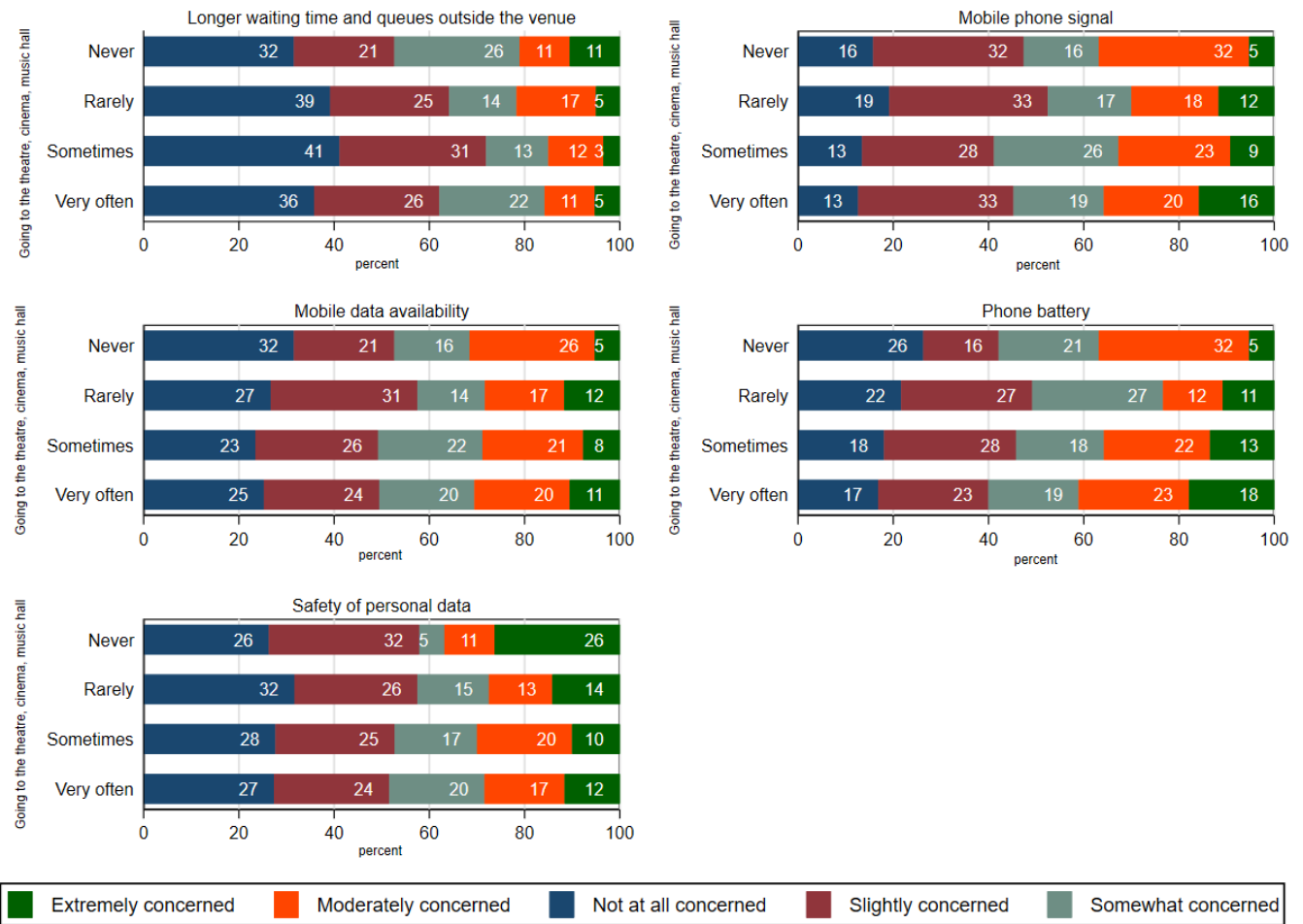


Figure 9 People's concerns about using mobile phones to prove immunity status by lifestyle (attending plays, museums etc.) (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

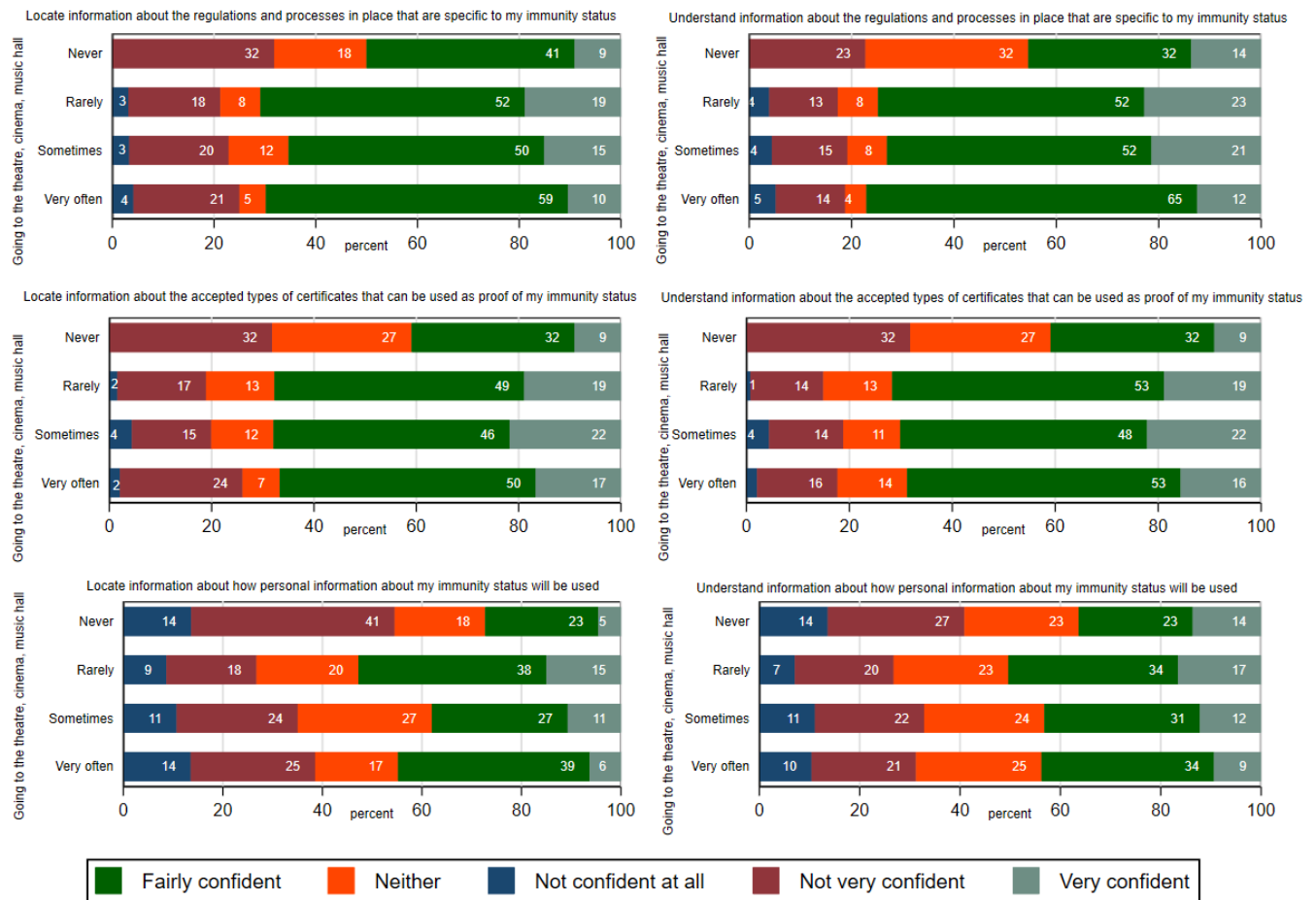


Figure 10 People's perceptions on the certification process by lifestyle (attending plays, museums etc.) (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

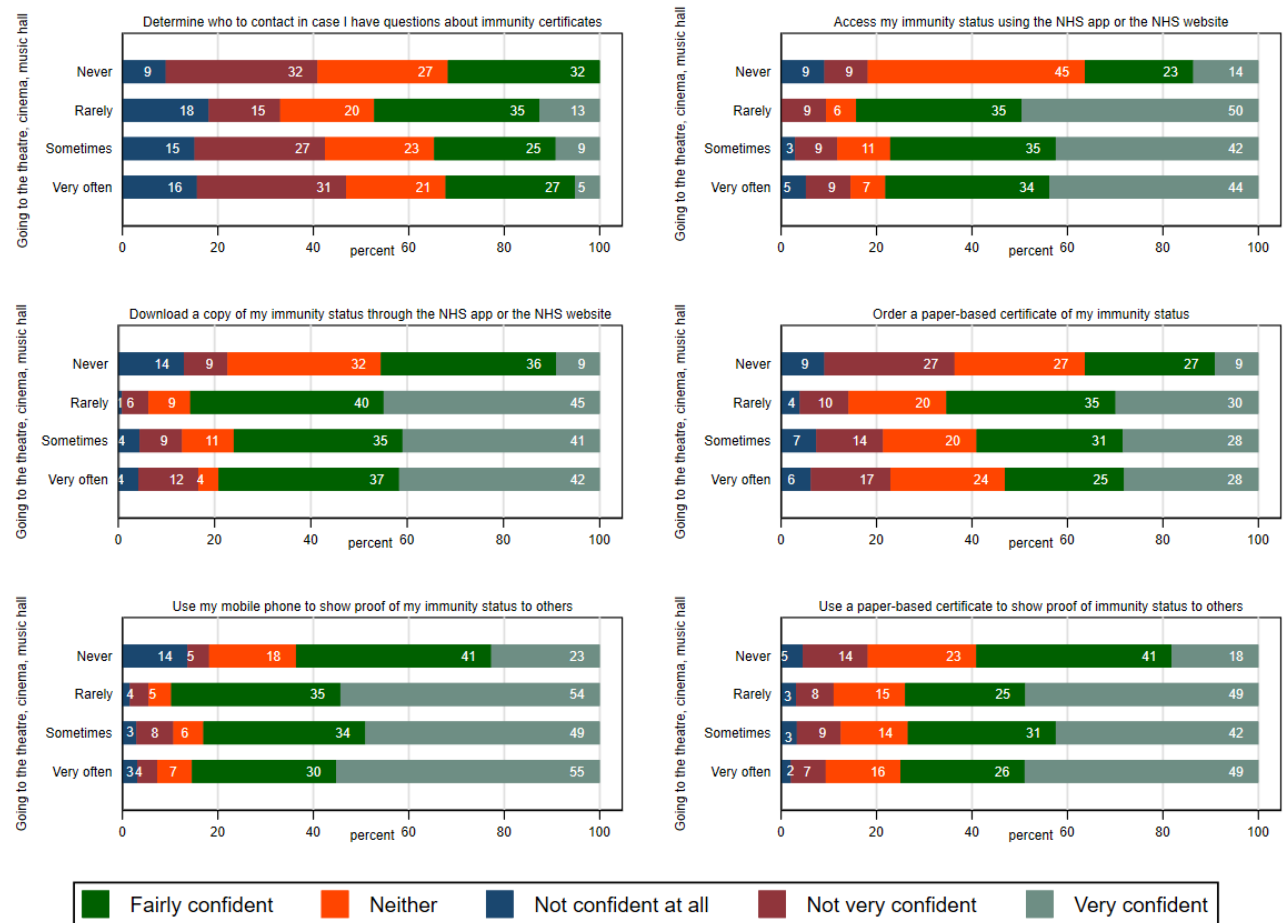


Figure 11 People's perceptions on the certification process by lifestyle (attending plays, museums etc.) (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

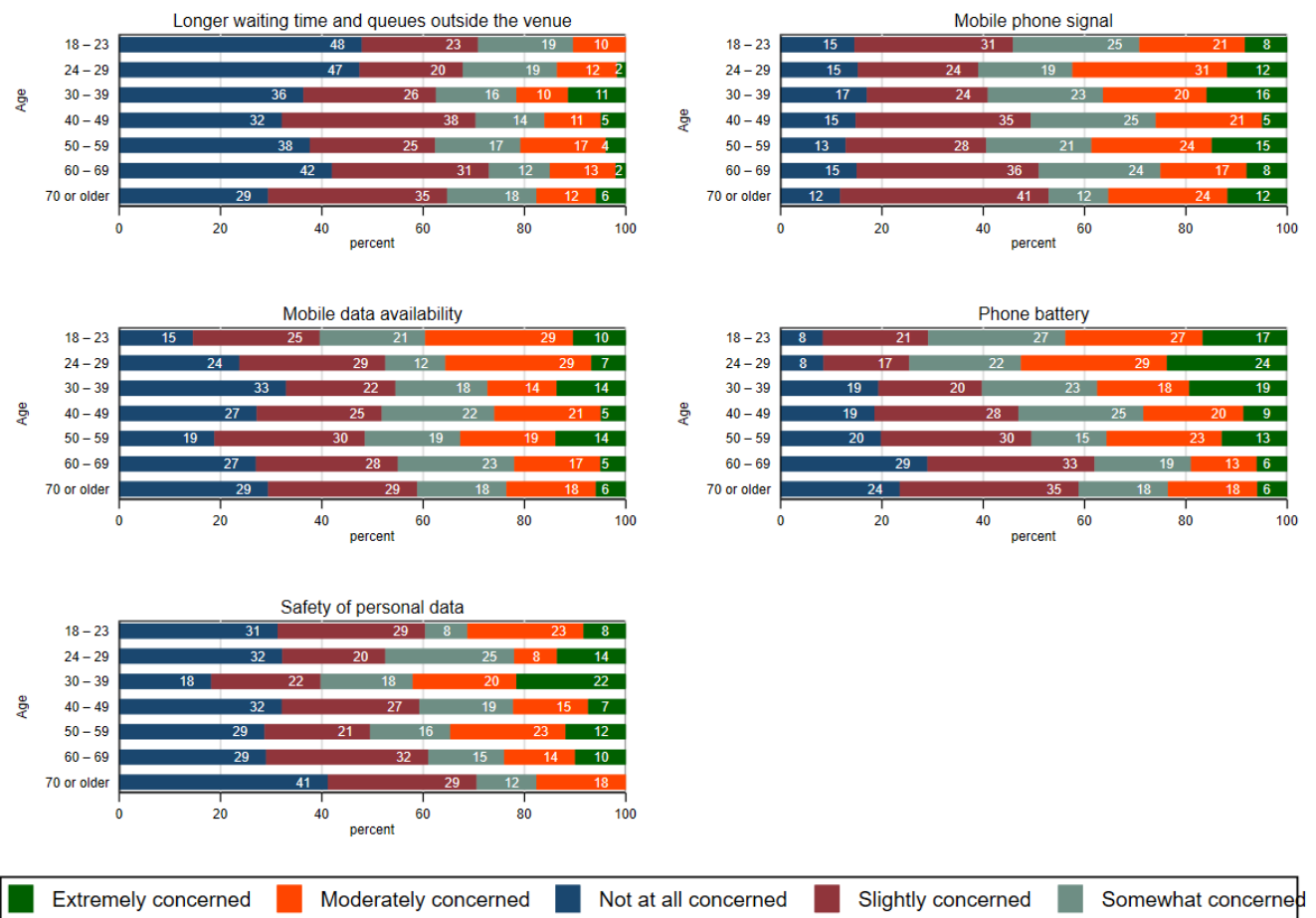


Figure 12 People’s concerns about using mobile phones to prove immunity status by age (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

Figure 12 shows that younger people between the ages 18-23 and 24-29 were more concerned about using mobile phones to prove their immunity status, particularly because of data availability and phone battery.

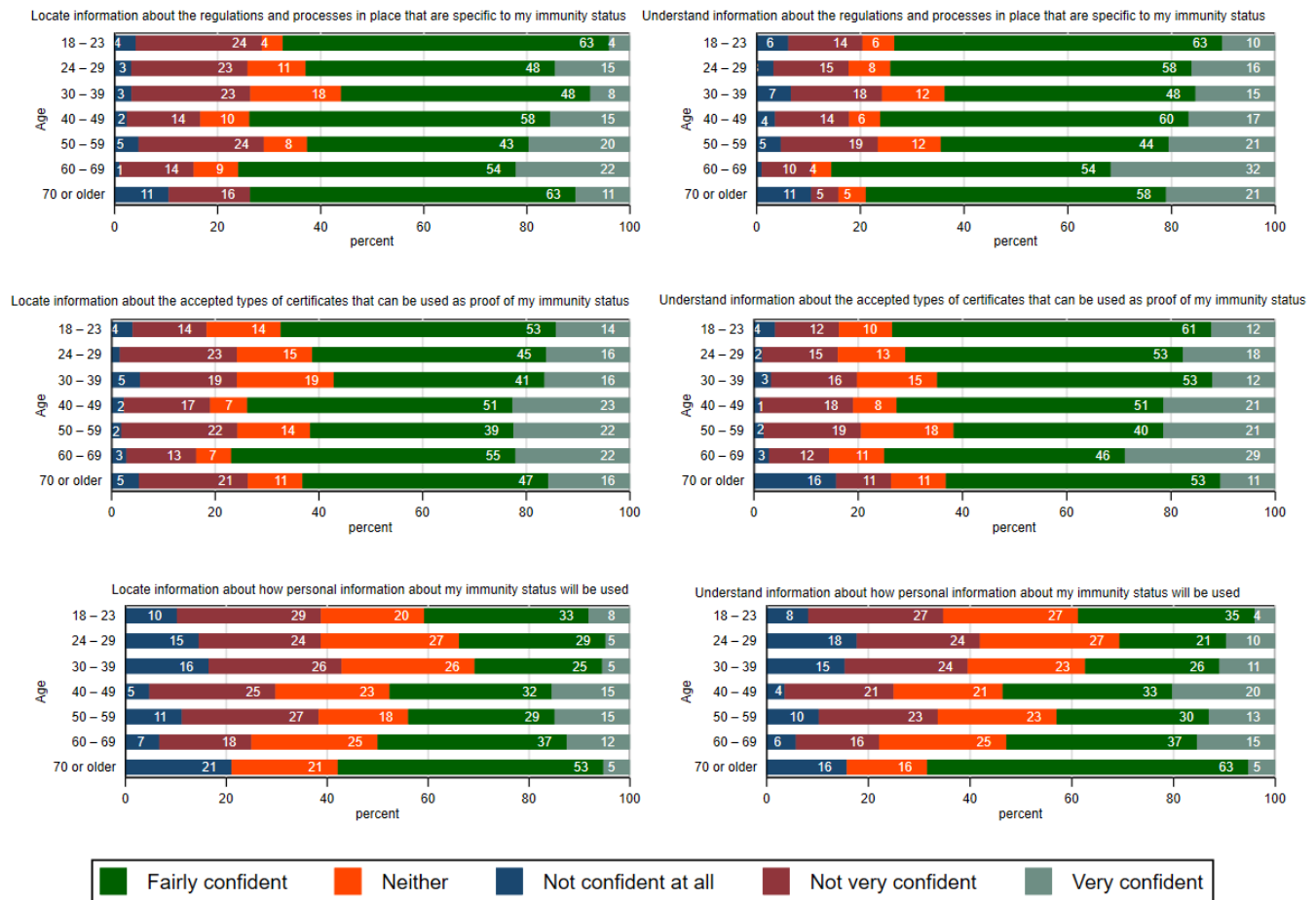


Figure 13 People's perceptions on the certification process by age (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

Figure 13 shows that older people, between the ages of 60 and 69 or over 70 were slightly more confident in locating and understanding information on immunity certificates compare to middled aged respondents or even younger respondents

Figures 14 and 15 show that respondents from ethnic minorities (BAME) were more concerned about using mobile phones to prove their immunity status and less confident about locating and understanding information on immunity certificates than white respondents.

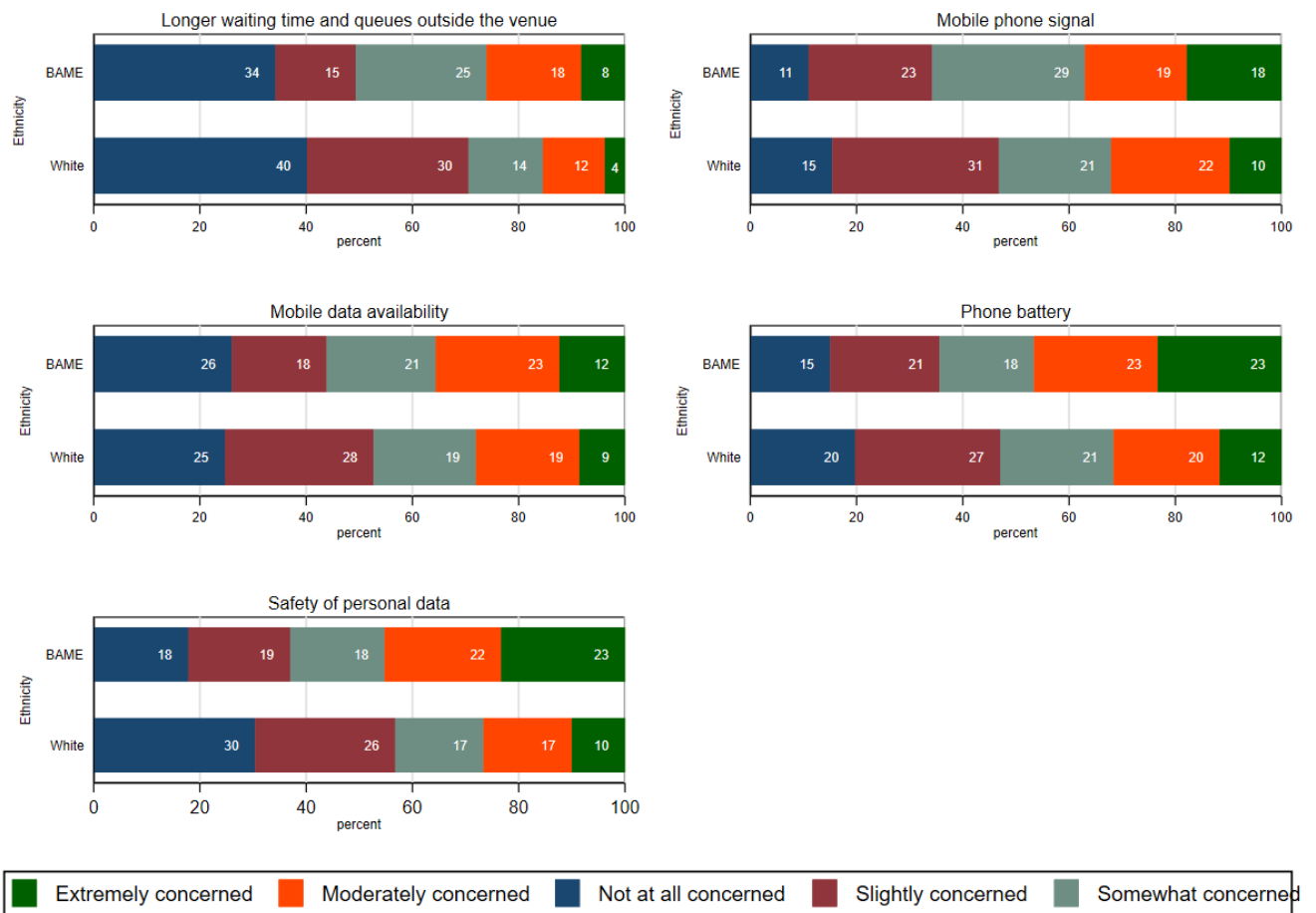


Figure 14 People’s concerns about using mobile phones to prove immunity status by ethnicity (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

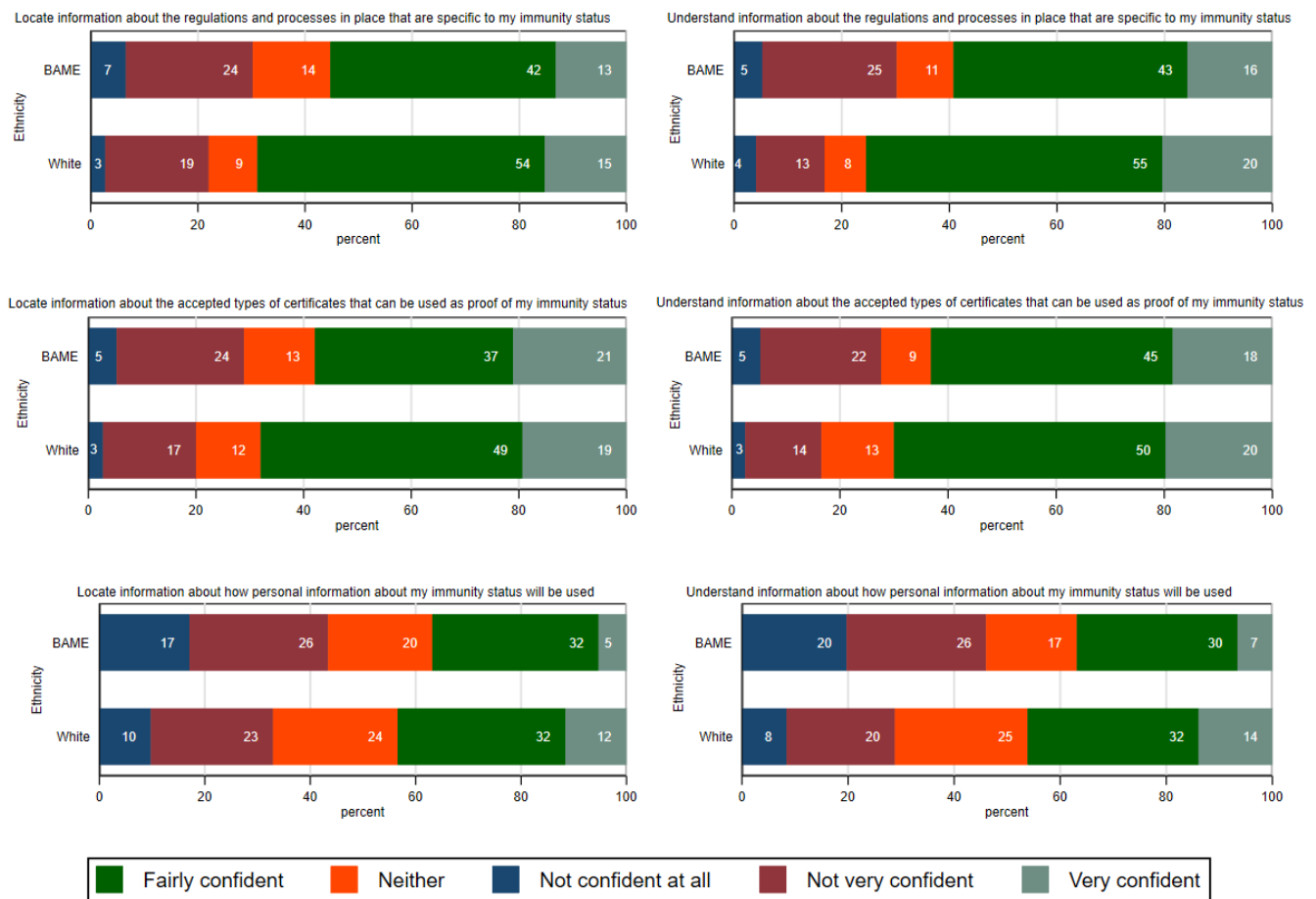


Figure 15 People's perceptions on the certification process by age (<https://osf.io/ra5pu/>). The figures displayed are expressed in percentages (%).

References

1. World Health Organization. Listings of WHO's response to COVID-19. 2020 [cited 9 Nov 2021]. Available: <https://www.who.int/news/item/29-06-2020-covidtimeline>
2. World Health Organization. WHO issues its first emergency use validation for a COVID-19 vaccine and emphasizes need for equitable global access. 2020 [cited 9 Nov 2021]. Available: <https://www.who.int/news/item/31-12-2020-who-issues-its-first-emergency-use-validation-for-a-covid-19-vaccine-and-emphasizes-need-for-equitable-global-access>
3. Wilf-Miron R, Myers V, Saban M. Incentivizing Vaccination Uptake: The “green Pass” Proposal in Israel. *JAMA - J Am Med Assoc.* 2021;325: 1503–1504. doi:10.1001/jama.2021.4300
4. Landa-Avila IC, Thomas Gyuchan J, Sassoon I, Colak O, Niculaescu C-E, Harvey T, et al. COVID-19 Immunity certificates as complex systems: Applying systems approaches to explore needs, risks, and unintended consequences. *Relating Systems Thinking & Design Symposium RSD10.* RSD10; 2021.
5. Landa-Avila C, Colak O, Niculaescu C, Harvey T, Jun GT, Sassoon I, et al. Mapping COVID-19 Health Certificates as a Complex System (version 1.1). 2021. doi:10.17028/rd.lboro.14933391.v1
6. Niculaescu C-E, Sassoon IK, Landa-Avila IC, Colak O, Jun GT, Balatsoukas P. Why “one size fits all” is not enough when designing COVID-19 immunity certificates for domestic use: a UK wide cross-sectional online survey. *medRxiv.* 2021; 2021.10.12.21264898. doi:10.1101/2021.10.12.21264898

Appendix

Table A Demographic characteristics of sample

		Freq.	Percent	Cum.
Age	18 - 23	49	9.50%	9.50%
	24 - 29	62	12.02%	21.51%
	30 - 39	91	17.64%	39.15%
	40 - 49	84	16.28%	55.43%
	50 - 59	107	20.74%	76.16%
	60 - 69	104	20.16%	96.32%
	70 or older	19	3.68%	100%
Gender	Female	265	51.36%	51.36%
	Male	250	48.45%	99.81%
	Prefer not to say	1	0.19%	100%
Ethnicity	Asian	28	5.43%	5.43%
	Black	14	2.71%	8.14%
	Hispanic/Latino	3	0.58%	8.72%
	Mixed	13	2.52%	11.24%
	Other	7	1.36%	12.60%
	South Asian	11	2.13%	14.73%
	White	440	85.27%	100%
Parent/legal guardian of children between 13-17 years old	No	451	87.40%	87.40%
	Yes	65	12.60%	100%
High COVID-19 risk category	No	398	77.13%	77.13%
	Yes	118	22.87%	100%
Immunity Status	First dose of vaccine and previous infection	10	1.94%	1.94%
	Fully vaccinated (full course of vaccination with or without the booster)	498	96.51%	98.45%
	Previous infection (natural immunity)	8	1.55%	100%
	<i>All</i>	<i>516</i>	<i>100%</i>	

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IMMUNE TEAM

Principal Investigator:

Dr Panos Balatsoukas (Loughborough University) – Contact:
p.balatsoukas@lboro.ac.uk

Co-Investigators:

Dr Isabel Sassoon (Brunel University London)

Dr Gyuchan Thomas Jun (Loughborough University)

Research Assistants:

Cecilia Landa-Avila (Loughborough University)

Ozlem Colak (Loughborough University)

Corina Niculaescu (Brunel University London)

Tina Harvey (Loughborough University)

Ethics approval

Ethical clearance to run the questionnaire was obtained from the College of Engineering, Design and Physical Sciences Research Ethics Committee, Brunel University London, ref: 32849-LR-Oct/2021- 34580-1

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