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Population preferences for inclusive COVID-19 policy responses

Currently, countries across the world are applying policies designed to combat the COVID-19 pandemic, such as lockdowns, international travel restrictions, subsectoral closures, and adjustments in public transportation. Although these restrictions can be effective in controlling the epidemiological dynamics, they also need to be assessed in terms of their acceptability by populations. The preferences of populations should matter, particularly after months of efforts, and the new requirements of lockdowns in several European countries despite these efforts.

Between May 4 and May 16, 2020, at the end of the first lockdown in France, our team designed a web-based survey, which was completed by a representative sample of the French population (n=1154). An objective of the survey was to assess acceptance of measures among the main anti-COVID-19 strategies discussed by the French Government at the beginning of April for after the lockdown period. Details of the survey are provided in the appendix. Using a discrete choice experiment,¹ we elicited population preferences regarding various combinations of COVID-19 epidemic control policies. Preference ranking was done for the population as a whole and for subgroups according to clinical vulnerability, age, and gender.

Masks, public transport restrictions, and even digital tracking (ie, via an optional mobile phone application) were deemed acceptable by the general population (figure). Additional weeks of lockdown, restaurant and bar closures, and excessive leisure travel restriction (≤ 100 km) were not deemed acceptable. The aversion to extra weeks of lockdown was more than proportional (per the usual quadratic equation): the

longer the duration of an extended lockdown, the increased intensity with which it was rejected. Overall these findings indicate the French population accepted the post-lockdown measures relatively well, not just as constraints but as necessary measures to be weighed up against the risk of further lockdown, a prospect which most viewed negatively.

Compared with the general population, clinically vulnerable people (ie, those affected by a chronic condition, self-reported) showed better tolerance to lockdown, more acceptance of mask wearing, and rejected less the closures of restaurants and bars. However, these differences were small, indicating either altruism by the non-vulnerable towards the vulnerable, or some singularity of the vulnerable in terms of attitude toward risk.

Young people (age 18–24 years) were the most dissonant group, possibly because they are less concerned by health risks than older age groups. They were clearly in favour of financial compensation for control policies (introduced as an all-purpose transfer, rewarding all the efforts requested), which was rejected by other segments of the population (figure). Financial incentives could be an efficient instrument if targeted towards young people, who might show improved adherence to restrictive policy options when compensated.

Knowing how people within a population rank various COVID-19 prophylactic measures is a prerequisite for designing sets of appropriate programmes, a challenge that many countries will face again before widespread availability of a vaccine. Our survey highlights the need for more inclusive anti-COVID policies and suggests routes to match control policies with the preferences of subgroups, with the aim of improving adherence.

We declare no competing interests.

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- de Bekker-Grob EW, Ryan M, Gerard K. Discrete choice experiments in health economics: a review of the literature. *Health Econ* 2012; **21**: 145–72.



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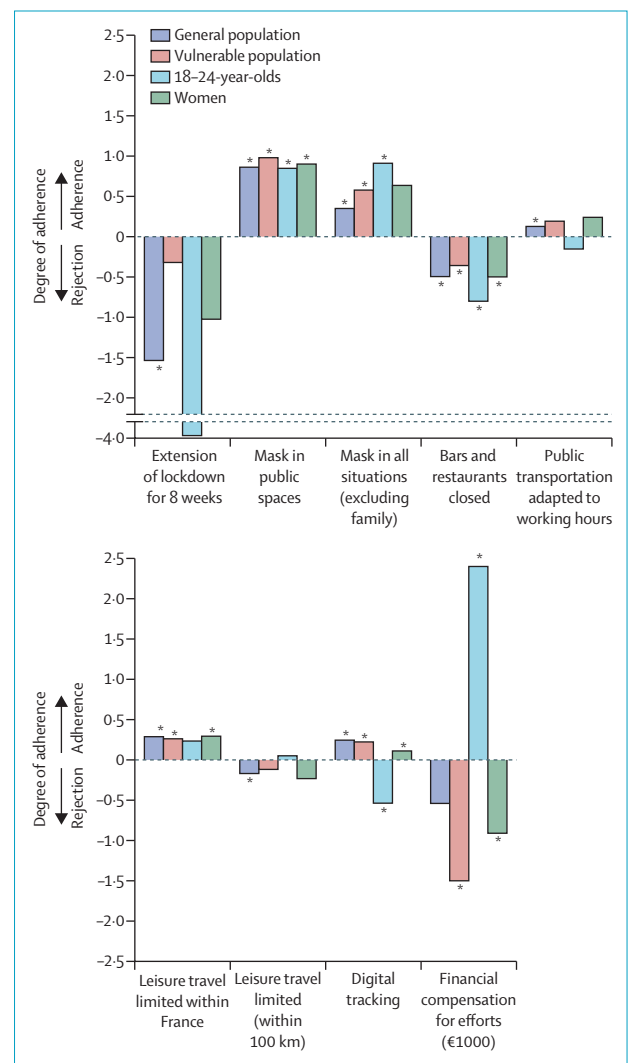


Figure: Degree of adherence of the population to prophylactic measures
Degrees of adherence were estimated with a conditional logit model of 3462 binary choices (3 propositions multiplied by 1154 respondents) observed in our Discrete Choice Experiment survey (appendix pp 3–4). More details on the materials and methods are available on request to the corresponding author. *p value < 0.05.