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JEL Classification: I1, I3, H4

Keywords: experts, Trust, Public health, COVID-19

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1 Introduction

Recommendations developed by public health experts are key to tackling public health crises. However, as the COVID-19 pandemic demonstrated, convincing people to comply with these recommendations is challenging. Because most responses are developed and communicated by experts, a key driver of behavioral change during a crisis is whether individuals agree with experts' advice. Therefore, it is important to understand how the framing of these messages, and in particular the attribution to experts, can influence agreement with public health recommendations.

In this paper, we study agreement and intended compliance with experts' recommendations using a series of large-scale survey experiments conducted in twelve countries across Latin America during the onset of the COVID-19 pandemic. In our main survey experiments, we recruited approximately 26,000 respondents through Facebook ads. These survey experiments were conducted between October 2020 and February 2021. We examine how people's agreement with different recommendations is affected by their attribution to experts. Respondents were randomized into five experimental groups, four treatment groups in which health recommendations were attributed to a different type of expert (government expert, private sector expert, academic expect, or an unspecified expert) and a control group in which the same health recommendations were not attributed to experts. We provided respondents with recommendations on actions they could take to reduce their exposure to COVID-19, and asked about their agreement and intended compliance with the advice. In particular, we focus on four recommendations to mitigate COVID-19: "avoiding social gatherings", "wearing a facemask", "exercising", and "spending time outside to absorb vitamin D."[1]

We find a backlash against experts in agreement with the health recommendations that are specific to the COVID-19 pandemic. Respondents are more likely to disagree with recommendations to avoid social gatherings and wear a facemask when these recommendations are attributed to experts. For instance, agreement with avoiding social gatherings decreases by 4.4 percentage points (5% of the mean) when attributed to an expert. In contrast, we do not find a backlash against experts for the health recommendations that are not unique to the pandemic context (exercise and spending time outdoors to absorb vitamin D); there is no change in the likelihood that respondents agree with these recommendations when they are attributed to experts.

We document four characteristics of the expert backlash in agreement with health recommendations. First, the backlash depends on the type of recommendation. The recommendations for which there is an expert backlash ("avoiding social gatherings" and "wearing a facemask") are unique to the pandemic and also have an externality component to them. Second, the backlash

[1]This information was not deceptive; we identified multiple sources for the different types of recommendations. These were widely endorsed by different experts and health authorities during the pandemic.

against experts for these recommendations is robust across countries and waves of the survey and persists even after countries relaxed COVID-19 restrictions and the recommendations were mostly no longer applicable. Third, we find that the backlash against experts for pandemic-specific recommendations is generalized for experts regardless of the sector they represent. Finally, the expert backlash might have an impact on intended compliance with the recommendation. We find that attributing recommendations to an expert significantly reduces intended compliance with the social gathering recommendation, but increases reported intentions to comply with the recommendation to wear a facemask.

Next, we explore potential mechanisms driving the expert backlash. In December 2021, we conducted a late-pandemic auxiliary survey experiment with 9,241 participants to explore potential mechanisms behind our main results. We find that anti-intellectualism (i.e., low ex-ante trust in experts) is a relevant trait in determining the expert backlash. Attributing recommendations to experts leads to lower agreement with all recommendations for individuals who distrust experts, as compared to respondents who exhibit higher levels of baseline trust in experts. However, anti-intellectualism does not explain why on average we find a backlash for some recommendations but not for others.

What explains the difference in expert backlash in agreement across recommendations? First, we show that new COVID-specific recommendations ("avoiding social gatherings" and "wearing a facemask") are associated with higher levels of social pressure to comply, which might contribute to the backlash against expert attribution. The greater social pressure may be due to the externality component of these recommendations. Second, individuals with a lower tendency to follow rules show lower levels of agreement with all recommendations compared to more "obedient" individuals, but the difference is stronger for the new COVID-specific recommendations ("avoiding social gatherings" and "wearing a facemask"). The same pattern of disagreement is apparent for individuals who are averse to changes. Taken together, these differences in agreement by "obedience" and aversion to change suggests that reactance could also play a role in expert backlash. As governments imposed new rules based on expert input that curtailed individual freedoms to manage the public health crisis, related recommendations may have been viewed more as extensions of the new rules than as health recommendations. This could have incited backlash against experts among individuals who are less likely to follow rules and are averse to change.

This paper contributes to a growing experimental literature showing that the design of public health recommendations are important for their acceptance and adoption. For instance, Balcetis et al. (2020) find that concrete rather than vague messaging about healthy eating habits are more effective in future healthy food consumption. Banker and Park (2020) shows that prosocial frames are less effective than self-focused frames when advertising health recommendations on Facebook. Moreover, studies have explored the importance of the delivery of the recommendation.

For instance, Cherry et al. (2021) finds that exposure to President Trump video messaging about the importance of wearing a facemask increases intended use, particularly among his supporters. However, Kitamura and Yamada (2020) find no evidence that a powerful messenger (i.e., the Emperor of Japan) changes the effectiveness of messages. We extend this literature by exploring the effect of experts as messenger for health recommendations during the COVID-19 pandemic. The COVID-19 pandemic occurred in an era of growing anti-intellectualism and early efforts to mitigate the spread of COVID-19 required convincing citizens to comply with new and rapidly changing health recommendations that were based on input from experts. In this context, we contribute novel experimental evidence on the effect of attributing new, pandemic-specific and established health recommendations to experts, and document a backlash effect even in the context of low and middle income countries in which health workers have been found to be the most trusted sources of guidance about COVID-19 vaccines (Solís Arce et al., 2021).

Our study also relates to a recent literature that has documented resistance to adopting health recommendations in general, and to experts' advice during the pandemic in particular. More specifically, our study joins several related literatures that study the role of experts in the pandemic (Calonico et al., 2022; Mihelj et al., 2022), of trust in experts (Cairney and Wellstead, 2020; Figueiras et al., 2021) or anti-intellectualism (Kraft et al., 2015; Merkley, 2020; Merkley and Loewen, 2021), reactance (Miller et al., 2007; Anker et al., 2016; Reynolds-Tylus, 2019; Hajek and Häfner, 2021; Sakai et al., 2021), biases and information processing (Faia et al., ming), personality traits (Tagini et al., 2021), and social norms (Bicchieri et al., 2021; Martínez et al., 2021) in compliance with health recommendations.

Several other factors have been found to be related with trust in experts' advice and compliance with recommendations. Battiston et al. (2021), for instance, documents a sort of fatigue after the first few weeks of the pandemic, with decreasing responsiveness to expert sources. Others, in turn, emphasize the role of government's responses to past pandemics in shaping trust in experts and thus lower compliance with ensuing recommendations (Eichengreen et al., 2020, 2021). Finally, some papers emphasize the role of trust in political leaders to explain compliance to COVID-19 policies (see Bargain and Aminjonov (2020) for the case of Europe, Cairney and Wellstead (2020) for UK and US, and Ajzenman et al. (2021) for Brazil). While we find find that trust affects individuals' agreement with expert recommendations, we also show that trust alone is insufficient to explain the uncovered expert backlash.

Our study emphasizes the importance of framing to agreement and compliance with health recommendations. By providing suggestive evidence on the roles of trust, personality traits, and social norms for agreement with expert advice, our findings offer a more nuanced and complex perspective on reactions to experts' recommendations. Although we document a role for anti-intellectualism and distrust, the level of agreement and of expert backlash also depends on the

nature of the recommendations and on the context in which they are issued. Recommendations that represent innovations, that may be perceived as rules or laws, and for which there is greater social pressure for compliance, generate higher levels of disagreement and of backlash against expert advice.

2 Survey and experimental design

2.1 Main survey experiment

We conducted an online survey in twelve Latin American countries and collected two separate samples that we pool together for our analysis. The first sample (henceforth "Sample 1") was collected between October 23rd and November 1st of 2020 in Argentina, Bolivia, Colombia, Ecuador, Mexico, Peru and Uruguay. We recruited participants using Facebook ads. Our ad mentioned the possibility of winning a cash prize in exchange for completing a survey, without any reference to the topic of the survey. We targeted the ads by demographic cells in order to obtain a sample that was representative in terms of age, gender, and educational attainment. The ad was shown to 1,899,845 users, and 78,982 clicked on it. Of the 11,417 users that started the survey, 10,394 completed it (91%). This entails dropping 4.5% of our sample.

The second sample (henceforth "Sample 2") was collected between December 22, 2020 and February 15 of 2021, and is comprised of respondents from Bolivia, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Mexico, Panama, and Uruguay. This sample was part of a follow-up survey of respondents who opted-in to being contacted for a follow up from a sample initially collected in early 2020 during the onset of the COVID-19 pandemic (see Bottan et al., 2020, for details). Of the approximately 116,000 participants of the original survey that opted-in to being contacted for a follow-up survey, 22,132 started the survey and 16,298 completed the experimental section (73.6%). Appendix Figure A.1 shows the sample to which each of the countries in the study belongs, and Appendix Table A.1 reports the sample size for each country and sample.

Respondents were randomized into four treatment groups in which health recommendations were attributed to a different type of expert (government expert, private sector expert, academic expect, or an unspecified expert) and a control group in which the health recommendations were not attributed to experts.[2] During the survey experiment, respondents were shown the following

[2]In Sample 1, respondents were asked demographic questions and then proceeded to the survey experiment module. The survey for Sample 2 was significantly longer (it gathered information on household income, assets, labor market outcomes and social service use during the pandemic). The position of the experimental module in the survey was randomized (either earlier or later in the survey). Despite this different scope, the experiment module (questions and experimental design) closely replicated that of Sample 1.

health recommendations:

- Always taking into account the rules in your locality, [experts] recommend avoiding social gatherings, as they could lead to the propagation of COVID-19.
- [Experts] recommend spending a few minutes outside frequently (maintaining social distancing), so as to increase vitamin D levels and thus improve the body's response to COVID-19.
- [Experts] recommend exercising regularly to improve the immune system's response to COVID-19.
- [Experts] recommend wearing a facemask even when outside to avoid the propagation of COVID-19.

The first two recommendations were included in both samples. The recommendation about exercising was only included in Sample 1, whereas the recommendation regarding facemasks was only included in Sample 2.

Subjects in the control group were shown the same recommendations except they were not framed as expert recommendations. For example, respondents in the control group were shown the statement: "It is important to exercise regularly to improve the immune system's response to COVID-19."

After showing respondents each recommendation, we asked them how much they agreed with each recommendation on a scale of 1 to 5. Finally, we asked respondents about their intended compliance with recommendations in the subsequent week. Specifically, we asked how many social gatherings they planned to attend, how many days they planned to spend time outside, how many days they planned to exercise (only Sample 1), and how often they planned to wear a facemask while outside (only Sample 2).[3]

2.2 Descriptive statistics

In Table 1 we present descriptive statistics for our final sample. On average, our respondents are 43.9 years old, 67% are female, and 60.5% have a tertiary education or higher. These characteristics are consistent with the population from which our samples were recruited: Facebook users in Latin America on average are older, more female and have higher education than the population averages in the region. Consistent with being older and highly educated, respondents report strongly adhering to COVID guidelines. On average, they attended less than one social gathering in the previous week, report high levels of facemask wearing compliance (4.55 on a scale from

[3]The full survey questionnaires are available at https://rb.gy/uqm01d (Sample 1) and https://rb.gy/v4a83x (Sample 2).

1 (Never) to 5 (Always)), and have moderate (and similar) levels of trust in government and the private sector (2.755 and 2.760 out of 5). Consistent with high levels of adherence, respondents report high levels of agreement, on average, with the all the different recommendations presented.

Our samples are well balanced in baseline characteristics across the different treatment arms. Results are presented in Appendix Table A.2, where each row corresponds to a different regression using respondent characteristics as the dependent variable, and dummy variables for the assigned treatment groups as independent variables (with the control group being the omitted category). The sample is well balanced across individual characteristics, where differences in age, gender and education are not statistically distinguishable from zero and economically insignificant as well. However, there are two small differences across treatment groups. First, respondents from Peru were slightly less likely to be randomized into the government expert or private sector expert treatment groups. Second, respondents in the unspecified expert treatment group spent fewer days outside last week (a 5% reduction over the control group mean).[4] In Section 3 we show that our main results are robust to controlling for these and other characteristics.

2.3 Identification strategy

Because whether a COVID-19 recommendation was made by an expert or not (and what type of expert) was randomly assigned, we can estimate the impact of an expert's recommendation on outcomes using the following model:

$$Y_i = \beta_0 + \beta_1 \, \textit{Expert}_i + \delta_{cs(i)} + \epsilon_i, \tag{1}$$

where Y_i is an outcome of interest. For example, an indicator variable that equals 1 if the respondent strongly agrees/agrees with statements about the importance of not participating in social gatherings (spending time outside, exercising, and wearing a facemask), and equals 0 if not. Our main variable of interest, $\textit{Expert}_i$, is an indicator variable that equals 1 if the respondent was shown the expert recommendations. The omitted category is the control group, in which the recommendations were not attributed to an expert. We initially pool the different expert treatments into a single variable to maximize power because results are qualitatively similar for the different types of experts (results discussed below). We also include country-sample fixed effects ($\delta_{cs(i)}$).[5] We use

[4] These small imbalances are not due to differential attrition. Appendix Table A.3 shows the results of the same balance tests for the sample of respondents who reached the part of the survey where the randomization was conducted, including those that did not respond questions about whether they agreed with the recommendations. The differences between groups arise in this larger sample as well.

[5] We have respondents from both samples in five of the twelve countries: Bolivia, Colombia, Ecuador, Mexico and Uruguay. In regressions where there are respondents from only one sample (i.e., those related to exercising or wearing a facemask), we only include country fixed effects.

heteroskedasticity-robust standard errors in all regressions because treatment was assigned at the individual level.

3 Empirical results

3.1 Backlash: Impact of experts on agreement with recommendations

We find a backlash against experts for pandemic-specific health recommendations. Panel A of Table 2 presents the results of our estimation of equation (1), where each column corresponds to a different dependent variable indicating agreement with different recommendations. Column (1) presents results for agreement with the recommendation to avoid social gatherings (samples 1 and 2 pooled). On average, respondents are *less* likely to agree with avoiding social gatherings when recommended by an expert. Attribution to an expert decreases agreement by 4.4 percentage points, an effect that is highly statistically significant (p-value¡0.001). Further, we find that the decrease in agreement when the recommendation is attributed to experts is partly driven by an increase in disagreement/strong disagreement with the recommendation (column (2)). Figure 1 clearly depicts the shift in the distribution of agreement for respondents who received an expert recommendation.

The expert backlash for the recommendation to avoid social gatherings is generalized across all countries in our sample (see Appendix Figures A.2-A.3). On average, agreement decreases across most countries, with the exception of Costa Rica, El Salvador and Dominican Republic. However, note that samples are significantly smaller for these countries and as a result we cannot reject the possibility of similar effect sizes as found in other countries.

We also find a significant backlash effect for the recommendation to wear a facemask. Results are presented in columns (3) and (4) of Table 2. Expert attribution decreases agreement with wearing a facemask by 1.4 percentage points, which is significant at the 10% level (p-value=0.059). Further, expert attribution increases disagreement by 1.8 percentage points, which is statistically significant at the 1% level (p-value=0.002). Although the point estimate is smaller than for avoiding social gatherings, we caution against directly comparing the magnitudes of these coefficients. The facemask recommendation was only included in Sample 2 (whereas the social gatherings recommendation was included in both Samples 1 and 2), therefore the relevant comparison is with the coefficient for agreement with avoiding social gatherings in Sample 2 (-0.022) (see Appendix Table A.4). These estimates are qualitatively and statistically similar.

We do not find evidence of a backlash against experts for the recommendations to spend time outside and to exercise. Results are presented in columns (5)-(8) of Table 2. Point estimates for agreement and disagreement with both of these recommendations are close to zero and statistically insignificant. For example, the estimate for agreement with spending time outside is 0.005 (p-

value=0.365) and with exercising is 0.006 (p-value=0.560). The 95% confidence interval suggests we can rule out even small backlash effects for agreement with spending more time outside (-0.005) and exercising (-0.012).

These results are robust. First, for all four recommendations, the backlash effect is robust to controlling for age, gender, educational attainment, and frequency with which the respondent carried out the corresponding activity in the previous week (results are reported in Appendix Table A.5). For the recommendation to avoid social gatherings, the point estimates for agreement and disagreement are very similar to the main specification when including controls (-0.044 and 0.011) and are highly statistically significant (p-values ¡0.001 and 0.002). Similarly, when including controls, the results for the recommendation to wear a facemask are quantitatively similar to those of the main specification and we continue to find no evidence of a backlash against experts for the recommendations to spend time outside and to exercise. Second, the results are robust to using an ordered probit specification, as shown in Appendix Table A.6. Third, for the recommendations that were included in both Samples 1 and 2 ("avoiding social gatherings" and "spending time outside to absorb vitamin D"), the effects are consistent across the samples (results presented in Appendix Table A.4). For the recommendation to avoid social gatherings, the point estimates for agreement in Sample 1 and 2 are -0.078 and -0.022 (p-values=0.000), while for disagreement they are 0.022 in Sample 1 (p-value¡0.001), and 0.004 in Sample 2 (although not statistically significant).

The backlash effects that we find are not driven by a particular type of expert. Recall that respondents in the treatment group were randomly shown one of four potential experts: academic, public sector, private sector or a unspecified expert. The sector the expert belongs to could potentially be important, especially in the context of Latin America where trust in the government and in the private sector tends to be low. We explore the heterogeneity by type of expert in Table 3, where we modify equation (1) to use separate dummy variables for each of the sectors the experts represent (government, private sector, academia, and unspecified sector).

The general backlash effect for recommendations to avoid social gatherings and wear a facemask are very similar across government, private sector and academic experts (e.g., -0.047, -0.052 and -0.051 for agreement with avoiding social gatherings, all significant at the 1% level). The point estimate for an unspecified expert is statistically smaller in magnitude (e.g., -0.026 with p-value=0.002 for the null hypothesis of equality with government expert in column (1)), though it is also qualitatively consistent with a backlash effect for the same recommendations. Because the backlash effects are similar across different types of experts, we pool all treatments into a single treatment indicator.

3.2 Backlash: Impact of experts on intended behavior

Beyond agreement with the recommendations, we test whether attributing a recommendation to an expert affects respondents' intended behavior. After being given the recommendations, respondents were asked about the degree to which they planned to comply with the different recommendations (e.g., "Thinking about the coming week, how many gatherings with friends and family (respecting social distance) are you planning to attend? [none, 1... 5 or more]"). Based on these questions, we generated an indicator variable for each recommendation indicating whether the respondent reported high intended compliance.[6] We estimate the model presented in equation 1 using the variables indicating high intended compliance for each recommendation as the dependent variable. Results are presented in Table 4.

The expert backlash effect on agreement does not always translate into lower intended future compliance. Estimates in column (1) suggest that respondents are 1.7 percentage points (p-value=0.026) less likely to intend to comply with avoiding social gatherings when recommended by an expert. In other words, when the recommendation is attributed to an expert respondents report they plan to attend *more* social gatherings the following week – contrary to the recommendation. However, we do not find a similar reduction in intended compliance for facemask wearing, but rather the opposite. The estimate in column (2) suggests that respondents are 1.7 percentage points (p-value=0.048) more likely to comply with mask wearing when the recommendation is made by an expert, despite the backlash effect in agreement. Finally, estimates in column (3) suggest that respondents are 2.3 percentage points (p-value=0.003) more likely to intend to spend time outside and the point estimate on intention to exercise more is close to zero and not statistically distinguishable from zero (p-value=0.412) as shown in column (4).[7]

Overall, we find that there is a general expert backlash effect for recommendations that are unique to the COVID-19 pandemic (avoiding social gatherings and wearing a facemask). Furthermore, we document that the backlash in agreement does not always translate into a reduction in intended compliance. We find that the backlash effect extends to compliance only for avoiding social gatherings, and if anything, expert attribution increases intended compliance for facemask wearing and spending time outside.

[6]This was defined by using the median for each question. For avoiding social gatherings, the dummy variable equals 1 if zero gatherings are reported (60.32% of responses); for wearing a facemask, it equals 1 if the respondent answered '5 or more' (68.38% of responses); for number of days exercising or spending time outdoors, it equals 1 if the respondent answered 3 or more days (55.6% and 54.85%).

[7]Reassuringly, agreement with recommendations is consistent with reported behaviour. For example, participants reporting a greater number of social gatherings in the previous week tend to state lower agreement about the importance of reducing them. Similarly, those who exercise and go outside more often state higher agreement with the importance of these activities to reduce the risk of COVID-19.

4 Mechanisms

In the this section, we discuss and provide suggestive evidence on potential explanations for the differential effect of expert attribution across recommendations. To explore these possibilities, we conducted an auxiliary online survey that included modules to measure different dimensions of trust and individual traits and perceptions.

4.1 Late-pandemic auxiliary survey experiment

We conducted an auxiliary online survey in December of 2021 to explore the potential mechanisms behind the results from our main survey experiments. As with Sample 1, we recruited participants from Argentina, Bolivia, Colombia, Ecuador, Mexico, Peru and Uruguay using Facebook ads. Of the 11,733 users that started the survey, 9,029 completed it (77%).

We replicate the recommendation experiment, but framed in a retrospective manner. The height of the pandemic had passed and many of the recommendations were less relevant at that time because most restrictions had been relaxed in the region. For example, the recommendation to avoid social gatherings was rephrased in the following manner: "During the pandemic, [experts] recommended avoiding social gatherings..." We also framed the questions on agreement with recommendations retrospectively by asking how much they agreed with the recommendations during the pandemic. We also included new questions aimed at measuring trust in experts, different personality traits, and perceptions of social pressure. The main personality traits measured were openness (or aversion to change) and obedience based on a subset of questions from the big five index (Goldberg, 1992).[8] To measure perceptions of social pressure, we asked respondents the extent to which friends and family followed recommendations, as well as the degree to which they believed their friends and family expected them to follow them (1 to 5 scale).

The auxiliary survey replicates our main results and corroborates those of our main experiment: there is an expert backlash effect in agreement with newer recommendations made during the pandemic (avoiding social gatherings and mask wearing), while the backlash is not present for other recommendations.

4.2 Role of individual traits and perceptions

We explore potential factors related to the backlash against expert recommendations. We first examine whether anti-intellectualism (i.e., lack of trust or of experts' credibility) could be driving the backlash by studying heterogeneity by respondent's trust in experts. A growing scientific skepticism (Kraft et al., 2015) worldwide implies that respondents may mistrust experts or the

[8]The complete survey is available at https://rb.gy/xci4v0.

knowledge they disseminate. This could be a factor behind the backlash, but we would expect it to play a similar role in any recommendation attributed to an expert.

Next, we explore two potential explanations for the differential backlash against experts across recommendations. Note that the recommendations to avoid social gatherings and to wear a facemask are the only ones that entail a positive externality and as a result could be subject to higher social pressure. Therefore, we study whether an individual's perceptions of social pressure to comply differ across recommendations. Additionally, the recommendations to avoid social gatherings and to wear a facemask are new health recommendations and could be perceived as extensions of new rules or laws developed with input from experts instead of voluntary health recommendations. This may incite a backlash against experts for these recommendations among individuals who are not open to change or do not have a tendency to follow rules. Therefore, we explore how overall agreement with the recommendations relates to individual traits such as openness (i.e., aversion to change) or "obedience" (i.e., tendency to follow rules).

4.2.1 Anti-intellectualism and expert backlash

We find that anti-intellectualism strongly predicts a lower agreement with *all* recommendations when attributed to experts. Before replicating the recommendation experiment in the auxiliary survey, respondents were asked about their levels of trust in experts. Around 49.8% of respondents indicated that they felt indifferent or did not trust experts before the pandemic. Using an indicator variable for whether respondents distrusted experts before the pandemic, we estimate a modified version of equation (1) including the dummy variable for expert distrust along with its interaction with the treatment indicator. Results are presented in Appendix Table A.7.

Respondents who distrust experts at baseline are less likely to agree with all recommendations, as seen by the sign and statistical significance of the coefficient for distrust in experts in all regressions. The coefficient for the expert treatment (i.e., the average treatment effect for those who trust experts) indicates a statistically significant backlash effect for avoiding social gatherings and wearing a facemask for individuals who *do* trust experts of 2 and 4.9 percentage points. The backlash effect on agreement with these recommendations is larger for individuals who distrust experts, as seen in the negative and statistically significant coefficients for the interaction terms (4.6 and 4.3 percentage points for avoiding social gatherings and wearing a facemask).

Conversely, the expert treatment increases agreement for spending time outside and doing exercise for individuals who trust experts (3.9 and 8.2 percentage points). However, this positive effect is undone for respondents who distrust experts. For these individuals, receiving recommendations on spending time outside and doing exercise has no effect on agreement (the p-values for the sum of the coefficients are 0.289 and 0.244).

The statistically significant coefficient on the interaction term suggests that among respon-

dents who distrust experts, attributing recommendations to experts makes them less effective, as compared to those who trust experts. These results suggest that while lack of trust in experts is a determinant of backlash against experts, it does not explain the difference in backlash by different recommendations.

4.2.2 Social pressure, reactance and expert backlash

One important distinction between the recommendations for which we find an expert backlash effect and those for which we do not is that they entail a significant externality. Avoiding social gatherings and wearing a facemask are important for protecting others from infection. In comparison, the benefits of exercising and spending time outdoors are inherently private. Therefore, the existence of a new form of social pressure could be driving the expert backlash that we document. In the auxiliary survey, we asked respondents about the extent to which their friends and family followed different recommendations, the extent to which their friends and family expected them to follow these recommendations, and whether they believed their friends or family would change their opinion about the respondent if they did not follow recommendations.

Perceptions of social pressure for compliance with the COVID-specific recommendations (avoiding social gatherings and wearing a facemask) are significantly different from those for the non-COVID specific recommendations (spending time outdoors and exercising). In Appendix Figures A.4 and A.5 we present the distribution of responses on beliefs about the extent to which friends and family follow the different recommendations, and the extent to which family and friends expected them to follow recommendations. There are two clear patterns in these figures. First, the distributions of responses for avoiding social gatherings and wearing a facemask are very similar. Over 60% of respondents believe that more than half or almost all their friends and family follow recommendations, or that they are expected to follow recommendations. Second, the distribution of responses for exercising is markedly different and, if anything, points in the opposite direction. Over 60% of respondents believe that very few or less than half of friends and family regularly exercise. Consistent with both these patterns, Appendix Figure A.6 shows the percentage of their friends and family that respondents believe would change their opinion about them if they did not follow recommendations. On average, respondents believe that around 38% and 36% of their friends and family would change their opinion if they did not avoid social gatherings or wear a facemask. In contrast, respondents believe that 24% of their friends and family would do so if they did not exercise regularly. These results suggest that differences in perceptions of social pressure for compliance across recommendations may partly be driving the pattern of expert backlash effects we observe.

The expert recommendations to avoid social gatherings and to wear a facemask could generate backlash not only because they involve a new form of social pressure, but also due to reactance.

To the best of our knowledge there are no standard measures of individual reactance, but we proxy for it by measuring two closely-related personality traits that we pulled from the big-five questionnaire: tendency to follow rules and openness to change.

We present the share of respondents strongly agreeing or agreeing with the different recommendations by degree of "obedience" in Appendix Figure A.7.[9] Overall, respondents identified as more "obedient" are more likely to agree with all recommendations than those that are relatively more "disobedient". Importantly, the difference is markedly larger for the recommendations to avoid social gatherings and to wear a facemask. We find a very similar pattern of results when using openness (aversion to change) as shown in Appendix Figure A.8. Respondents who are more open to change are significantly more likely to agree with COVID-specific recommendations than those averse to change.[10]

Overall, we find that anti-intellectualism generates a lower agreement with all recommendations when attributed to experts, but does not explain the difference in expert backlash between more novel COVID-specific recommendations and established health recommendations that were well-known prior to the pandemic. We provide suggestive evidence for two channels that could partially explain the pattern of expert backlash that we observe. The first is individual reaction against new perceived forms of social pressure, and the second is a reaction against collective mandates among those who have a lower tendency to follow rules and are more averse to change.

5 Conclusion

We conducted large-scale survey experiments in twelve countries in Latin America during the height of the COVID-19 pandemic. On average, we find that when health recommendations that were new during the pandemic were randomly attributed to an expert, agreement with the recommendation would decrease (i.e., a backlash effect). However, this is not true for other health recommendations. The sector an expert represents is not relevant in explaining differences in backlash effects. We find that low levels of trust in experts results in a lower agreement with all recommendations when attributed to experts. We present suggestive evidence that the differential expert backlash effects could be attributed to strong social pressure to comply with COVID-specific recommendations and individual refusal to abide by the imposition of new rules on behavior set

[9] We first compute the mean of the two obedience questions, and then define obedience/disobedience with the median score.

[10] Seemingly unrelated regressions where the dependent variable is an indicator for whether the individual strongly agrees/agrees with the recommendation indicate that we can reject the null hypothesis that the difference between "obedient" and "disobedient" respondents is equivalent for avoiding social gatherings/wearing a facemask vs. the other two recommendations. In the case of the gap between respondents who are averse and open to change, we find that it is larger for wearing a facemask compared to exercising and spending time outside, and larger for avoiding social gatherings compared to spending time outside.

forth by governments.

Our findings offer a more nuanced perspective on how governments should frame health messaging campaigns and specifically on the role that experts should play in public messaging. Recommendations that represent innovations, that could be perceived as extensions of rules or laws, and for which there is social pressure for compliance generate higher levels of disagreement and of backlash against expert advice. Simply not attributing a recommendation to an expert could significantly improve people's support for a health intervention.

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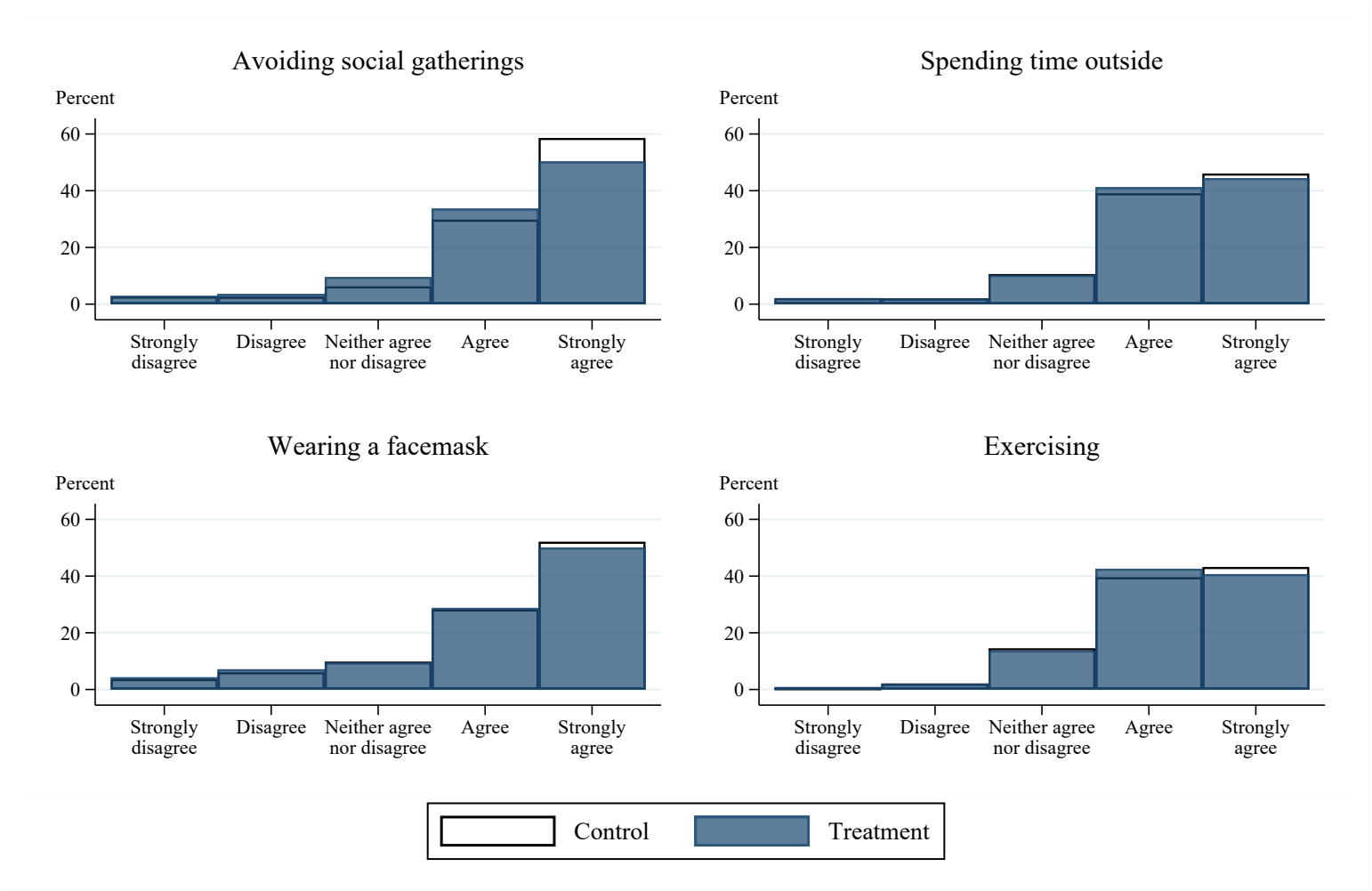
Tables and Figures

Figure 1: Distribution of agreement with expert recommendation



Notes: These figures show the distribution of respondents' agreement with statements on the importance of avoiding social gatherings, spending time outside, wearing a facemask and exercising regularly. We separately plot the distribution for individuals in the treatment group (shown a recommendation by any expert) and the control group (not shown any recommendation).

Table 1: Descriptive statistics

	Mean	SD	Min	Max	N
Baseline characteristics					
Sample 1	0.389	0.488	0.000	1.000	26,692
Age	43.874	14.659	16.000	100.000	26,692
Female	0.672	0.469	0.000	1.000	26,692
Less than primary school	0.011	0.106	0.000	1.000	26,692
Primary school	0.075	0.263	0.000	1.000	26,692
Secondary school	0.309	0.462	0.000	1.000	26,692
Tertiary education	0.489	0.500	0.000	1.000	26,692
Postgraduate education	0.116	0.321	0.000	1.000	26,692
Argentina	0.075	0.263	0.000	1.000	26,692
Bolivia	0.084	0.277	0.000	1.000	26,692
Chile	0.130	0.337	0.000	1.000	26,692
Colombia	0.166	0.372	0.000	1.000	26,692
Costa Rica	0.037	0.188	0.000	1.000	26,692
Ecuador	0.091	0.288	0.000	1.000	26,692
El Salvador	0.034	0.181	0.000	1.000	26,692
Mexico	0.117	0.321	0.000	1.000	26,692
Panama	0.056	0.229	0.000	1.000	26,692
Peru	0.043	0.204	0.000	1.000	26,692
Dominican Republic	0.023	0.149	0.000	1.000	26,692
Uruguay	0.145	0.352	0.000	1.000	26,692
Num. social gatherings last week (0-5)	0.731	1.061	0.000	5.000	26,671
Num. days outside last week	3.007	2.593	0.000	7.000	26,671
Num. days exercised last week	2.110	2.317	0.000	7.000	10,393
Frequency wore mask last week (1-5)	4.549	0.877	1.000	5.000	16,267
Trust in the private sector (1-5)	2.760	1.086	1.000	5.000	19,150
Trust in the government (1-5)	2.755	1.385	1.000	5.000	19,165
Outcome variables					
Agree on importance of avoiding social gatherings (1-5)	4.279	0.959	1.000	5.000	26,692
Agree on importance of being outside (1-5)	4.242	0.873	1.000	5.000	26,692
Agree on importance of exercise (1-5)	4.208	0.815	1.000	5.000	10,394
Agree on importance of wearing mask (1-5)	4.142	1.114	1.000	5.000	16,298
Num. social gatherings planned next week (0-5)	0.591	0.921	0.000	5.000	25,605
Num. days outside planned next week	3.442	2.550	0.000	7.000	25,596
Num. days exercise planned next week	3.048	2.390	0.000	7.000	9,444
Frequency wearing mask planned next week (1-5)	4.468	0.954	1.000	5.000	16,148

Notes: This table provides descriptive statistics for the surveys conducted between October 2020 and February 2021.

Table 2: Impact of expert recommendation on agreement with recommendation

	Avoiding social gatherings		Wearing a facemask		Spending time outside		Exercising	
	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Main survey experiment								
Expert	-0.044***	0.011***	-0.014*	0.018***	0.005	-0.002	0.006	0.003
	(0.005)	(0.003)	(0.008)	(0.006)	(0.005)	(0.003)	(0.009)	(0.004)
Observations	26,692	26,692	16,298	16,298	26,692	26,692	10,394	10,394
R^2	0.048	0.029	0.039	0.016	0.003	0.006	0.012	0.002
Dep. variable mean (control)	0.884	0.053	0.804	0.098	0.852	0.042	0.828	0.026
Sample	1-2	1-2	2	2	1-2	1-2	1	1
Panel B: Late-pandemic auxiliary survey experiment								
Expert	-0.044***	0.021***	-0.072***	0.030***	0.011	-0.021***	0.050***	-0.019***
	(0.009)	(0.005)	(0.011)	(0.008)	(0.010)	(0.006)	(0.012)	(0.006)
Observations	9,241	9,241	9,241	9,241	9,241	9,241	9,241	9,241
R^2	0.015	0.007	0.020	0.017	0.007	0.006	0.011	0.005
Dep. variable mean (control)	0.885	0.041	0.804	0.114	0.802	0.062	0.703	0.067
Sample	3	3	3	3	3	3	3	3

Notes: The sample in Panel A comes from the surveys conducted between October 2020 and February 2021. The sample in Panel B comes from the survey conducted in December 2021. The dependent variable is an indicator for whether the respondent strongly agrees/agrees, or strongly disagrees/disagrees with a statement, as specified in the column header. In columns 1-2, the statement refers to the importance of avoiding social gatherings, whereas in columns 3-4 the statement is about wearing a facemask even while outside. In columns 5-6, the statement is about the importance of spending time outside, and in columns 7-8 the statement is about the importance of frequently exercising. The regressions in columns 3-4 were only conducted for Sample 2, and the regressions in columns 7-8 were only conducted for Sample 1. The regressor of interest is an indicator for whether the respondent was presented with a recommendation from an expert. The omitted category is the control group, which was not shown any recommendation. In Panel A we control for sample-country fixed effects, and in Panel B we control for country fixed effects. Robust standard errors are in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 3: Impact of expert recommendation on agreement with recommendation by expert sector

	Avoiding social gatherings		Wearing a facemask		Spending time outside		Exercising	
	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Government expert	-0.047***	0.019***	-0.009	0.013*	0.007	-0.002	-0.013	0.016***
	(0.007)	(0.005)	(0.010)	(0.008)	(0.007)	(0.004)	(0.012)	(0.006)
Private sector expert	-0.052***	0.010**	-0.025**	0.024***	-0.003	-0.005	-0.013	0.004
	(0.007)	(0.004)	(0.010)	(0.008)	(0.007)	(0.004)	(0.012)	(0.005)
Academic expert	-0.051***	0.014***	-0.020**	0.018**	-0.005	0.008**	0.017	-0.003
	(0.007)	(0.005)	(0.010)	(0.008)	(0.007)	(0.004)	(0.011)	(0.005)
Unspecified expert	-0.026***	0.001	-0.003	0.017**	0.020***	-0.008**	0.032***	-0.006
	(0.006)	(0.004)	(0.010)	(0.008)	(0.007)	(0.004)	(0.011)	(0.005)
Observations	26,692	26,692	16,298	16,298	26,692	26,692	10,394	10,394
R^2	0.049	0.030	0.039	0.016	0.004	0.006	0.014	0.004
Dep. variable mean (control)	0.884	0.053	0.804	0.098	0.852	0.042	0.828	0.026
Sample	1-2	1-2	2	2	1-2	1-2	1	1

Notes: The dependent variable is an indicator for whether the respondent strongly agrees/agrees, or strongly disagrees/disagrees with a statement, as specified in the column header. In columns 1-2, the statement refers to the importance of avoiding social gatherings, whereas in columns 3-4 the statement is about wearing a facemask even while outside. In columns 5-6, the statement is about the importance of spending time outside, and in columns 7-8 the statement is about the importance of frequently exercising. The regressions in columns 3-4 were only conducted for Sample 2, and the regressions in columns 7-8 were only conducted for Sample 1. The regressors of interest are dummies for whether the respondent was presented with a recommendation from a government expert, private sector expert, academic expert, or unspecified expert. The omitted category is the control group, which was not shown any recommendation. We also control for sample-country fixed effects. Robust standard errors are in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 4: Impact of expert recommendation on intended compliance during the next week

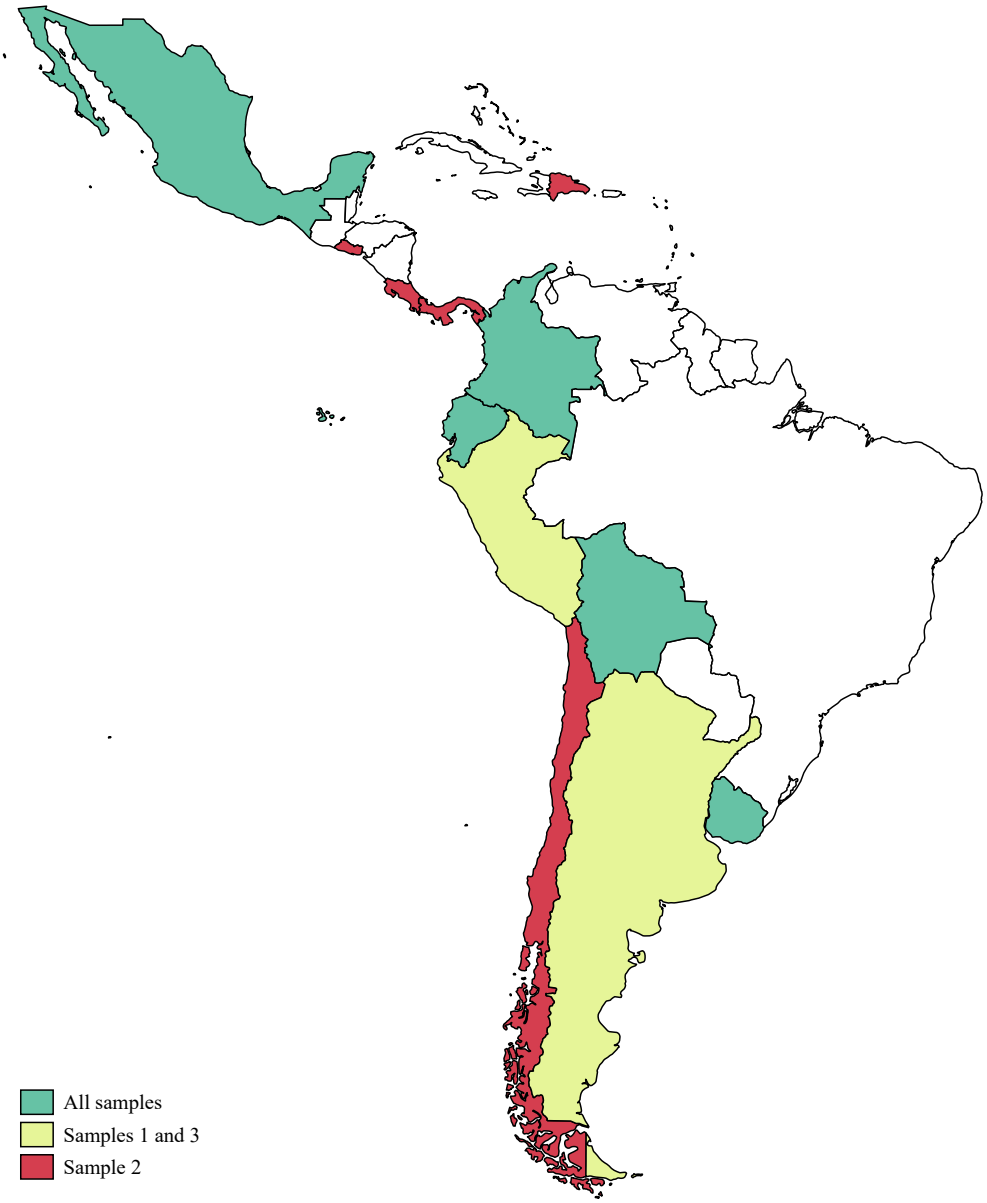
	Social gatherings	Wearing a facemask	Spending time outside	Exercising
	(1)	(2)	(3)	(4)
Expert	-0.017**	0.017**	0.023***	-0.010
	(0.007)	(0.009)	(0.008)	(0.013)
Observations	25,605	16,148	25,596	9,444
R^2	0.045	0.125	0.055	0.007
Dep. variable mean (control)	0.617	0.670	0.537	0.557
Sample	1-2	2	1-2	1

Notes: The dependent variables are dummy variables that equal 1 if respondent reports a high level of intended compliance with the recommendation and 0 otherwise. High compliance is defined as the response being greater or equal (less than or equal) than the median categorical response to the question for each recommendation (avoiding social gatherings). The regression in column 1 was only conducted for Sample 2, and the regression in column 4 was only conducted for Sample 1. The sample for these regressions is slightly smaller, as some of the respondents did not reach this part of the interview. The regressor of interest is an indicator variable that equals 1 if the respondent was presented with a recommendation from an expert. The omitted category is the control group, which was not shown any recommendation. All regressions control for sample-country fixed effects. Robust standard errors are in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

ONLINE APPENDIX

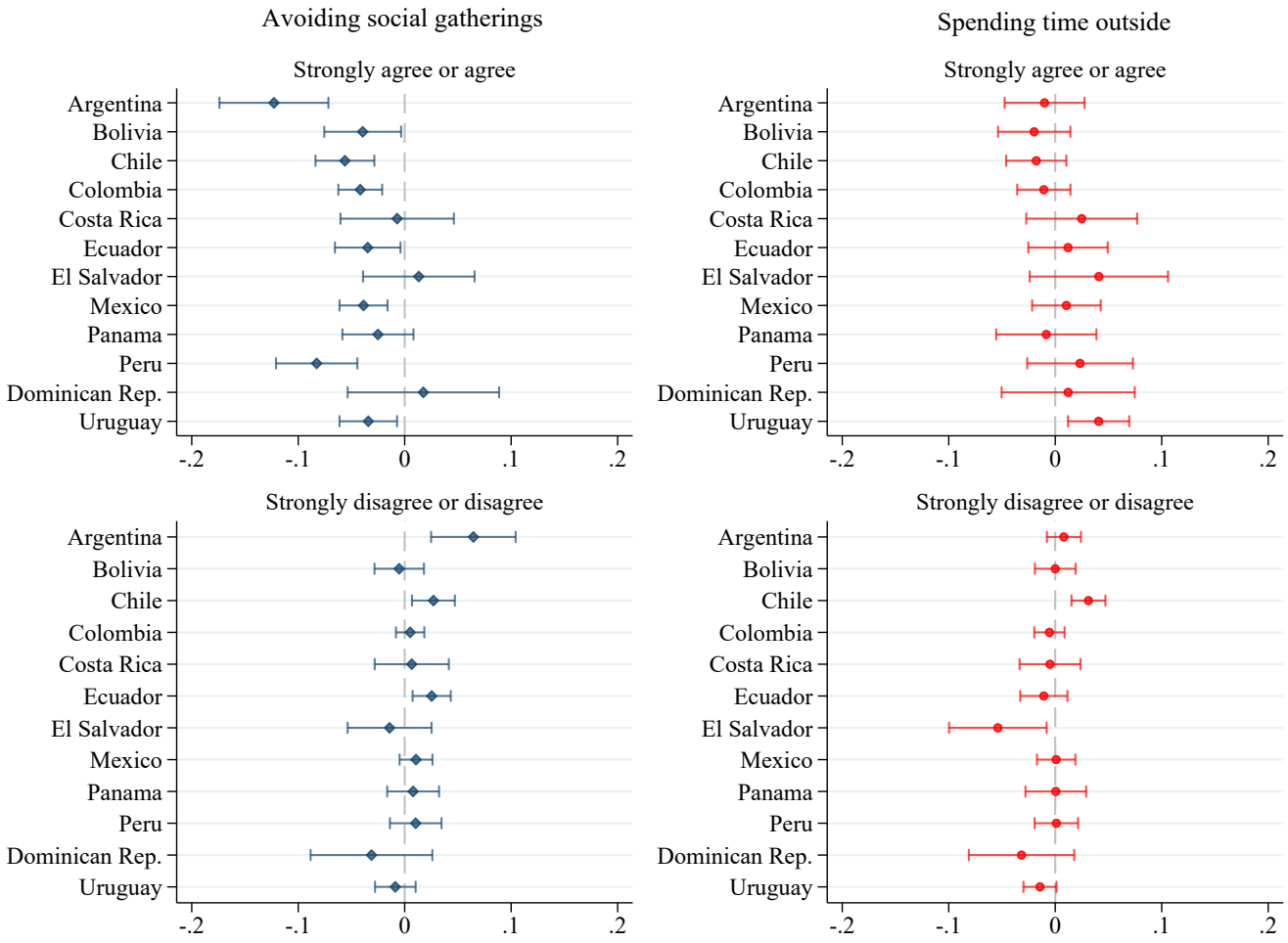
Appendix A Figures and Tables

Figure A.1: Countries in each sample



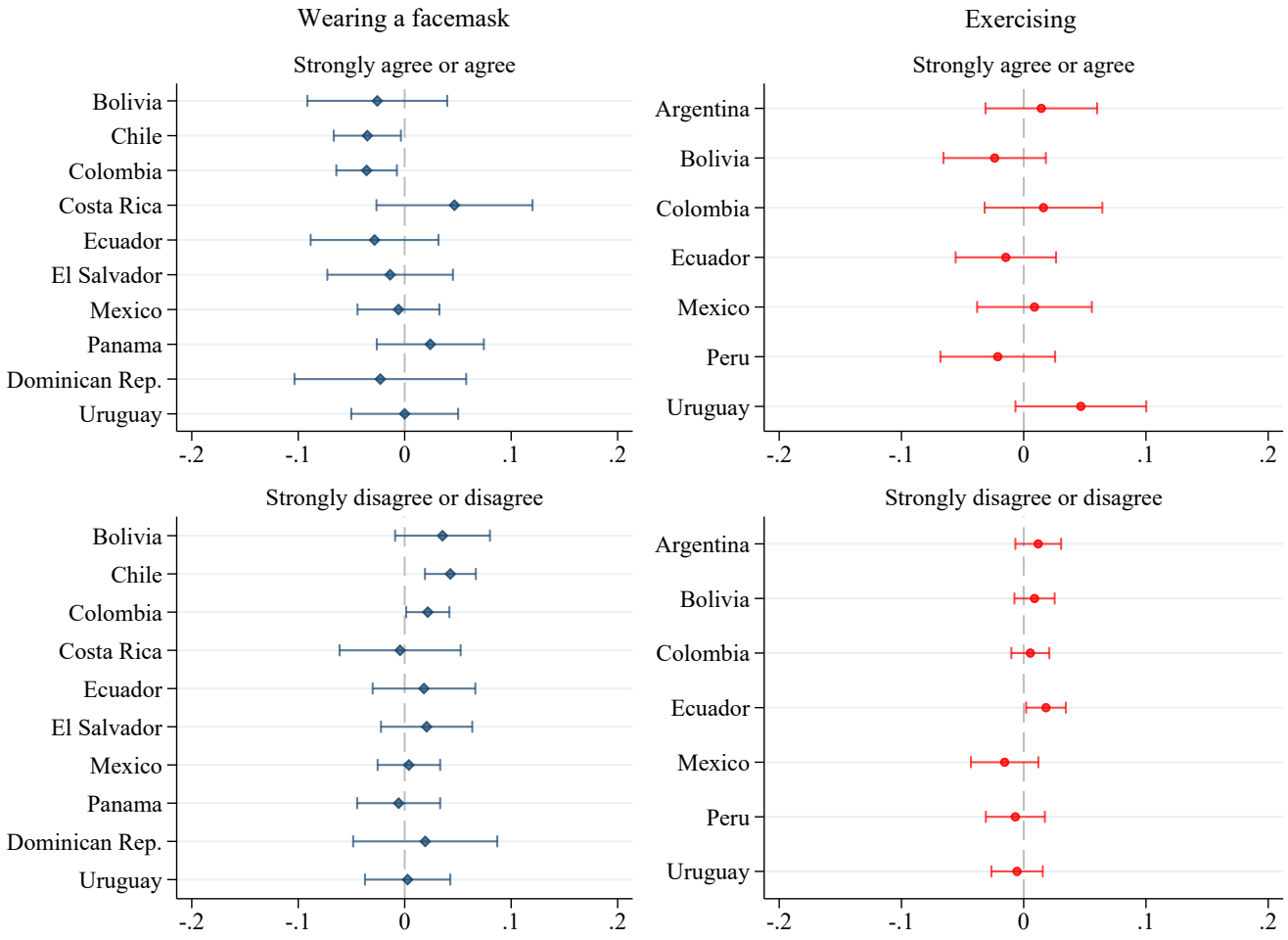
Notes: This figure shows the countries in each of our samples. Samples 1 and 2 correspond to the main survey experiment, and Sample 3 to the auxiliary post-pandemic survey experiment.

Figure A.2: Impact of expert recommendation on agreement with recommendation on social gatherings and spending time outside by country



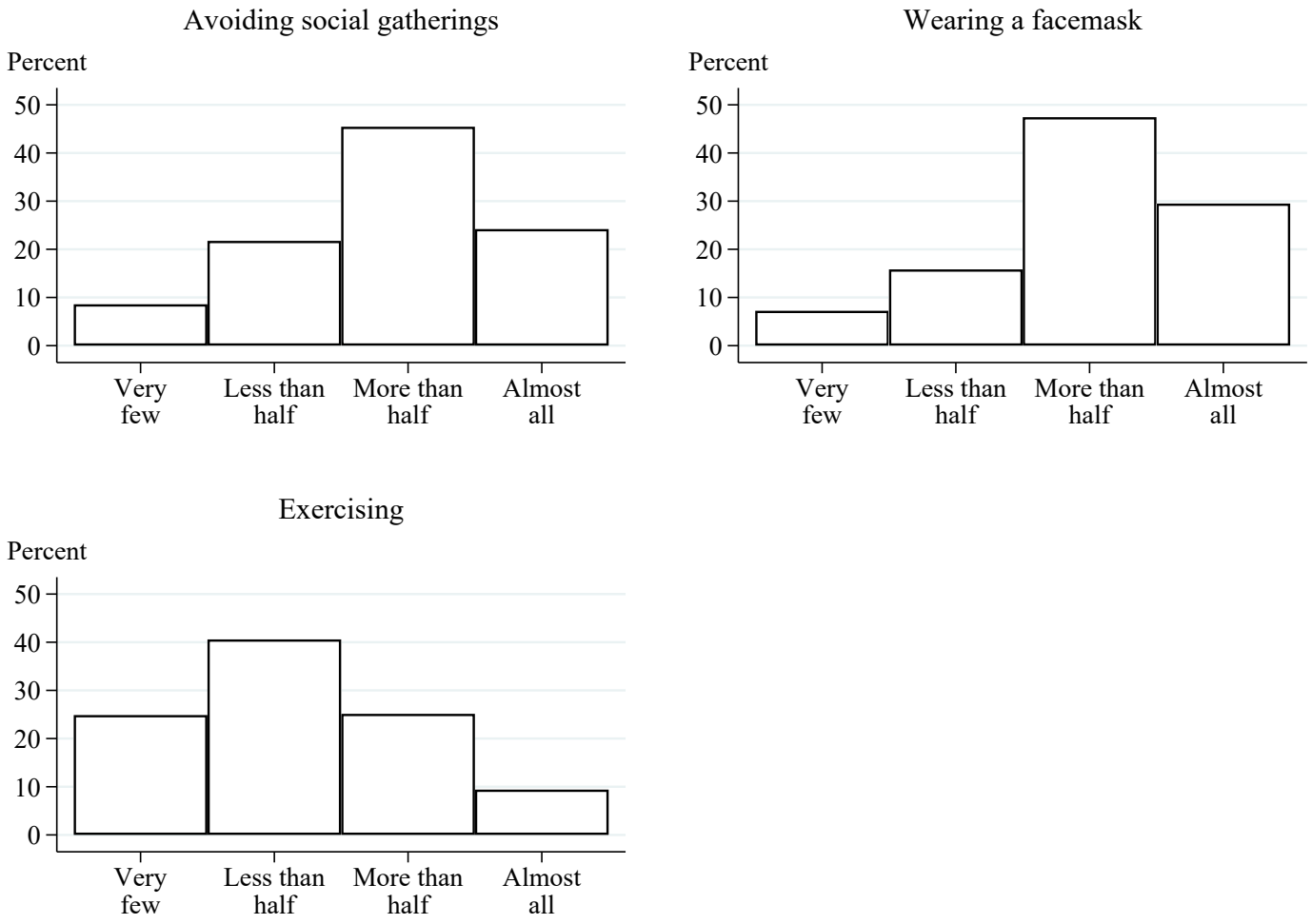
Notes: The figures in the top (bottom) show the results of different regressions where the dependent variable is an indicator for whether the respondent strongly agrees/agrees (strongly disagrees/disagrees) with a statement. In the figures to the left, the statement refers to the importance of avoiding social gatherings, and in the figures to the right, the statement is about the importance of spending time outside. The regressor of interest is an indicator for whether the respondent was presented with a recommendation from an expert. The omitted category is the control group, which was not shown any recommendation. We estimate separate regressions for each country, and report the coefficient and 95% confidence interval of the regressor of interest. In countries that appear in both samples, we also include sample fixed effects.

Figure A.3: Impact of expert recommendation on agreement with recommendation on wearing a facemask and exercising



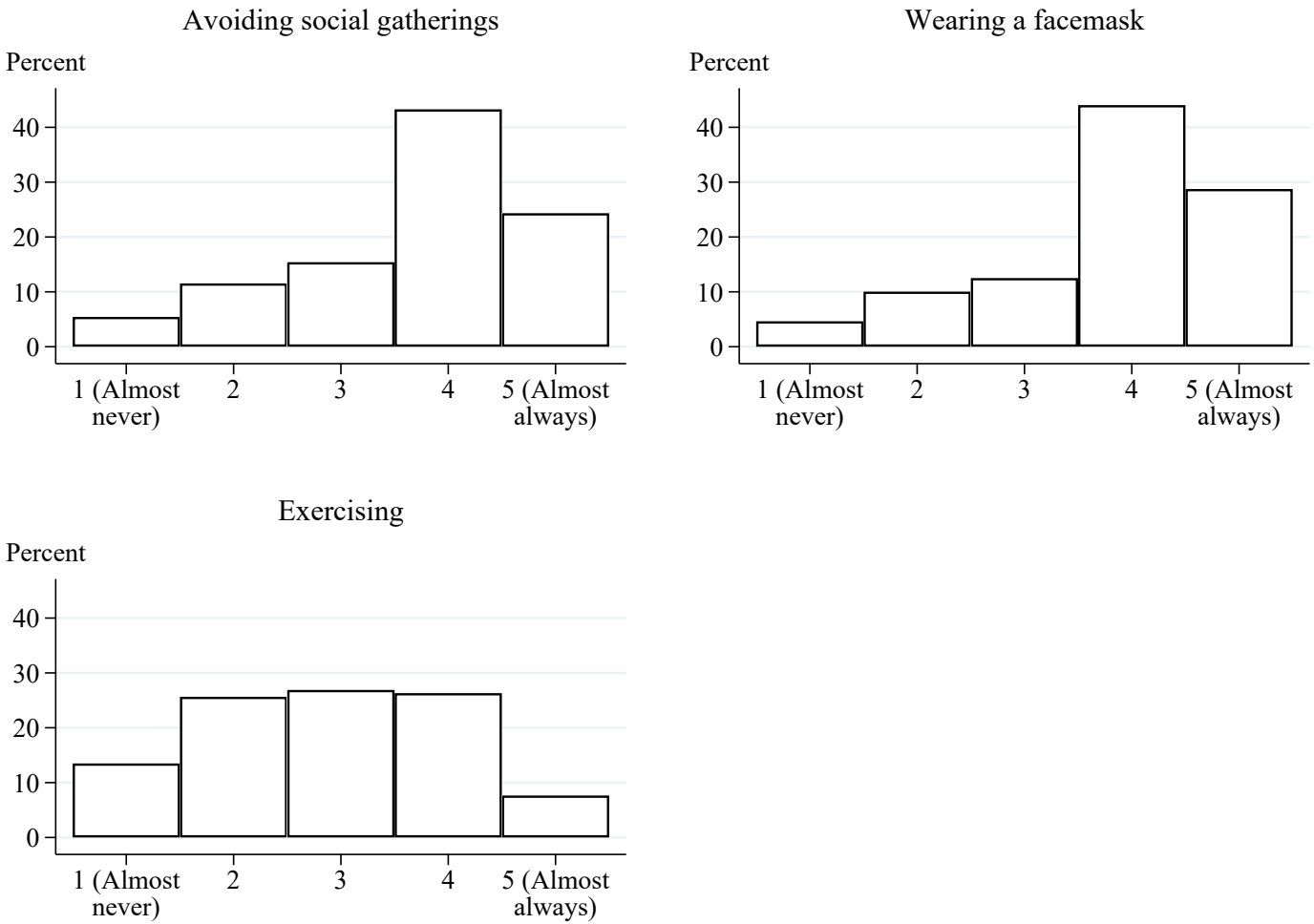
Notes: The figures in the top (bottom) show the results of different regressions where the dependent variable is an indicator for whether the respondent strongly agrees/agrees (strongly disagrees/disagrees) with a statement. In the figures to the left, the statement refers to the importance of wearing a facemask, and in the figures to the right, the statement is about the importance of exercising. The regressor of interest is an indicator for whether the respondent was presented with a recommendation from an expert. The omitted category is the control group, which was not shown any recommendation. We estimate separate regressions for each country, and report the coefficient and 95% confidence interval of the regressor of interest.

Figure A.4: Share of friends/family that followed the recommendations



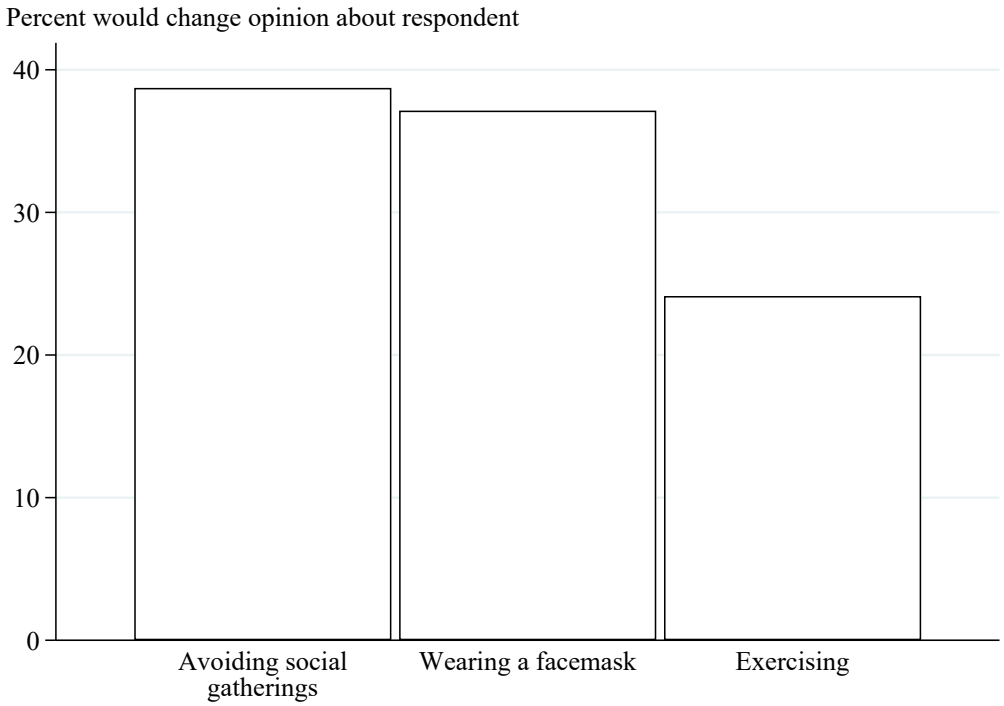
Notes: The sample for this analysis comes from the survey conducted in December 2021. These figures show the distribution of responses to questions about the share of friends/family (i.e., the people whose opinion the respondent cares most about) that followed each of the recommendations specified in the figure header.

Figure A.5: Frequency with which friends/family expected respondent to follow the recommendations



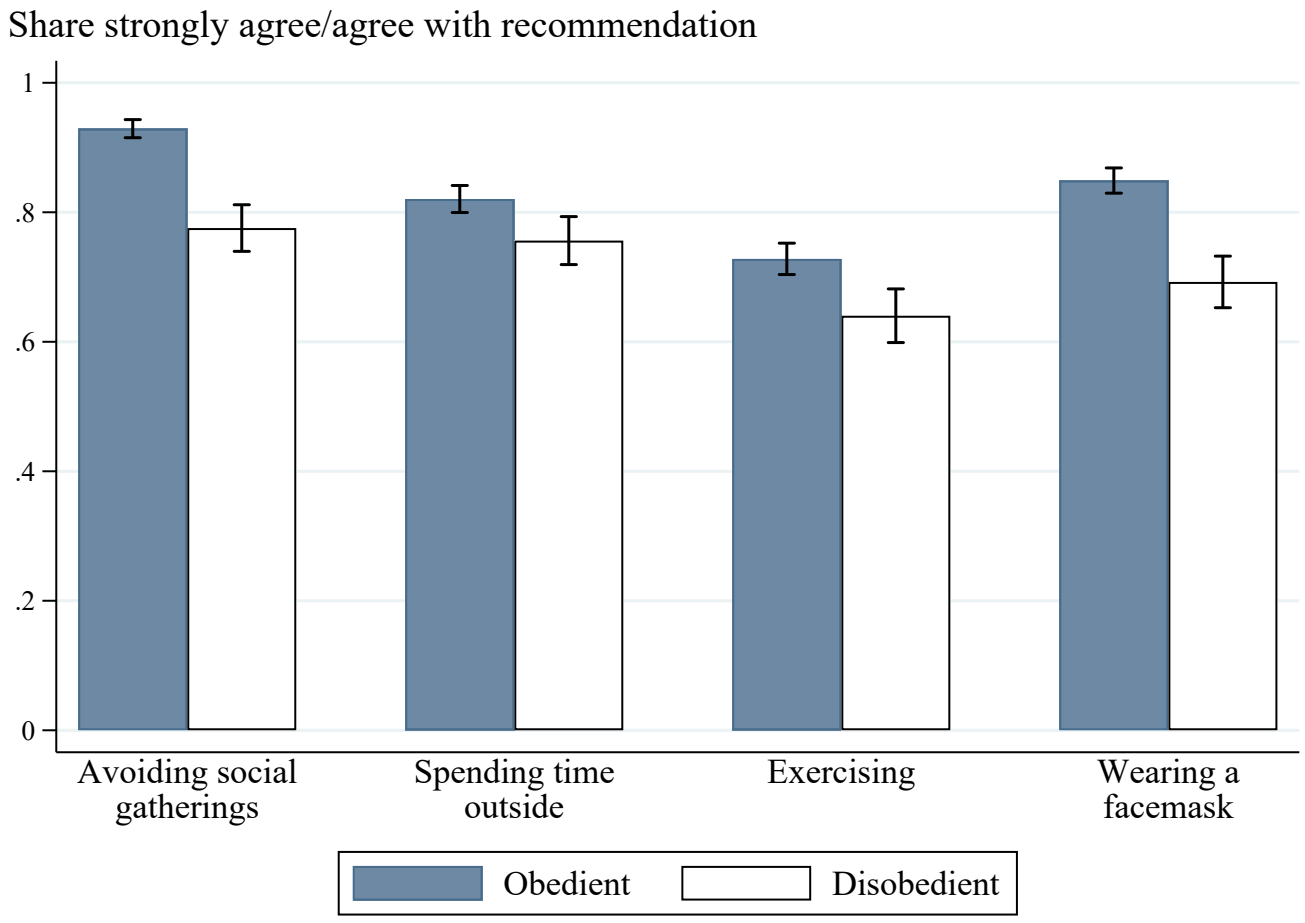
Notes: The sample for this analysis comes from the survey conducted in December 2021. These figures show the distribution of responses to questions about the frequency with which friends/family (i.e., the people whose opinion the respondent cares most about) expected the respondent to follow the recommendation specified in the figure header.

Figure A.6: Percentage of friends/family that would change their opinion of respondent if he/she did not follow the recommendations



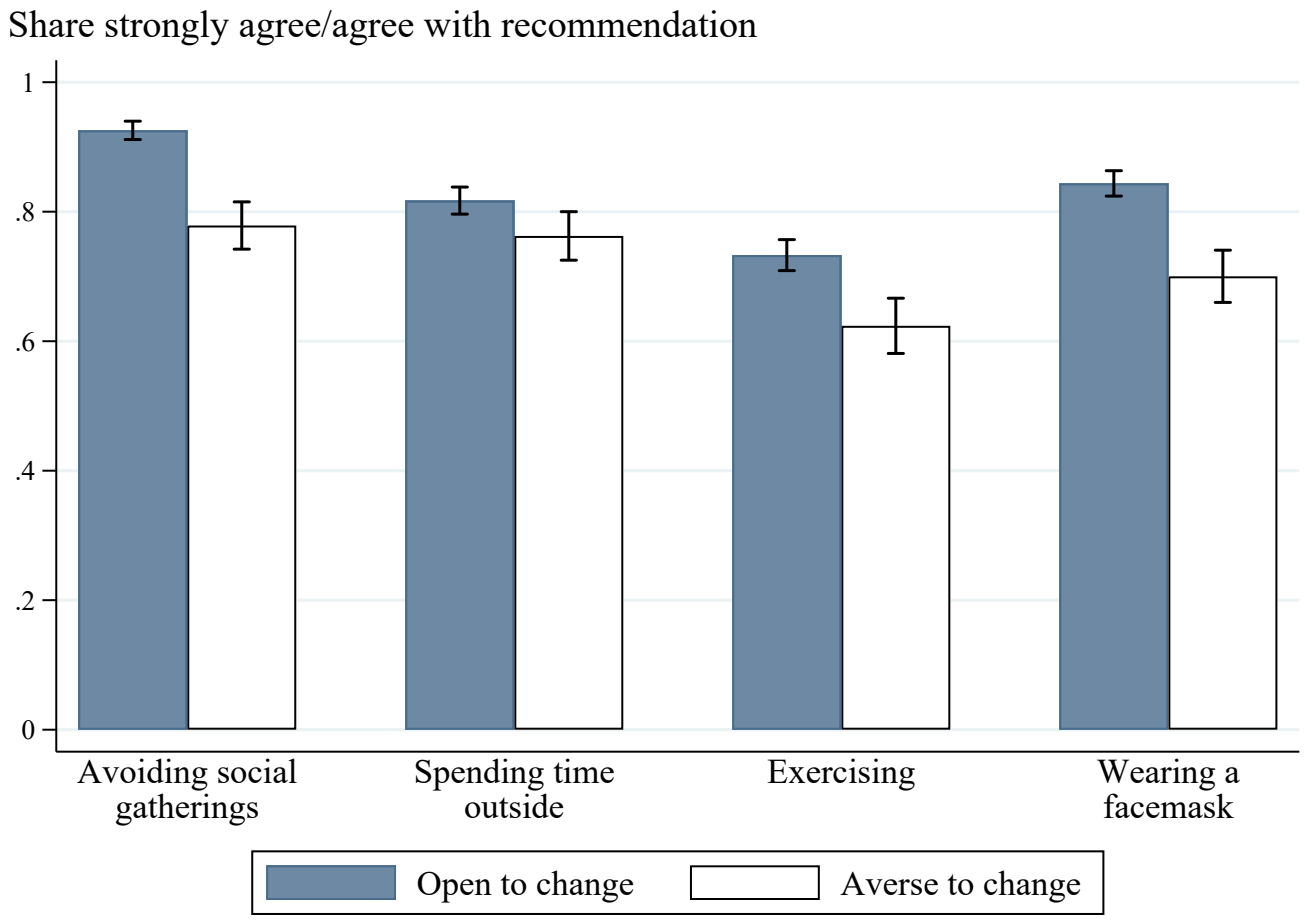
Notes: The sample for this analysis comes from the survey conducted in December 2021. This figure show the share of respondents who answered that their friends/family (i.e., the people whose opinion the respondent cares most about) would change their opinions about him/her if he/she did not follow the recommendation specified in the x-axis.

Figure A.7: Share of respondents that strongly agree/agree with recommendations by tendency to follow rules



Notes: The sample for this analysis comes from respondents in the control group in the survey conducted in December 2021. This figure shows the share of respondents who strongly agree/agree with the recommendation depicted in the x-axis and the 95% confidence interval of this mean. The sample is split into individuals who tend to follow rules ("obedient") and those that do not ("disobedient").

Figure A.8: Share of respondents that strongly agree/agree with recommendations by aversion to change



Notes: The sample for this analysis comes from respondents in the control group in the survey conducted in December 2021. This figure shows the share of respondents who strongly agree/agree with the recommendation depicted in the x-axis and the 95% confidence interval of this mean. The sample is split into individuals who are averse to change and individuals who are not.

Table A.1: Number of observations per country and sample

Country	Sample 1	Sample 2	Sample 3	Total
Argentina	1,995		1,418	3,413
Bolivia	1,403	840	1,168	3,411
Chile		3,481		3,481
Colombia	1,487	2,937	1,410	5,834
Costa Rica		981		981
Ecuador	1,351	1,087	1,269	3,707
El Salvador		903		903
Mexico	1,368	1,747	1,199	4,314
Panama		1,488		1,488
Peru	1,160		1,206	2,366
Dominican Republic		605		605
Uruguay	1,630	2,229	1,571	5,430
Total	10,394	16,298	9,241	35,933

Table A.2: Balance across treatment arms

	Government expert	Private sector expert	Academic expert	Unspecified expert	P-value (joint sign.)	Mean (control)
Sample 1	-0.002	-0.006	0.004	-0.003	0.883	0.391
	(0.009)	(0.009)	(0.009)	(0.009)		
Age	0.341	-0.189	0.156	0.143	0.424	43.780
	(0.283)	(0.282)	(0.283)	(0.283)		
Female	-0.002	0.005	-0.012	-0.001	0.426	0.674
	(0.009)	(0.009)	(0.009)	(0.009)		
Less than primary school	0.003	0.000	0.002	0.002	0.563	0.010
	(0.002)	(0.002)	(0.002)	(0.002)		
Primary school	0.000	-0.003	0.000	-0.003	0.911	0.076
	(0.005)	(0.005)	(0.005)	(0.005)		
Secondary school	0.007	0.009	0.003	0.003	0.876	0.304
	(0.009)	(0.009)	(0.009)	(0.009)		
Tertiary education	-0.011	-0.008	-0.015	-0.008	0.647	0.497
	(0.010)	(0.010)	(0.010)	(0.010)		
Postgraduate education	0.001	0.003	0.010	0.006	0.497	0.112
	(0.006)	(0.006)	(0.006)	(0.006)		
Argentina	0.002	-0.002	0.004	-0.002	0.745	0.074
	(0.005)	(0.005)	(0.005)	(0.005)		
Bolivia	-0.001	0.000	0.001	0.006	0.679	0.083
	(0.005)	(0.005)	(0.005)	(0.005)		
Chile	0.000	0.000	-0.002	-0.002	0.998	0.131
	(0.007)	(0.007)	(0.006)	(0.007)		
Colombia	0.003	0.004	0.001	0.002	0.982	0.164
	(0.007)	(0.007)	(0.007)	(0.007)		
Costa Rica	0.000	0.000	0.000	0.001	0.997	0.037
	(0.004)	(0.004)	(0.004)	(0.004)		
Ecuador	-0.001	0.007	0.000	0.003	0.644	0.090
	(0.006)	(0.006)	(0.006)	(0.006)		
El Salvador	-0.001	0.000	0.000	0.000	0.999	0.034
	(0.003)	(0.004)	(0.003)	(0.004)		
Mexico	0.001	-0.005	0.000	0.001	0.871	0.117
	(0.006)	(0.006)	(0.006)	(0.006)		
Panama	0.000	0.000	-0.001	0.000	0.999	0.056
	(0.004)	(0.004)	(0.004)	(0.004)		
Peru	-0.009**	-0.011***	-0.005	-0.007	0.080	0.050
	(0.004)	(0.004)	(0.004)	(0.004)		
Dominican Republic	0.000	0.000	0.000	-0.001	1.000	0.023
	(0.003)	(0.003)	(0.003)	(0.003)		
Uruguay	0.005	0.006	0.001	-0.003	0.619	0.143
	(0.007)	(0.007)	(0.007)	(0.007)		
Num. social gatherings last week (0-5)	0.010	0.008	0.020	-0.005	0.769	0.725
	(0.020)	(0.021)	(0.021)	(0.020)		
Num. days outside last week	-0.019	0.019	0.007	-0.155***	0.003	3.036
	(0.050)	(0.051)	(0.050)	(0.050)		
Num. days exercised last week	-0.076	-0.071	-0.105	-0.139*	0.391	2.188
	(0.073)	(0.073)	(0.072)	(0.071)		
Frequency wore mask last week (1-5)	0.003	0.010	-0.011	-0.011	0.846	4.551
	(0.022)	(0.022)	(0.022)	(0.022)		
Trust in the private sector (1-5)	0.036	0.052**	0.006	0.017	0.194	2.738
	(0.025)	(0.025)	(0.025)	(0.025)		
Trust in the government (1-5)	0.037	-0.014	0.007	0.014	0.582	2.746
	(0.032)	(0.032)	(0.031)	(0.032)		

Notes: This table reports the results of different regressions where the dependent variable is specified in the row header and the independent variables are dummies for whether the respondent was presented with a recommendation from a government expert, private sector expert, academic expert, or unspecified expert. The omitted category is the control group, which was not shown any recommendation. The sample contains individuals who do not have missing values in the main dependent variables.The second to last column shows the p-value of a joint significance test for all regressors. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A.3: Balance across treatment arms (full sample)

	Government expert	Private sector expert	Academic expert	Unspecified expert	P-value (joint sign.)	Mean (control)
Missing dependent variables	0.000	0.001	0.001	0.000	0.901	0.003
	(0.001)	(0.001)	(0.001)	(0.001)		
Sample 1	-0.003	-0.006	0.003	-0.004	0.879	0.388
	(0.009)	(0.009)	(0.009)	(0.009)		
Age	0.331	-0.177	0.153	0.191	0.434	43.740
	(0.281)	(0.281)	(0.282)	(0.282)		
Female	-0.001	0.006	-0.012	-0.001	0.426	0.675
	(0.009)	(0.009)	(0.009)	(0.009)		
Less than primary school	0.003	0.000	0.002	0.002	0.569	0.010
	(0.002)	(0.002)	(0.002)	(0.002)		
Primary school	0.000	-0.003	0.000	-0.003	0.914	0.076
	(0.005)	(0.005)	(0.005)	(0.005)		
Secondary school	0.006	0.008	0.002	0.003	0.914	0.303
	(0.009)	(0.009)	(0.009)	(0.009)		
Tertiary education	-0.011	-0.008	-0.014	-0.008	0.683	0.499
	(0.010)	(0.010)	(0.010)	(0.010)		
Postgraduate education	0.002	0.003	0.010	0.006	0.538	0.112
	(0.006)	(0.006)	(0.006)	(0.006)		
Argentina	0.002	-0.002	0.004	-0.002	0.744	0.074
	(0.005)	(0.005)	(0.005)	(0.005)		
Bolivia	-0.001	0.000	0.001	0.006	0.697	0.083
	(0.005)	(0.005)	(0.005)	(0.005)		
Chile	0.000	0.001	-0.002	-0.001	0.993	0.132
	(0.007)	(0.007)	(0.006)	(0.007)		
Colombia	0.003	0.004	0.002	0.002	0.985	0.163
	(0.007)	(0.007)	(0.007)	(0.007)		
Costa Rica	0.000	0.000	0.000	0.001	0.998	0.037
	(0.004)	(0.004)	(0.004)	(0.004)		
Ecuador	0.000	0.006	0.000	0.002	0.750	0.090
	(0.006)	(0.006)	(0.005)	(0.006)		
El Salvador	0.000	0.000	0.000	0.000	1.000	0.035
	(0.004)	(0.004)	(0.003)	(0.004)		
Mexico	0.001	-0.004	0.000	0.001	0.920	0.117
	(0.006)	(0.006)	(0.006)	(0.006)		
Panama	0.000	0.000	0.000	0.001	1.000	0.056
	(0.004)	(0.004)	(0.004)	(0.004)		
Peru	-0.009**	-0.011***	-0.005	-0.007*	0.077	0.049
	(0.004)	(0.004)	(0.004)	(0.004)		
Dominican Republic	0.000	0.000	0.001	0.000	1.000	0.023
	(0.003)	(0.003)	(0.003)	(0.003)		
Uruguay	0.005	0.006	0.001	-0.002	0.747	0.142
	(0.007)	(0.007)	(0.007)	(0.007)		
Num. social gatherings last week (0-5)	0.010	0.008	0.017	-0.006	0.823	0.725
	(0.020)	(0.021)	(0.021)	(0.020)		
Num. days outside last week	-0.020	0.016	0.000	-0.154***	0.003	3.036
	(0.050)	(0.050)	(0.050)	(0.050)		
Num. days exercised last week	-0.076	-0.071	-0.105	-0.139*	0.391	2.188
	(0.073)	(0.073)	(0.072)	(0.071)		
Frequency wore mask last week (1-5)	0.004	0.013	-0.007	-0.009	0.849	4.549
	(0.021)	(0.021)	(0.022)	(0.021)		
Trust in the private sector (1-5)	0.036	0.051**	0.007	0.014	0.205	2.737
	(0.025)	(0.025)	(0.024)	(0.025)		
Trust in the government (1-5)	0.034	-0.019	0.008	0.013	0.557	2.747
	(0.031)	(0.032)	(0.031)	(0.031)		

Notes: This table reports the results of different regressions where the dependent variable is specified in the row header and the independent variables are dummies for whether the respondent was presented with a recommendation from a government expert, private sector expert, academic expert, or unspecified expert. The omitted category is the control group, which was not shown any recommendation. The sample contains individuals who reached the part of the survey where the randomization was conducted, but is not limited to those who do not have missing values in the main dependent variables. The second to last column shows the p-value of a joint significance test for all regressors. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A.4: Impact of expert recommendation on agreement with recommendation – Sample 1 and 2

	Avoiding social gatherings		Spending time outside	
	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree
	(1)	(2)	(3)	(4)
Panel A: Sample 1				
Expert	-0.078***	0.022***	0.001	0.006*
	(0.008)	(0.005)	(0.008)	(0.004)
Observations	10,394	10,394	10,394	10,394
R^2	0.079	0.066	0.001	0.001
Dep. variable mean (control)	0.872	0.049	0.863	0.021
Panel B: Sample 2				
Expert	-0.022***	0.004	0.008	-0.007
	(0.006)	(0.005)	(0.007)	(0.004)
Observations	16,298	16,298	16,298	16,298
R^2	0.007	0.003	0.003	0.003
Dep. variable mean (control)	0.892	0.056	0.845	0.056

Notes: The dependent variable is an indicator for whether the respondent strongly agrees/agrees, or strongly disagrees/disagrees with a statement, as specified in the column header. In columns 1-2, the statement refers to the importance of avoiding social gatherings, whereas in columns 3-4 the statement is about the importance of spending time outside. The regressions in Panel A were only conducted for Sample 1, and the regressions in Panel B were only conducted for Sample 2. The regressor of interest is an indicator for whether the respondent was presented with a recommendation from an expert. The omitted category is the control group, which was not shown any recommendation.We also control for country fixed effects. Robust standard errors are in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A.5: Impact of expert recommendation on agreement with recommendation – Robustness to adding controls

	Avoiding social gatherings		Wearing a facemask		Spending time outside		Exercising	
	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree
Expert	-0.044***	0.011***	-0.014**	0.017***	0.006	-0.002	0.008	0.003
	(0.005)	(0.003)	(0.007)	(0.005)	(0.005)	(0.003)	(0.009)	(0.004)
Observations	26,692	26,692	16,298	16,298	26,692	26,692	10,394	10,394
R^2	0.067	0.038	0.200	0.141	0.031	0.013	0.052	0.007
Dep. variable mean (control)	0.884	0.053	0.804	0.098	0.852	0.042	0.828	0.026

Notes: The dependent variable is an indicator for whether the respondent strongly agrees/agrees, or strongly disagrees/disagrees with a statement, as specified in the column header. In columns 1-2, the statement refers to the importance of avoiding social gatherings, whereas in columns 3-4 the statement is about wearing a facemask even while outside. In columns 5-6, the statement is about the importance of spending time outside, and in columns 7-8 the statement is about the importance of frequently exercising. The regressions in columns 3-4 were only conducted for Sample 2, and the regressions in columns 7-8 were only conducted for Sample 1. The regressor of interest is an indicator for whether the respondent was presented with a recommendation from an expert. The omitted category is the control group, which was not shown any recommendation. We also control for sample-country fixed effects, age, gender, educational attainment, and the frequency with which the respondent carried out the corresponding activity in the previous week. To avoid losing observations in cases where the last control variable is missing, we include the variable with dummies for its different values, and add an indicator variable taking a value of 1 if the variable is missing. Robust standard errors are in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A.6: Impact of expert recommendation on agreement with recommendation – Ordered probit

	Avoiding social gatherings (1)	Wearing a facemask (2)	Spending time outside (3)	Exercising (4)
Expert	-0.197***	-0.061***	-0.020	-0.041
	(0.018)	(0.022)	(0.017)	(0.027)
Observations	26,692	16,298	26,692	10,394
Sample	1-2	2	1-2	1

Notes: This table shows the results of ordered probit regressions where the dependent variable is a categorical variable measuring the degree of agreement with a statement (from 1, strongly disagree to 5, strongly agree). In column 1, the statement refers to the importance of avoiding social gatherings, and in column 2 the statement is about wearing a facemask even while outside. The statement in column 3 is about the importance of spending time outside, and in columns 4 the statement is about the importance of frequently exercising. The regression in column 2 was only conducted for Sample 2, and the regression in columns 4 was only conducted for Sample 1. The regressor of interest is an indicator for whether the respondent was presented with a recommendation from an expert. The omitted category is the control group, which was not shown any recommendation. We also control for sample-country fixed effects. Robust standard errors are in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A.7: Heterogeneous effects - Low trust in experts

	Avoiding social gatherings		Wearing a facemask		Spending time outside		Exercising	
	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree	Strongly agree or agree	Strongly disagree or disagree
Expert	-0.020**	0.011**	-0.049***	0.019**	0.039***	-0.024***	0.082***	-0.019**
	(0.009)	(0.006)	(0.012)	(0.009)	(0.014)	(0.008)	(0.016)	(0.008)
Expert × Doesn't trust experts	-0.046***	0.017	-0.043**	0.020	-0.055***	0.006	-0.062***	-0.000
	(0.017)	(0.011)	(0.021)	(0.017)	(0.021)	(0.012)	(0.023)	(0.013)
Doesn't trust experts	-0.134***	0.064***	-0.230***	0.189***	-0.046*	0.012	-0.053*	0.029*
	(0.023)	(0.015)	(0.029)	(0.025)	(0.026)	(0.013)	(0.031)	(0.016)
Observations	9,241	9,241	9,241	9,241	9,241	9,241	9,241	9,241
R^2	0.063	0.028	0.078	0.061	0.022	0.009	0.024	0.008
Dep. variable mean (control)	0.885	0.041	0.804	0.114	0.802	0.062	0.703	0.067
Effect size (Expert + Interaction)	-0.066	0.028	-0.091	0.038	-0.017	-0.018	0.020	-0.019
P-Value (Expert + Interaction=0)	0.000	0.002	0.000	0.006	0.289	0.051	0.244	0.046

Notes: The sample for this analysis comes from the survey conducted in December 2021. The dependent variable is an indicator for whether the respondent strongly agrees/agrees, or strongly disagrees/disagrees with a statement, as specified in the column header. In columns 1-2, the statement refers to the importance of avoiding social gatherings, whereas in columns 3-4 the statement is about wearing a facemask even while outside. In columns 5-6, the statement is about the importance of spending time outside, and in columns 7-8 the statement is about the importance of frequently exercising. The regressors are an indicator for whether the respondent was presented with a recommendation from an expert, an indicator for whether the respondent was indifferent/had low trust in experts before the pandemic, and the interaction between the two. The omitted category is the control group, which was not shown any recommendation. We also control for country fixed effects. Robust standard errors are in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.