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Expectations, reference points, and compliance with COVID-19 social distancing measures☆

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ABSTRACT

We study the behavioral impact of announcements about the duration of a policy and their relationship with people's expectations in the context of the COVID-19 lockdowns. We surveyed representative samples of Italian residents at three moments of the first wave of the pandemic to test how intentions to comply with social-isolation measures depend on the duration of their possible extension. Individuals were more likely to reduce, and less likely to increase, their compliance effort if the hypothetical extension was longer than they expected, whereas positive surprises had a lesser impact. The behavioral response to the (mis)match between expected versus hypothesized extensions is consistent with expectations acting as reference points and can help explain the increase in observed physical proximity in Italy following lockdown extension announcements. Our findings suggest that public authorities should consider citizens' expectations when announcing policy changes.

1. Introduction

Non-pharmaceutical interventions such as bans on gatherings, business closures, or stay-at-home orders have been a key policy tool during the COVID-19 pandemic. Evidence shows that, overall, these interventions contributed significantly to reduce the spread of the disease, contain hospitalizations and deaths, and lessen the related social and economic costs (Brauner et al., 2021; Flaxman et al., 2020; Haug et al., 2020; Haushofer & Metcalf, 2020). Compliance with these measures cannot be taken for granted, however. Some studies documented that it depends on socioeconomic constraints, such as whether citizens have access to flexible work arrangements (Papageorge et al., 2020), and behavioral factors, including beliefs about the infectiousness of the virus (Akesson, Ashworth-Hayes, Hahn, Metcalfe, & Rasooly, 2022) and individuals' sense of civic duty (Barrios et al., 2021; Durante et al., 2021).

We investigate how citizens' willingness to comply depends on a critical feature of many non-pharmaceutical interventions: their announced duration.[1] In doing so, we provide evidence of another behavioral factor that affects compliance: people's expectations of the duration of self-isolation measures, compared to policy announcements. The importance of discontent and protests against restrictions makes the

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[1] The issue of compliance with medical advice or prescriptions, for instance in terms of medication adherence, has received increased attention (see for instance Lien et al., 2010) and is of crucial relevance in an environment like a pandemic, given the strong externalities that exist in this context.

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issue all the more relevant - demonstrations against lockdowns and other restrictions have been staged in several countries throughout the pandemic.[2] Moreover, issues related to announcements and expectations do not concern only lockdown policies. For instance, delays in the rollout of vaccines in most of continental Europe in the first trimester of 2021 forced governments to repeatedly postpone the announced starting dates and milestones for mass immunization, with potentially negative consequences for people's willingness to comply with existing measures.[3] The emergence of new variants of the virus, such as Omicron in late 2021, led to a new wave of restrictions and related communications about their duration. Therefore, studying the relationship between policy announcements, expectations, and compliance is of primary importance for both scholarly and policy reasons.

In the early months of the pandemic, policymakers faced difficult trade-offs in determining the length of restrictions. Although a long duration may signal the gravity of the crisis, therefore inducing people to comply, some citizens may consider restrictions over lengthy periods unacceptable or unberable, inducing them to give up early on. Moreover, citizens may interpret subsequent extensions to restrictions as a signal that policymakers were clueless in managing the crisis, reducing compliance. As such, policymakers needed to solve the tension between either implementing a lockdown of very long or even indefinite length, or announcing shorter durations with the risk of having to enact multiple extensions as the crisis unfolded.

To study these issues, we conducted three cross-sectional surveys on representative samples of the Italian population at critical moments of the first wave of the COVID-19 pandemic: when cases were rising rapidly, when they were plateauing, and during the descending phase of infections. After eliciting the respondents' expectations about the duration of the lockdown, we presented them with three scenarios with hypothetical lockdown extensions varying in length (a few weeks, a few months, or indefinitely until the pandemic is under control). After each scenario, we asked whether they intended to maintain, increase or decrease their compliance with the social-isolation restrictions. We showed the scenarios in random order; this allowed us to avoid framing effects, and have variation both across-subjects (e.g., by considering only the first scenario that the respondents saw) and within-subjects.

We find that participants were more likely to report an intention to reduce compliance with social-isolation restrictions when they faced a hypothesized extension of the policy that was longer than they expected (i.e., when negatively surprised). Positive surprises had the opposite effect, although less strong. In addition, when facing the prospect of a longer-than-announced lockdown, participants had a higher propensity to reduce compliance if they expected that the restrictions would end on the exact date that the Government announced, as compared to those who expected an extension. Compliance intentions associate significantly with the mismatches between expectations and hypothesized extensions even after controlling for individual expectations and indicators of the extent to which individuals were concerned about the pandemic.

Our findings indicate that individual expectations may function as relevant anchors or reference points (Ericson & Fuster, 2011), and discrepancies between expectations and the duration of a policy can reduce citizens' willingness to comply. The adverse impact of negative surprises, in particular, dominates the positive effect of positive surprises. The behavioral factors that explain our findings are akin to those identified in other contexts where expectations act as reference points, influencing such behaviors as labor supply (DellaVigna et al., 2017), domestic violence (Card & Dahl, 2011), and tax elusion (Engström et al., 2015). Auld (2003) highlights the importance of expectations during an epidemic, and Bertoni et al. (2020) show that using a gain or loss frame is consequential for health testing. In the context of the COVID-19 pandemic, it is less clear how expectations would influence behaviors in case of negative surprises, especially since observation of others was limited during the lockdowns, which likely reduced the potential role of social norms to serve as reference points for compliant behaviors.[4] Abeler et al. (2011), for instance, show that setting ambitious expectations can lead people to work longer hours and earn more money (see also Camerer et al., 1997 and Thakral & Tô, 2017 for similar results). However, other studies suggest that this effect could go in the opposite direction, reducing rather than increasing effort. In our case, a goal-gradient effect could also be at play, whereby the farther people are to a given goal, the less likely they exert effort to achieve it (Bonezzi et al., 2011; Heath et al., 1999). In particular, "moving the goalpost" for when the social distancing measures would be lifted might have led to frustration among the public if they began to believe that the goal was unattainable (Huang et al., 2012; Louro et al., 2007).[5] This suggests that repeated extension announcements of lockdown measures may have adverse effects on compliance if the current expectation is that the restrictions will end soon. The econometric estimates of the effects we find are robust to controls for reported levels of compliance and for individual characteristics correlated with expectations about the duration of the social-isolation restrictions, such as concerns about the severity of the virus, and for actual health risks, such as living in a region with a higher prevalence of COVID-19 cases. Results are very similar when we limit the analysis to the response to the first extension scenario that the participants saw (the order was random), to rule out consistency effects. These additional analyses corroborate our interpretation of the findings in terms of expectations working as reference points. Moreover, the anonymity of the survey, and the fact that even in the middle of the epidemic about half of participants admitted not complying with some of the restrictions, are reassuring that the stated intentions that the participants reported may well represent their actions, consistent with recent evidence (Jensen, 2020).

By highlighting some of the costs of mismatches between expectations and extensions, our study provides insights to public authorities on how to manage citizens' expectations in public health emergencies that require prolonged or intermittent lockdown measures. Indeed, the

[2] The press gave large coverage to these protests. For instance, "As Europe's Lockdowns Drag On, Police and Protesters Clash" was the title of a March 2021 story in the *New York Times* (https://www.nytimes.com/2021/03/23/world/europe/lockdowns-virus-europe-police-bristol.html), and an article titled "Covid: Huge protests across Europe over new restrictions " appeared on BBC News on November 1, 2021 (https://www.bbc.com/news/world-europe-59363256).

[3] See https://www.wsj.com/articles/europe-despairs-as-covid-19-vaccine-rollout-stalls-and-pandemic-grinds-on-11616497200.

[4] A meta-analysis by Bursztyn and Yang (2021) documents the widespread presence of misperceptions of norms and how correcting them can positively alter people's behavior. In the context of COVID-19 the role that norm (mis) perceptions played is less clear. On the one hand, it is possible that first-hand experience of the lockdown induced most citizens to believe that compliance with physical distancing measures was high, while on the other hand the media attention focusing on non-adherence of a small number of non-compliant may have caused many people to form incorrect beliefs about the prevalence of norm non-adherence.

[5] This effect is visible in several contexts, such as the dissatisfaction that consumers may have from experiencing a lower quality of a good or service than they expected, or that patients and airline passengers feel if wait times are longer than announced. These mis-confirmations may lead the individuals to not engage with a service or purchase a good again (e.g. see Craig et al., 2017) Insights for good and service providers vary; for example, foot-in-the-door techniques (asking initially for a small commitment, and escalate later) may facilitate initial adoption, but lead to a negative shock in the future. Door-in-the-face approaches, whereby the proposer starts by asking a strong commitment, may discourage adoption but, conditional on adopting, may lead to positive surprises and higher satisfaction and retention (Staw 1981; Kelly and Milkman, 2013). Studies in medicine have also analyzed patients' expectations gaps (see, for instance, Bismark et al., 2011, or O'Connor et al., 2000).

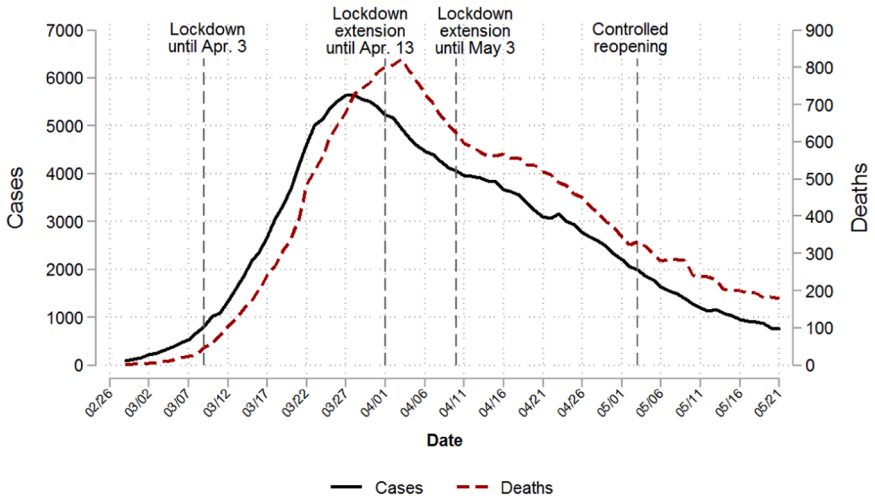


Fig. 1. Timeline of COVID-19 epidemic and policy responses in Italy: February-May 2020.
Notes: Source: authors' calculations based on European center for Disease Prevention and Control data. Last update May 19, 2020. The first survey ran on March 18–20, 2020, the second on April 8–10, and the third on April 22–24.

governments of several countries, including Canada, Germany, France, the United States, India and the United Kingdom, enacted stay-at-home mandates specifying an end date, and in several cases they extended the lockdowns beyond the date they established initially. These extensions were often inevitable responses to unanticipated developments of the COVID-19 pandemic, especially during the first wave. Given our findings, however, there may be room to alleviate the negative consequences of these extensions through the management of citizens' expectations.

In the next Section, we report some details about the evolution of the pandemic in March and April 2020 in Italy, the timeline of government interventions to contain the spread of the disease, and aggregate evidence of actual physical distancing. In Section 3 we describe the methodology of our study as well as the data. Section 4 reports our analyses and interpretations. We conclude, in Section 5, by discussing how our findings contribute to explaining the development of physical distancing throughout the lockdown period and the implications for public policy.

2. Epidemiological and institutional background

In late February 2020, Italy was the first Western country to enact a lockdown in response to the rapidly growing number of coronavirus cases. Fig. 1 displays the epidemiological developments between February and May 2020, as well as the timing of the main policy responses. The diffusion of the coronavirus rapidly reached a peak of six thousand new daily cases in late March, about a month after the first evidence of community spread. Deaths surged just as fast, reaching almost one thousand in a single day again at the end of March. During this first wave of the epidemic, the incidence was unevenly distributed across the national territory, with the North and part of the Center being severely hit, while the South experienced the pandemic much more lightly.

The Government introduced a nation-wide lockdown on March 9, as a temporary measure to last until April 3. During this period, the authorities also imposed the closure of most economic activities. The Government then went on to revise the end date of the lockdown twice, on April 1 (until April 13), and on April 10 (until May 3). Starting May 4, a gradual relaxation of the measures began.[6]

Despite media coverage stressing the severity of the epidemic, hefty fines and severe sanctions for lawbreakers, the Italian Government struggled to ensure full compliance by the public. Fig. 2 provides some evidence of the degree of physical distance over time in Italy. We rely on data by Pepe et al. (2020) who computed the average degree of a spatial proximity network from de-identified mobile phone data of about 170,000 users in Italy, daily and by province, which we collapse to obtain weekly observations. The line reports the average index per week, after controlling for time-invariant unobservable differences between provinces, from the beginning of March through early May.[7] Following the introduction of strict stay-at-home measures, and the closure of most economic activities, proximity fell steeply; the index remains at near zero for a few weeks, even following the first extension of the lockdown. However, after a further extension, citizens' behavior changed toward greater mobility and physical vicinity. There are of course several plausible reasons for such a change. Anecdotal evidence from media reports, for example, suggests that in addition to weather conditions more conducive to outdoor activities, and an actual decline of reported cases and deaths, there was an increasing frustration amid repeated extensions of the restrictions that made citizens less tolerant and less compliant (Galluzzo, 2020).[8] The objective of our study is to investigate whether different reactions to lockdown extension announcements might contribute to explain compliance, the behavioral and psychological nature of these different responses, and their policy implications.

[6] Appendix A provides a detailed account of COVID-19 events and policy responses in the country.

[7] Location data is provided by Cuebiq Inc., a location intelligence and measurement platform. Through its 'Data for Good program', Cuebiq provides access to aggregated and privacy-safe mobility data for academic research and humanitarian initiatives. The index measures the daily mean of hourly contacts within a 50-meter radius of two users, with multiple links counted only once (as proxy for household members). A link between two nodes of the network indicates the possibility that the corresponding individuals have had a close-range encounter during a given day.

[8] The following newspaper articles (in Italian), for instance, report that the Prime Minister was worried for the psychological stability of citizens before announcing the second extension https://www.corriere.it/cronache/20_aprile_08/coronavirus-fase-2-turni-code-ogni-attivita-cosi-ripartira-l-italia-f15f75dc-7910-11ea-ab65-4f14b5300fbb.shtml or https://www.huffingtonpost.it/entry/un-lockdown-ogni-15-giorni_it_5e8ccadbc5b62459a9302d19

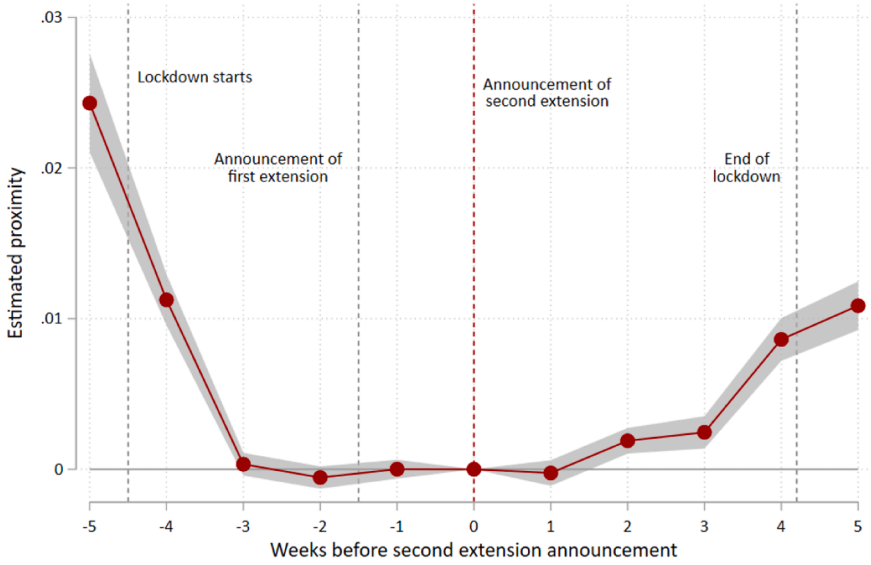


Fig. 2. Estimated physical proximity across Italian provinces around key milestone events.

3. The survey

3.1. Design

To study how the duration of stay-at-home measures may influence compliance, we collaborated with an established survey firm, SWG, to run three survey rounds on representative samples of the Italian population.[9,10] The first survey round ran on March 18–20, 2020, the second on April 8–10, and the third on April 22–24. Thus, we first surveyed citizens after the lockdown enactment when cases were rising rapidly, then after a first extension announcement when cases were plateauing, and, finally after a second extension announcement during the descending phase of infections.

Each survey round had four main parts. In the first part, respondents answered questions about what actions they were adopting to reduce the likelihood of contagion. Next, we measured respondents' awareness of the official end date of the stay-at-home measures by asking them to report it. Third, after reminding all respondents of the officially announced end date, to equalize possibly heterogeneous levels of awareness (April 3 in round 1, April 13 in round 2, and May 3 in round 3), we recorded the respondents' subjective expectations on possible extensions of the measures. In this question, there were four statements and we asked participants to choose the one they believed would be most likely to occur. The options were as follows: (a) "the measures will end on the date indicated by the Government"; (b) "the measures will be extended by a few weeks"; (c) "the measures will be extended by a few months"; and (d) "the measures will be extended indefinitely, until deemed necessary". Finally, we asked respondents to consider a set of scenarios with different extensions of the stay-at-home measures, and to indicate their intentions to comply with the restrictions under each scenario. There were three cases for them to consider, each with a different duration of the extension: "by a few weeks", "by a few months", "indefinitely, until deemed necessary". In each scenario, participants would select one of five options: "I would significantly increase my isolation", "I would somewhat increase my isolation", "I would continue in my current behavior", "I would somewhat reduce my isolation", "I might decide to not comply with the rules". To avoid ordering effects, we presented the scenarios in random sequence.

This design allows us to determine whether the duration of the extension affects intentions to comply with stay-at-home measures. Further, we can assess whether any given extension represented a surprise (positive if the extension was shorter than what the respondent expected, negative otherwise) or matched individuals' expectations. The survey also included a section with questions about the respondents' socio-demographic characteristics.

Our survey design does not include exogenous manipulation of individual expectations. In addition to the ethical issues that these manipulations might raise in the context of a pandemic, it is difficult to think about a way to affect expectations that would not also influence compliance in any other way other than through expectations themselves. In the econometric analyses below, we rely on controls for several relevant individual characteristics to address potential explanations for heterogeneities in expectations, and we discuss different interpretations of our findings. The key goal of this study is to document how discrepancies between expectations and formal announcements associate with changes in compliance. Note that this focus on *changes* in their self-isolation efforts alleviates concerns about unobserved heterogeneity, because individual differences in the assessment of risk (or in other aspects) should affect the level of effort, but not necessarily the change.

Moreover, we measure intentions to comply with social-distancing restrictions, rather than actual behavioral change due to extensions of the measures. As such, social desirability bias could be a concern. For example, people may be inclined to understate the extent to which they are considering reducing their effort. However, respondents' identities were unknown to the researchers, and the fact that even in the middle of the epidemic more than half of participants admitted not complying with some of the social distancing measures (see below) suggests that, consistent with recent evidence (Jensen, 2020), social desirability may not be a major concern in this context.

[9] SWG is one of the most established market research firms in Italy and a member of the European Society for Opinion and Marketing Research. The company manages a panel of over 60,000 individuals in the country. Respondents fill the surveys online or respond to questions via an online computer-assisted telephone interview (CATI) software. The firm began administering questions related to the COVID-19 epidemic in a weekly survey in late January 2020. We added a set of questions to three of SWG's surveys (questions in Italian and their English translation are in Appendix B).

[10] At the beginning of the COVID-19 pandemic, SWG started fielding regular surveys on representative samples of the Italian population to track beliefs and policy preferences. We leveraged their ongoing efforts by adding our modules. As such, the sample size of our survey rounds was constrained by SWG available pool of respondents at that time.

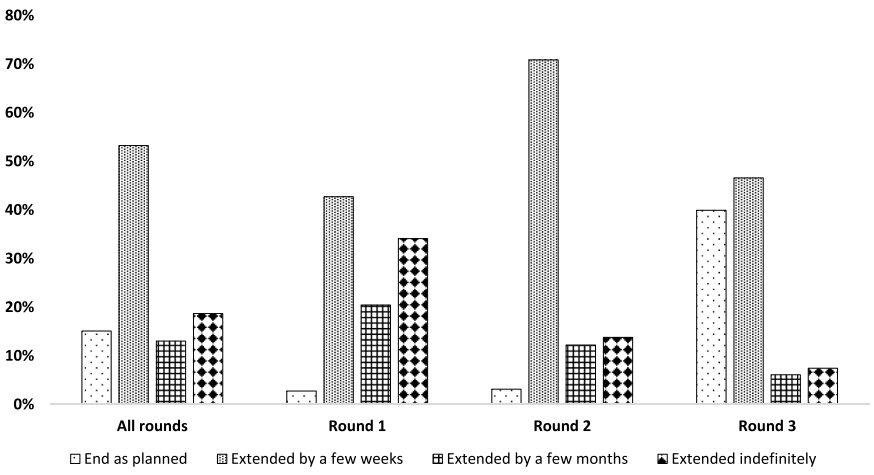


Fig. 3. Expected end date of self-isolation measures.
Notes: The graph reports the sampling-weighted proportions of respondents who reported their expectation that the self-isolation measures would end as planned, or be extended by a few weeks, a few months, or until necessary. The design-based F statistic for equality of distribution of expectations between the three rounds is 73.1 ($p<0.001$).

3.2. Data and descriptive statistics

The survey reached 894, 891 and 912 individuals in the first, second and third round, respectively. 39.7% of the responses came from participants who reside in one of the five regions where the disease initially spread on a larger scale (the "Red Zone" – see Appendix A).[11] About 17% reside in Lombardia, the most populous region that also experienced the largest incidence of COVID-19 cases and deaths. In terms of age profile, 32.8% of participants are older than 60; as such, they are in the subpopulation at highest risk of severe effects from COVID-19.[12] On average, respondents adopted 4.3 of the six recommended social-isolation behaviors listed in the survey, and 46% of the sample reported adopting all six recommended practices.[13]

A large majority of respondents (77.2%) reported accurately the date that the Italian Government had announced as the deadline for the stay-at-home measures as of the date of the survey (i.e., April 3, April 13 and May 3 for the first, second and third round, respectively).[14] Thus, although a large share of the population was aware of the relevant deadlines, between 25%−30% of the population was either confused or not well informed about the timeline of the measures.

4. Analyses

4.1. Respondents' expectations about possible extensions of stay-at-home measures

As shown in Fig. 3, the distribution of expectations about the duration of possible extensions of the stay-at-home measures was different across the three rounds. In the first round, only 2.8% of respondents believed that the lockdown would end on the official date (April 3). Roughly 43% expected the Government to extend the provisions by a few weeks, 20.4% by a few months, and 34.1% for an indefinite time. In the second round, again only a few respondents expected the measures to end at the (new) official date (April 13), but many more believed the extension to last only a few weeks compared to round 1 (70.9%), and fewer expected longer extensions. In the third round, the trend toward expecting a closer end of the lockdown continued, with nearly 40% of respondents anticipating that it would actually end on the newly announced date (May 3), almost half believing it would last only a few more weeks, and a small minority expecting extensions by a few months or an undetermined time.[15] The shift in expectations followed at least in part the evolution of the epidemic and the actual policies. Considerable heterogeneity in expectations about how long the measures would be in place remained, however, in each round.

4.2. Respondents' reactions to possible extensions of stay-at-home measures

We now turn to analyzing how individuals respond to government communication. Our objective is to test how positive or negative surprises (i.e., the duration of self-isolation restrictions is shorter or longer than expected, respectively) affect intentions to comply. We first report some descriptive graphical evidence and then turn to regression analyses.

In Panel A of Fig. 4, we show the distribution of the respondents' intentions to comply with stay-at-home restrictions under the three scenarios of potential extensions to the date announced by the Government at a given time: "a few weeks", "a few months", or "indefinitely". Because extreme compliance intentions were infrequent, we grouped intentions to comply into three categories: "maintain", "reduce" (combining "would reduce self-isolation" and "would consider

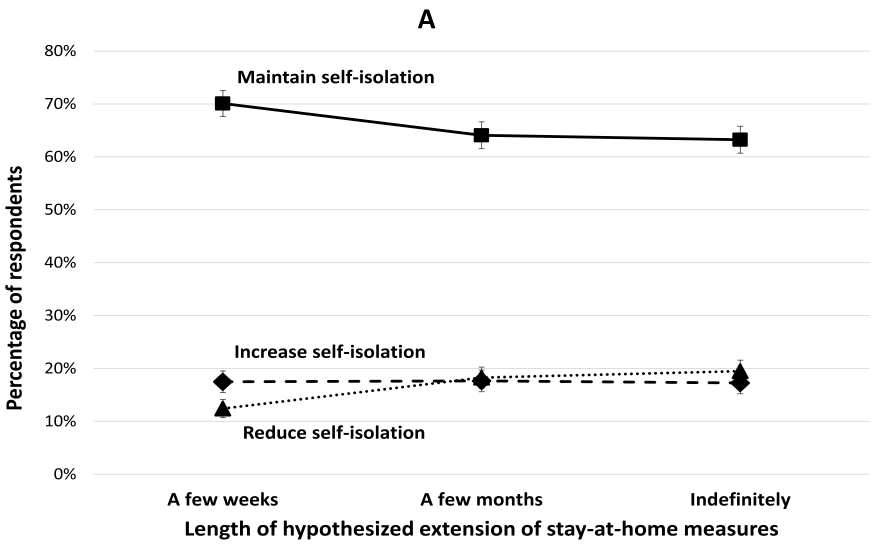
[11] The five regions were Lombardia, Veneto, Marche, Piemonte, Emilia-Romagna.

[12] See: https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html.

[13] Table A2 in Appendix A reports the summary statistics of the socio-demographic characteristics of the sample, both overall and for each survey round. The table also shows the p-values from F tests of linear regressions (with and without sample weights) of each socio-economic indicator on dummy variables representing the different waves of the survey. Overall, the differences in these characteristics between survey rounds are negligible in size and not statistically significant. Table C1 in Appendix C shows these statistics for various relevant sub-groups. The six recommended behaviors listed in the survey were: "I try to keep a safe distance from people", "I do not go to crowded places", "I go to supermarkets as seldom as possible", "I no longer meet with friends", "I no longer meet with relatives who do not live with me", and "I do not leave home except in an emergency". Due to a coding error, in the second round the survey firm coded this question as single-response instead of multiple-response. We have thus discarded the question from round 2. See Tables C2 and C3 in Appendix C for details.

[14] 73.5% in round 1, 64.7% in round 2, and 93.4% in round 3. The proportions are similar among red-zone residents and those living in the rest of the country (77.3% vs. 77.2%) and among respondents younger than 60 and older than 60 (76.9% vs. 77.6%). see Table C4 in Appendix C.

[15] These proportions are similar among residents of red-zone and non-red zone regions, and among respondents younger than 60 and those older than 60 (see Table C5 in Appendix C).



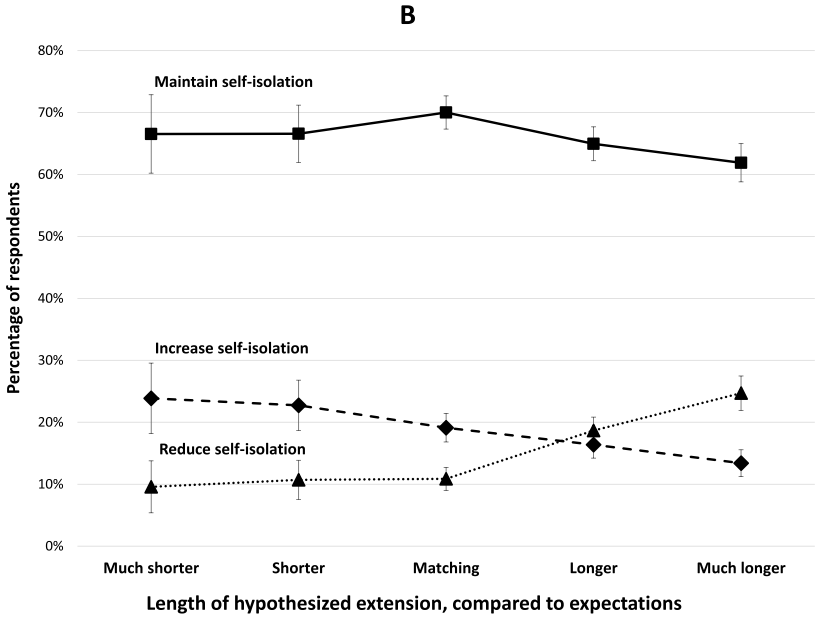


Fig. 4. Self-isolation intentions, by hypothesized duration of lockdown extension and (mis)match between expectations and extension scenarios.
Notes: The graph reports the sampling-weighted proportion of respondents who stated their intention to increase, maintain, or reduce their compliance with self-isolation measures, by hypothesized extension scenarios (Panel A) and by (mis)match between the hypothesized extension scenarios and their expectation about this extension (Panel B). "Increase self-isolation" corresponds to the intention to either "increase substantially" or "increase somewhat" self-isolation; "Reduce self-isolation" includes the options "reduce somewhat" or "consider not complying with restrictions"; "Maintain self-isolation" indicates intention to "continue with current self-isolation behavior". The vertical lines represent 95% design-based confidence intervals. The design-based F statistic for the test of equality of distribution in the three hypothesized extension cases in Panel A is 21.9 ($p<0.001$); the equivalent statistic for equality of distribution of intentions to comply in the three (mis)match cases in Panel B is 18.29 ($p<0.001$).

no longer respecting the rules"), and "increase" ("increase somewhat" and "increase greatly" self-isolation efforts).[16]

Most respondents (between 63% and 70%) in all scenarios indicated that they intended to "maintain" their current self-isolation efforts, with a decline in case of longer extensions. The proportion of respondents who intended to increase self-isolation is similar across the three scenarios (between 17.2% and 17.7%). Conversely, the share of respondents who would reduce it increases with the length of the expected extensions, going from 12.4% in the scenario where the lockdown is extended by a few weeks to 19.5% in the case of indefinite extension. There are also differences across rounds, with a drop in the proportion of respondents who intend to increase their compliance and a rise in those decreasing it in more recent rounds (see Appendix C for details). Intentions to comply are thus sensitive to the hypothesized duration of lockdown extensions. This could be due to the cost of isolation increasing with its duration. As a longer lockdown is plausibly connected to more severe epidemiological environments, also its benefits could increase with duration, but not necessarily as steeply as the cost.

To investigate the extent to which intentions to comply with the lockdown depended on individual expectations about how long the measures would be in place, we defined a measure of match (or mismatch) between expectations and extension scenarios. A match occurs when the extension scenario coincides with the respondents' expectations. Mismatch cases can be positive or negative: "shorter" and "much shorter" indicate instances where the scenario hypothesizes that the measures will end sooner than the respondent expects, whereas "longer" and "much longer" denote cases in which the hypothesized extension dates end later than a respondent's expectation. Table 1 summarizes these different instances.[17]

Panel B of Fig. 4 displays the distribution of self-isolation intentions by the (mis)match between expectations and hypothesized extension

[16] We report the full distributions overall and by round in Figures C1 and C2.

[17] Potentially, we could create a further category for the combination "end on announced date"-"extended indefinitely", but we consider the shock of an indefinite extension not too different between those expecting an immediate end and those expecting a few weeks extension and, therefore, keep them in the same category.

Table 1
(Mis)match between expectations and hypothesized length of extension of stay-at-home measures.

		Scenario		
		Extended by a few weeks	Extended by a few months	Extended indefinitely (until necessary)
Expected end of stay-at-home measures	**End on announced date**	longer	much longer	much longer
	Extended by a few weeks	match	longer	much longer
	Extended by a few months	shorter	match	longer
	Extended indefinitely (until necessary)	much shorter	shorter	match

Notes: The columns of this table report the lockdown extension scenarios presented to the respondents; the rows refer to the respondents' expectations about the duration of the lockdown. We indicate as a "match" the cases in which the expectations corresponded to the hypothesized extensions. "Shorter" and "much shorter" correspond to cases where the hypothesized duration of the measures is less than the expected duration; "longer" and "much longer" indicate that the scenario hypothesizes the measures to end later than expected.

scenario. The sampling-weighted averages show that the proportion of respondents who report a willingness to increase compliance with self-isolation measures decreases as the hypothesized extension of the measures gets longer than the respondents expected. Conversely, the more negative the surprise between scenario and expectations, the higher the proportion of individuals expressing the intention to reduce their level of compliance. For extreme mismatches (where the scenario is much longer than expectations), the share of respondents who indicate they would reduce compliance is higher than the share of those who would increase it. We also observe an asymmetry between positive surprises, which are not associated with changes in compliance intentions, and negative ones, for which we find a reduction in compliance intentions.

On the one hand, one might expect less tolerance in later survey rounds due to people's fatigue with social distancing measures; on the other hand, later in the pandemic people might learn more about the severity of the crisis, and this could lead to greater compliance. Thus, the predicted effect of extensions across waves is ambiguous and worth studying. We find qualitatively similar patterns in each round (Fig. C2 in Appendix C), although the main effects of interest are more pronounced in rounds 1 and, especially, 3. In our econometric analysis, we pooled observations from all three rounds, including round fixed effects in the regressions; the estimates are consistent with the lower willingness to comply being a result of the mismatch between expectations and extension announcements rather than simply being due to survey round effects.

4.3. Regression analyses

We investigate the statistical significance of these differences, and their robustness to controls, with multinomial logit regressions. The outcome variable is the choice between increasing, maintaining (the default option) and reducing compliance. The covariates on which we focus are the different extension scenarios, the expectations about extensions that the respondent reported, and the type of mismatch between scenarios and expectations. Additional covariates include indicators for each survey round and the set of socio-demographic characteristics reported in Table A2 in Appendix A.[18] Table 2 reports the parameter estimates in relative-risk-ratio transformations. For each specification, the first column displays the estimated coefficients for the option to increase compliance, and the second the estimates for the option to reduce compliance.

The estimated coefficients from specification (1) indicate that respondents, on average, were significantly more likely to express the intention to reduce their compliance when presented with a scenario that implied an extension longer than a few weeks. They were also less likely to report a willingness to increase (and more likely to decrease) compliance in round 3. In specification (2) we included indicators of the respondents' expectations, setting "the lockdown will end as planned" as the omitted category. Respondents who expected the Government to extend the duration of the lockdown were less likely to reduce their intention to comply compared to those who expected the lockdown to end on the announced date (without any large or statistically significant differences across groups who expected different extensions). In specification (3) we add among the covariates the deviations from the extension scenarios, with "extension matching expectations" as the omitted category. The results confirm the descriptive evidence from Fig. 4: respondents who experienced negative surprises were significantly less likely to report the intention to increase compliance, and (especially) more likely to report the intention to reduce it, compared with the "extension matching expectations" case. Positive surprises imply reactions in the opposite direction, although these effects are weaker and, in most cases, not statistically significant. Wald tests for differences between the estimated coefficients on the positive and negative surprise indicators provide further evidence of the significance of the asymmetric effect of deviations of extension scenarios from expectations.[19] Thus, the most significant reaction (statistically and in size) to the discrepancy between extension scenarios and expectations is the intention to reduce compliance when the hypothesized extension is longer than expected, while the reaction to shorter than expected extensions is negligible.

Because expectations about the duration of the lockdown measures vary, we can further investigate whether all types of expectations are equally relevant reference points. Some respondents believed that the isolation restrictions would end at the officially announced dates, and this belief was more frequent in the third round. The official date was plausibly particularly salient, making it especially consequential in order to anticipate behavioral responses. Here, we focus on the positive and negative surprise effects, leaving as the omitted category, again, the "extension matching expectations". In specification (4), we report estimates from regressions where the covariates include interaction terms between the indicators for the hypothesized extension being longer or shorter than the expectations, and the different expectations. Given the increased detail of the analysis, we grouped the expectation-mismatch indicators for "shorter" and "much shorter", and for "longer" and

[18] Table A2 shows that the samples are well-balanced on socio-demographic characteristics across the three survey rounds.

[19] In Appendix C Table C6, we present results from specifications that include indicators for scenarios and expectations both directly and in deviations from the scenarios. Although there is some variation in deviations for each level of expectations, this variation is many cases limited to one or two categories, which makes the interpretation of the coefficients on the expectations-scenario deviations indicators problematic. To mitigate this concern, in Table C6 we present results after aggregating "shorter" and "much shorter" into one category ("shorter") and "longer" and "much longer" into one category ("longer"). Although the estimated coefficients are smaller in magnitude, our main result that negative surprises lead to reduced compliance is robust to this alternative specification.

Table 2
Self-isolation intentions: multinomial logit estimates.

		(1)		(2)		(3)		(4)	
	Option:	Increase compliance	Reduce compliance	Increase compliance	Reduce compliance	Increase compliance	Reduce compliance	Increase compliance	Reduce compliance
Scenario	A few months	1.105*	1.638***	1.106*	1.651***	1.296***	1.234	1.350***	1.510***
		(0.0579)	(0.105)	(0.0582)	(0.107)	(0.129)	(0.161)	(0.120)	(0.142)
	Until Needed	1.092	1.780***	1.093	1.798***	1.508**	1.095	1.377***	1.622***
		(0.0684)	(0.128)	(0.0687)	(0.131)	(0.243)	(0.225)	(0.156)	(0.181)
Expectations	A few weeks			0.759	0.441***				
				(0.188)	(0.0850)				
	A few months			1.081	0.425***				
				(0.305)	(0.114)				
	Until needed			1.150	0.387***				
				(0.316)	(0.113)				
Length of hypothesized extension, relative to expectations:	Much shorter					1.378*	1.026		
						(0.266)	(0.285)		
	Shorter					1.106	0.993		
						(0.131)	(0.163)		
	Longer					0.865	1.535***		
						(0.0886)	(0.212)		
	Much longer					0.686**	2.032***		
						(0.121)	(0.454)		
Length of hypothesized extension relative to expectations * expectations	Shorter * Expect lockdown to be extended by a few months							1.196	1.140
								(0.226)	(0.290)
	Shorter * Expect lockdown to be extended indefinitely							1.135	1.005
								(0.177)	(0.226)
	Longer * Expect lockdown to end on announced date							1.017	2.654***
								(0.249)	(0.555)
	Longer * Expect lockdown to be extended by a few weeks							0.706***	1.249
								(0.0884)	(0.174)
	Longer * Expect lockdown to be extended by a few months							0.999	1.159
								(0.188)	(0.268)
Round:	Round 2	0.759*	0.910	0.853	0.882	0.824	0.826	0.831	0.872
		(0.119)	(0.159)	(0.137)	(0.172)	(0.130)	(0.160)	(0.132)	(0.166)
	Round 3	0.572***	2.299***	0.616**	1.592**	0.665**	1.856***	0.599***	1.574**
		(0.0937)	(0.350)	(0.116)	(0.306)	(0.116)	(0.330)	(0.112)	(0.298)
Adjusted Wald test of differences (F-stat)	Longer - Shorter					2.21	3.97**		
	Much longer - much shorter					4.59**	2.45		
	Observations	7917		7917		7917		7917	
	F-statistic	6.7		7.1		6.2		6.5	
	N. respondents	2639		2639		2639		2639	

Notes: In all regressions, the baseline option is "maintain current behavior", the omitted lockdown length scenario is "a few weeks", and the omitted round is Round 1. In specification (2), the omitted expectations group is "end as planned". In specification (3), the omitted relative expectations length is "scenario matches with expectations", and in specification (4), the omitted interactions are those with "scenario matches with expectations". We report the estimates as relative risk ratios. Each respondent selected one option from each of three questions, therefore there are up to three observations per individual in the regression sample. All regressions include, among the covariates, gender, age, education, whether the respondent lives alone or with her/his parents, marital status, whether the respondent has children, whether s/he is currently employed, whether the respondents' household is currently facing economic difficulties, and whether they live in one of the "Red Zone" regions. The regressions include sampling weights. Linearized standard errors are in parenthesis. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

"much longer" into only two categories ("shorter" and "longer", respectively). Given the design of the survey, the length of the restrictive measures in the scenarios could be shorter that the expectations only if the expectations were for the duration to extend for a few months or indefinitely. Therefore, there are only two interaction terms between the indicator for shorter-than-expected extension scenarios and reported expectations. The estimates show that the negative reactions to expectation mismatches are particularly strong for those who expected an end of the lockdown at the announced date (who are more likely to reduce compliance), as well as for those who expected an extension by a few weeks (who are less likely to increase compliance). The non-significant estimates for those expecting the lockdown to be extended by a few months suggest that the difference between an extension by a few months and an indefinite one may not be strong.[20]

A more fine-grained investigation of individual responses to the three scenarios provides further information on the origin of these results. First, about 10% of respondents reported that they would reduce their compliance in all three extension scenarios. The majority of these participants expected that the restriction would end at the date that the Government announced. Thus, for these respondents all hypothesized extension scenarios were "longer" than what they expected. Second, roughly 15% of individuals indicated the intention to keep or increase compliance for shorter extensions, and the intention to reduce compliance for longer extensions, i.e., in the scenario where individuals were more likely to receive a negative surprise. It is these two subsets of respondents that largely determine the "negative surprise effect" that we detected.

4.4. Alternative explanations and additional analyses

To address the possibility that factors other than expectation mismatches explain our findings, we perform several additional tests. One concern is that positively and negatively surprised individuals, in part by construction, may hold different expectations or have different levels of baseline compliance.[21] Those who experience negative surprises, for example, are also those who expect the lockdown to end sooner. In turn, these people might also believe that the pandemic is not very serious, which might explain why they are less likely to maintain or increase their self-isolation efforts. Conversely, those who expect the restrictions to be extended for longer periods are more likely to be positively surprised; they might be more concerned about the pandemic, and thus more likely to state they would maintain or increase their self-isolation efforts. On the one hand, regardless of the underlying determinants of our findings, relevant policy implications remain; in particular, repeated extensions of the end-dates of the isolation measures may have overall negative consequences in terms of compliance with those restrictions. On the other hand, it is useful to understand whether these overall consequences derive from individual heterogeneities or from systematic behavioral responses to the different scenarios, given the expectations.

We perform two additional analyses to address this question. First, we rely on additional information, available only for the first round of the survey: the answers to a question about whether respondents were "afraid of getting sick with COVID-19". As shown in Appendix Table C7, respondents who expected longer extensions were indeed more likely to be "quite afraid" or "very afraid" to contract the virus. The regression results displayed in Appendix Table C8, however, indicate that controlling for this variable (a binary indicator taking the value of 1 if people are either "quite afraid" or "very afraid") does not change meaningfully the estimates of our coefficients of interest.[22] Second, we test whether our results hold also when we account for the respondents' baseline levels of compliance with social-distancing restrictions, by adding to the covariates a binary indicator of whether the respondents reported complying with all six listed social-isolation behaviors (as reported in Section 3, this splits the sample approximately in half). The results, reported in Appendix Table C9, show that the estimated coefficients on baseline compliance are similar in magnitude (about 0.66) and statistically significant for both "increase compliance" and "reduce compliance". This indicates that being fully compliant with recommended social-distancing measures is associated with an increased likelihood of maintaining current levels of compliance as opposed to either reducing it or increasing it. Again, the magnitude and statistical significance of our main estimated coefficients of interest are unchanged.

In addition to the self-reported measure of concerns for the virus in the first survey round, we can also control for the actual health risks based on the respondents' place of residence, for all three rounds. Throughout the first wave of the pandemic, some areas of the more populous regions of the north of Italy were more affected by the health crisis. In particular, the regions of Emilia Romagna, Lombardia, Marche, Piemonte, and Veneto – often referred to by the media and government officials as the "Red Zone" – accounted for 75% of the total number of COVID-19 cases recorded across the country by May 2020, despite having 42% of the population. As reported in Table C10, our findings hold also after controlling for this factual risk indicator; respondents in the Red Zone were equally significantly likely to report an intention to reduce their self-isolation efforts if the extensions were longer or much longer than they expected, with the latter having a larger estimated coefficient. Similarly, we do not see a reduction on intended compliance in case of positive surprises (i.e., if extensions are shorter or much shorter than respondents' expected end date). The main difference between respondents living inside and outside of the Red Zone is that, overall, a higher share of Red Zone respondents reports an intention to increase their compliance efforts regardless of whether the scenarios matched their expectations. Despite this, the willingness to increase their self-isolation efforts decreases as the length of hypothesized extensions increases relative to their expectations. In columns 3 and 4 of Table C10, we split the population by age, one of the most important individual factors affecting risk. Younger citizens show a higher propensity to reduce compliance when facing longer than expected extensions, whereas the elderly are less likely to increase compliance.

These additional findings suggest that the association between deviations of lockdown extension scenarios from expectations is not likely due to underlying differences between positively and negatively surprised individuals in terms of their concern about the coronavirus, their relative risk of contagion, or their level of compliance with the social-distancing restrictions.

Moreover, although we can rule out that "ordering effects" may explain the responses to the hypothetical scenarios because the respondents saw the scenarios in random sequence, a remaining concern is

[20] We ran the same analysis while also including, among the regressors, the interaction terms between the indicator for the scenarios matching expectations, and the expectations being that extensions would be of a few weeks, a few months, or indefinite (i.e., three additional interaction terms compared to specification (4) from Table 2). The estimates from this further detailed model are in Table C9 in Appendix C. The estimates of main interest do not vary meaningfully. A shorter or equal length of the extension scenario with respect to expectations does not correlate with an increased propensity to reduce compliance regardless of the underlying expectations.

[21] As noted in Section 3 above, the fact that we ask how participants want to *change* their self-isolation efforts reduces these concerns: individual differences in the assessment of risk (or in other aspects) should in first instance affect the level of effort rather than the change.

[22] Because this variable is only available for Round 1, we focus on the robustness of the magnitude of the estimated coefficients with and without controlling for baseline fear of getting sick. For comparison, in Appendix Table C8 we also report the results from our main specification including data from all three rounds. When we restrict the sample to Round 1 only, we obtain coefficients that are more imprecisely estimated, but of similar magnitude with or without controlling for the "fear of getting sick" variable.

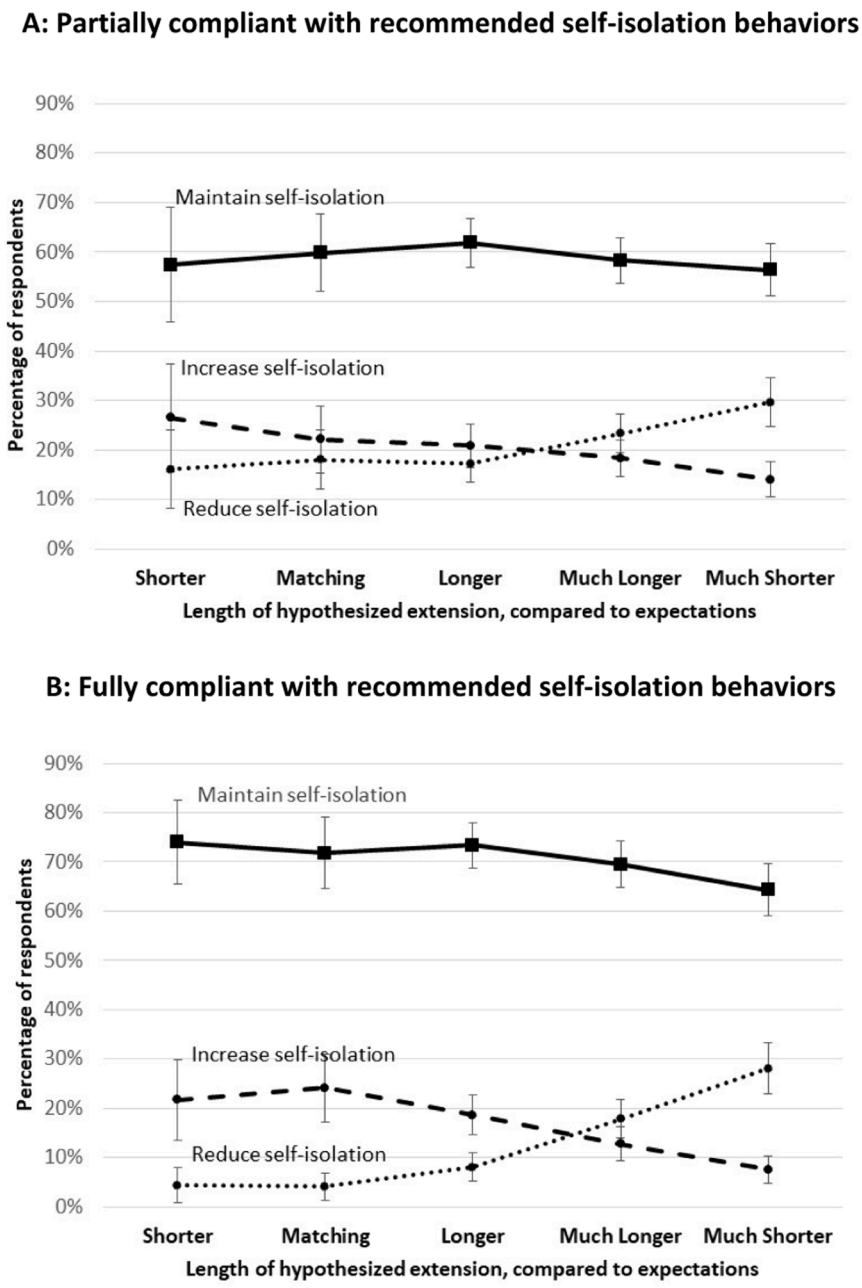


Fig. 5. Mismatch between expectations and extension scenarios and self-isolation intentions, by compliance with recommended self-isolation behaviors.
Notes: The graph reports the sampling-weighted proportion of respondents who stated their intention to increase, maintain, or reduce their compliance with self-isolation measures, by (mis)match between the hypothesized extension scenarios and their expectation about this extension, separately for respondents who were partially compliant (Panel A) and fully compliant (Panel B) with recommended self-isolation behaviors (the question on which this measure is based is only available for rounds 1 and 3). "Increase self-isolation" corresponds to the intention to either "increase substantially" or "increase somewhat" self-isolation; "Reduce self-isolation" includes the options "reduce somewhat" or "consider not complying with restrictions"; "Maintain self-isolation" indicates intention to "continue with current self-isolation behavior". The vertical lines represent 95% design-based confidence intervals.

that the responses may be the result of a preference for "consistency" by the participants. Limited to the third round of the survey, SWG kept track of what scenario appeared first to each respondent; we therefore perform our main analyses restricting the sample to the responses to the first displayed scenario in the third round.[23] In Figs. C3 and C4 and in Table C11 we show that our main findings holds also with this subsample of observations.[24]

Another possible explanation for the asymmetry between positive and negative surprises is that if individuals are already exerting maximal self-isolation efforts, increasing effort might be difficult to do. To evaluate the plausibility of such a "ceiling effect", in Fig. 5, we replicate the analyses from Fig. 4 separately for two groups of respondents, those who reported being compliant with some but not all recommended preventative behaviors ("partially compliant") and those who reported complying with all six recommended behaviors ("fully compliant"). We observe very similar patterns for the two groups of respondents. In particular, although the "fully compliant" individuals display a higher propensity to maintain their current level of compliance, they have ample room to both reduce or increase their self-isolation efforts. Thus, ceiling effects are unlikely to explain the results.

Thus, overall, our results are consistent with expectations functioning as reference points for individuals, and with discrepancies between actual duration of a policy and expectations asymmetrically affecting intentions. The negative impact of "bad surprises", in particular, dominates the positive effects of "positive surprises".

[23] The order of the scenario questions was randomly assigned in all survey rounds. However, due to a database error by the survey firm, we have information on the order that each respondent saw only for the third round, for which we report the results.

[24] Because of the smaller number of observations, the estimates are less precise than in the full sample.

5. Discussion

Announcements belong to the toolkit of public authorities to affect citizens' responses to policies. In the context of the COVID-19 pandemic, governments in democratic countries heavily relied on citizens' willingness to comply with social-distancing measures to reduce the spread of the virus. Achieving full compliance via strong formal enforcement (e.g. fines, geo-tracking) is not only controversial but also costly to implement. Hence, persuading the public to self-isolate is a critical policy goal. Choosing the right duration of social distancing measures, however, is a challenging task for policymakers. On the one hand, an indefinite duration might better signal the severity of the crisis leading to higher compliance, but potentially discouraging citizens who might find it hard to isolate due to mental health or job and income losses. On the other hand, announcing multiple extensions might negatively affect the government's credibility, possibly leading to higher distrust in future government policies, thus reducing compliance over time. Thus, managing citizens' expectations about the duration of social-distancing measures is crucial to ensure greater compliance.

We found that expectations about the duration of social isolation measures influence the public's intention to comply with the restrictions. Importantly, people's willingness to comply in case of an extension of the restrictions depends on how the length of this extension compares to expectations. Negative surprises (i.e., lockdown measures will be in effect for a longer time than expected) are associated with a higher willingness to reduce compliance. Positive surprises, in contrast, did not appear to be associated with an increased willingness to comply.

These results are consistent with and contribute to a growing literature that explores the role of expectations as reference points, and the asymmetric effect of positive and negative deviations of realized scenarios from expectations.

Our findings suggest that to maximize the effectiveness of temporary social-distancing and isolation efforts, authorities should manage public expectations about when these measures will be relaxed. For example, they could minimize the possibility of negative surprises by clearly stating that although the measures are temporary, extensions might be necessary if epidemiological conditions get worse (ideally spelling out the specific criteria or indicators that will be used to make the determination). Our findings also contribute to explaining the trends in social proximity that we reported in Fig. 2. The first extension of the lockdown was largely expected, and many people anticipated extensions by months or even indefinitely. Our findings suggest that, under these circumstances, people would not reduce their self-isolation efforts after an extension announcement. Expectations then started to change, and a smaller proportion of the population expected further lockdown extensions, if any, to last long. This made it more likely that people would react to further extensions by relaxing their compliance with physical distancing requirements, which is consistent with what we observe in the figure.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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Appendices

Appendix A. Chronology of COVID-19 events and policy responses in Italy

The Government of Italy declared a six-month long state of emergency to respond to the COVID-19 outbreak on January 31, 2020, after blocking air traffic from China the day before. Cases of contagion in the northern regions of the country rose more rapidly than in the rest of the country, which led to a series of national and local government measures being implemented concurrently. In the most affected region, Lombardia, the Government suspended most public activities, including

Table A1
Timeline of COVID-19 epidemic and policy responses in Italy.

Date	*Event*
30-Jan-20	Italy closes flights from China
31-Jan-20	First two cases of COVID-19 diagnosed in Rome
31-Jan-20	Government declares state of emergency
21-Feb-20	First cases of community transmission reported in Lombardia and Veneto; first COVID-19 death (in Vo', Veneto)
21-Feb-20	Most public activities suspended in outbreak areas in Lombardia and (the following day) in Veneto
23-Feb-20	Complete lockdown of outbreak areas in Lombardia and Veneto
24-Feb-20	Schools closed in Lombardia, Veneto, Friuli-Venezia Giulia, Emilia Romagna and (on the following days) Liguria and Marche
4-Mar-20	Schools closure extended to the whole country, announced until March 15
8-Mar-20	Lockdown ("stay at home" measures) declared for Lombardia and 14 Provinces in Veneto, Emilia Romagna, Piemonte and Marche
9-Mar-20	**Lockdown ("stay at home" measures) extended to the whole country until April 3rd; school closure extended to the whole country, announced until April 3rd**
11-Mar-20	Government ordered closure of most retail stores (exceptions included groceries and pharmacies), restaurants and bars, as well as most personal services until March 25th
19-Mar-20	Italy surpasses China as the country with the most reported COVID-19 deaths
22-Mar-20	Government suspended all non-essential economic activities until April 3rd. It also prohibited individual movements outside people's town of domicile (with the exception of work- and health-related reasons or in case of absolute urgency). All these measures are put in place until April 3
1-Apr-20	**Lockdown extended until April 13**
10-Apr-20	**Lockdown extended until May 3**
26-Apr-20	Government announced a gradual reopening plan for the so-called "phase 2″, that would start from May 4
4- May-20	"Phase 2″ started: movements across regions still forbidden, while the ones between municipalities allowed only for work and health reasons, as well as for visits to relatives. *Re*-opening of manufacturing industries and construction sites
13-May-20	Government announced schools would remain closed until September
16-May-20	The Prime Minister announced the Government plan for the easing of restrictions. Due to the plan, most businesses could reopen, and free movement was granted to all citizens within their Region; movement across Regions was still banned for non-essential motives
3-Jun-20	Government allows travels to and from Italy and between the country's regions

Table A2
Characteristics of the survey respondents.

	(1) Full sample	(2) Round 1	(3) Round 2	(4) Round 3	(5) F-tests for equality across rounds (p-values)	(6)
Socio-demographics					Unweighted	Using sampling weights
Women	51.9%	51.9%	51.9%	51.9%	p=0.109	p>0.999
Age (years)	50.7	50.7	51.1	50.3	p=0.115	p=0.738
Completed high school	65.9%	66.2%	66.4%	64.9%	p=0.259	p=0.774
College degree	19.5%	19.2%	20.1%	19.2%	p=0.289	p=0.845
Lives alone	14.1%	13.2%	14.4%	14.9%	p=0.680	p=0.574
Lives with parents	12.4%	11.7%	11.7%	13.7%	p=0.079	p=0.327
Married	62.6%	63.3%	64.2%	60.4%	p=0.320	p=0.219
Has children	63.6%	64.1%	63.1%	63.5%	p=0.135	p=0.904
Employed	51.7%	53.1%	51.9%	49.9%	p=0.767	p=0.384
Facing economic difficulties	55.0%	55.4%	54.3%	55.4%	p=0.917	p=0.871
Age 60+	32.8%	32.3%	33.7%	32.5%	p=0.053	p=0.811
Lives in Red Zone	39.7%	41.7%	37.3%	39.8%	p=0.684	p=0.162
Lives in Lombardia	17.2%	17.6%	17.8%	16.3%	p=0.652	p=0.645
Compliance with social-isolation measures						
Compliance with social-isolation measures	4.3	4.5	NA	4.1		
Adopting all social-isolation measures	46.1%	49.9%	NA	42.2%		
N	2697	894	891	912		

Notes: Columns (1)-(4) report socio-demographic characteristics of respondents (top panel) and self-reported measures of compliance with social-isolation measures (bottom panel) overall and separately for each survey round. Red Zone refers to the following regions: Emilia Romagna, Lombardia, Marche, Piemonte, Veneto. The variable "Facing economic difficulties" identifies respondents who reported that they "are having economic difficulties", "make to the end of the month with much struggling", or "are poor and their income does not allow them to make it to the end of the month". "Compliance with social-isolation measures" is the number of social-isolation measures respondents report having adopted, and "adopting all social-isolation measures" is the percentage of respondents who reported adopting all recommended measures (see Appendix Tables C2 and C3 for details). We used sampling weights (provided by SWG) to compute these statistics. In the last two columns, we report the p-values of F-tests from regressions of each variable on dummy variables for survey waves, without sampling weights (column 5) and with sampling weights (column 6).

economic and educational ones, in ten villages in Lombardia, with similar measures being adopted in one village in Veneto region the following day. On February 23, further tightening of restrictions in these villages were applied, including a prohibition to access or leave the area or hold any type of meeting for the following fourteen days.

On the same day, several regions in the North of Italy suspended upcoming public events, and closed schools and museums, until Sunday, March 1 for Lombardy, Veneto, Friuli-Venezia Giulia, and Emilia Romagna, and February 29 for Piemonte, with the provision that the deadline might change as the "epidemiological scenarios" developed.

On February 24, other northern regions adopted similar isolation measures, such as Liguria and the Province of Trento, followed by the central region of Marche (announcing a preliminary deadline for March 4). On March 1, the Government issued a decree suspending public events and closing schools until March 8 in Lombardia, Veneto and Emilia Romagna and in some provinces of Marche and Liguria. On March 4, the closure of schools was extended to the whole country until March 15.

On March 8, the Government implemented a total lockdown and banned individual movements with an exception for work or health reasons or for necessity (e.g. purchasing of food and medicines) in the whole of Lombardia and in selected provinces in Emilia Romagna, Veneto, Marche and Piemonte, for a total of 14 provinces in the North of the country. The following day the Government extended these measures to the whole country. These restrictions were announced to remain in place until April 3. On March 11th, the Government also ordered the closure of most retail shops until March 25, with the exception of grocery shops and pharmacies. This included restaurants, bars, and most personal services (e.g. hairdressers).

On March 22, the Government announced that the originally scheduled end date for the closure of commercial activities (March 11) was extended to April 3, and further suspended commercial and industrial activities, and prohibited individual movements outside the town of domicile, with an exception of work or health reasons or for absolute necessity.

On April 1, the Government extended a total lockdown to the whole country until 13 April, and on April 10 it was prolonged until May 3.

On April 26, the Government announced a starter plan for the so-called "phase 2″, that would start from 4 May. Due to the "Phase 2″, movements across regions would still be forbidden, while the ones between municipalities would be allowed only for work and health reasons, as well as for visits to relatives. *Re*-opening of manufacturing industries and construction sites are allowed too.

On May 13, the Government announced schools would remain closed until September.

On May 16, the Prime Minister announced the Government plan for the easing of restrictions.

Due to the plan, most businesses could reopen, and free movement was granted to all citizens within their Region; inter-regional travel was not permitted, unless it is for absolute necessity. Swimming pools, gyms and then theatres and cinemas could also reopen.

On June 3, the Government allowed unrestricted travel to and from EU countries and between Italy's regions. The inter-regional and foreign travel ban remained in place until after Italy's June 2 Republic Day holiday, avoiding any mass travel over that long-holiday weekend.

Appendix B. Survey questions

Original Italian (English translation below)

1. Per prevenire il contagio, quali di questi comportamenti quotidiani sta adottando?

[R*otazione tipo: random*]

a mi lavo le mani molto spesso
b vado in giro con la mascherina
c non stringo più la mano a nessuno
d cerco di stare a distanza dalle persone
e non frequento luoghi affollati
f vado il meno possibile nei supermercati
g non mi incontro più con gli amici
h non mi incontro più con i parenti che non vivono con me
i non esco di casa salvo urgenze

[F*ine rotazione*]

a nessuno di questi
b preferisco non rispondere

2. Il Governo ha annunciato una serie di misure temporanee di autoisolamento per fronteggiare l'emergenza coronavirus, il cosiddetto decreto "io sto a casa". Si ricorda fino a che data resteranno in vigore queste misure?

[I*nserire data: dd/mm/yyyy*]

3. La data di scadenza delle misure "io sto a casa" annunciata dal Governo è il [3 aprile/13 aprile/3 maggio]. Secondo Lei queste misure:

a Termineranno nella data prevista
b Verranno prorogate di qualche settimana
c Verranno prorogate di qualche mese
d Verranno prorogate a tempo indefinito, fino a quando sarà ritenuto necessario

[L*e prossime tre domande vengono presentate in ordine casuale*]

4. Se le misure di autoisolamento dovessero essere prorogate diqualchesettimana oltre la scadenza del [3 aprile/13 aprile/3 maggio], quale di queste opzioni descrive meglio ciò che lei pensa di fare:

a Aumenterei significativamente il mio autoisolamento
b Aumenterei in qualche misura il mio autoisolamento
c Continuerei con i miei comportamenti attuali
d Ridurrei in qualche misura il mio autoisolamento
e Potrei decidere di non rispettare più le regole

5. Se le misure di autoisolamento dovessero essere prorogate diqualchemese oltre la scadenza del [3 aprile/13 aprile/3 maggio], quale di queste opzioni descrive meglio ciò che lei pensa di fare:

a Aumenterei significativamente il mio autoisolamento
b Aumenterei in qualche misura il mio autoisolamento
c Continuerei con i miei comportamenti attuali
d Ridurrei in qualche misura il mio autoisolamento
e Potrei decidere di non rispettare più le regole

6. Se le misure di autoisolamento dovessero essere prorogate a tempoindefinito oltre la scadenza del [3 aprile/13 aprile/3 maggio], fino a quando sarà ritenuto necessario, quale di queste opzioni descrive meglio ciò che lei pensa di fare:

a Aumenterei significativamente il mio autoisolamento
b Aumenterei in qualche misura il mio autoisolamento
c Continuerei con i miei comportamenti attuali
d Ridurrei in qualche misura il mio autoisolamento
e Potrei decidere di non rispettare più le regole

[*Fine randomizzazione*]

English translation

1. To prevent contagion, which of these everyday behaviors are you adopting? [items a) through i) presented in random order]

a) I very often wash my hands
b) I walk around with a mask
c) I don't shake hands anymore
d) I try to keep a safe distance from people
e) I do not go to crowded places
f) I go to supermarkets as seldom as possible
g) I no longer meet with friends
h) I no longer meet with relatives who do not live with me
i) I do not leave home except in an emergency
j) None of these
k) I prefer not to answer

2. The Government announced and enacted a series of policies to address the COVID19 emergency, in particular the presidential decree known as "I stay at home". Do you remember until what date the social isolation measures are in place?

[*Enter date here*]

3. The "Stay at home" measures are set to end on [April 3 / April 13 / May 3]. In your opinion, these measures:

a will actually end on the announced date
b will be extended by a few additional weeks
c will be extended by a few additional months
d will be extended indefinitely, until deemed necessary

[*The next three questions three questions are in random order for each respondent*]

4. If the self-isolation measures are extended by a few additional weeks after [April 3 / April 13 / May 3], which of these options best represents what you plan to do:

a I would significantly increase my isolation
b I would somewhat increase my isolation
c I would continue in my current behavior
d I would somewhat reduce my isolation
e I might decide not to comply with the rules

5. If the self-isolation measures are extended by a few additional months after [April 3 / April 13 / May 3], which of these options best represents what you plan to do:

a I would significantly increase my isolation
b I would somewhat increase my isolation
c I would continue in my current behavior
d I would somewhat reduce my isolation
e I might decide not to comply with the rules

6. If the self-isolation measures are extended indefinitely after [April 3 / April 13 / May 3], until deemed necessary, which of these options best represents what you plan to do:

a I would significantly increase my isolation
b I would somewhat increase my isolation
c I would continue in my current behavior
d I would somewhat reduce my isolation
e I might decide not to comply with the rules

Appendix C. Additional tables and figures

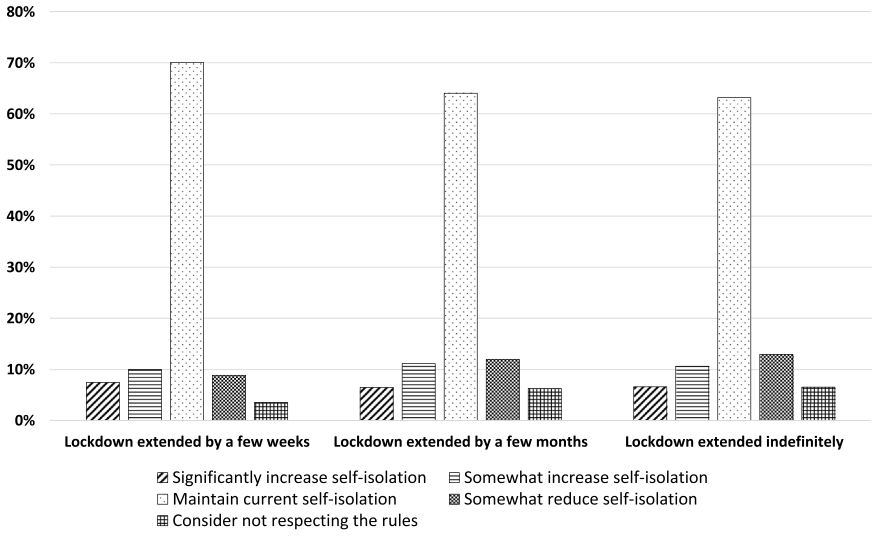

Fig. C1. Self-isolation intentions, by hypothesized duration of lockdown extension.
Notes: The chart reports the share of respondents who indicated their intention to maintain, increase or reduce their compliance with self-solation provisions, separately by the different extension scenarios. We used sampling weights to compute these statistics (SWG provided the weights).

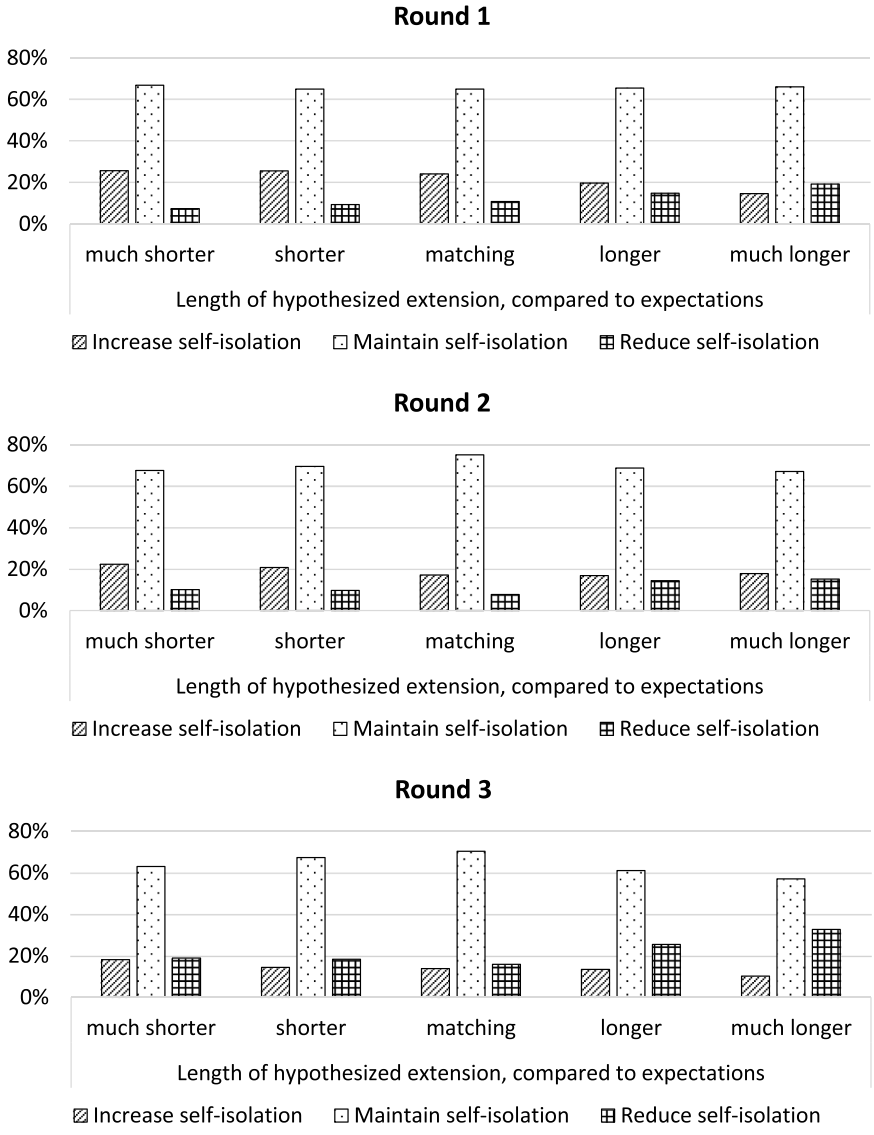

Fig. C2. Self-isolation intentions, by (mis)match between expectations and extension scenarios, by round.
Notes: "Increase self-isolation" corresponds to the intention to either "increase substantially" or "increase somewhat" self-isolation; "Reduce self-isolation" includes the options "reduce somewhat" or "consider not complying with restrictions"; "Maintain self-isolation" indicates intention to "continue with current self-isolation behavior". We used frequency weights to compute these statistics (SWG provided the weights).

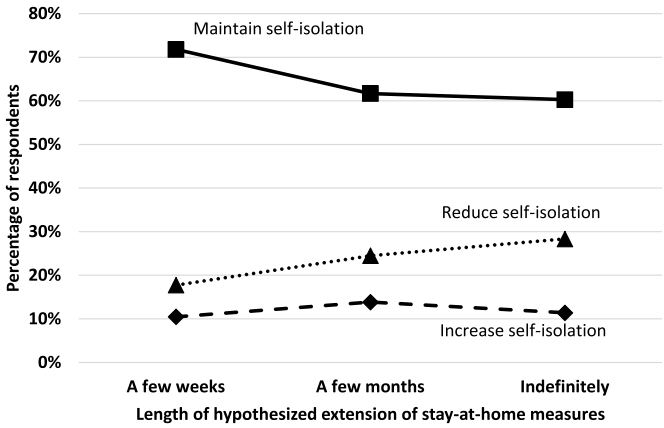

Fig. C3. Self-isolation intentions, by hypothesized duration of lockdown extension and (mis)match between expectations and extension scenarios Round 3, first (randomly assigned) scenario.
Notes: The graph reports the sampling-weighted proportion of respondents who stated their intention to increase, maintain, or reduce their compliance with self-isolation measures, by hypothesized extension scenarios. The data are limited to the first (randomly assigned) scenario shown to participants in round 3. "Increase self-isolation" corresponds to the intention to either "increase substantially" or "increase somewhat" self-isolation; "Reduce self-isolation" includes the options "reduce somewhat" or "consider not complying with restrictions"; "Maintain self-isolation" indicates intention to "continue with current self-isolation behavior".

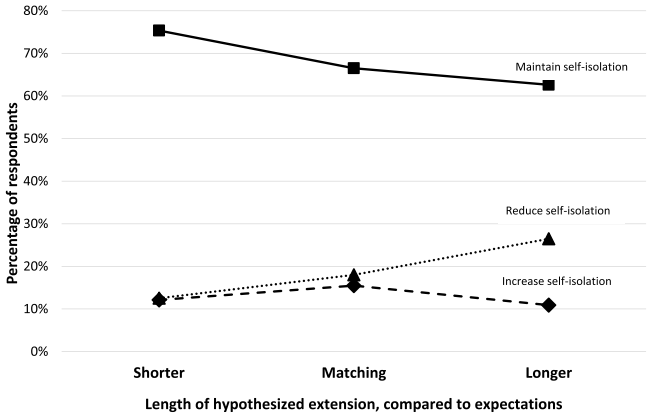

Fig. C4. Self-isolation intentions, by and (mis)match between expectations and extension scenarios, limited to the first extension scenario per respondent.
Notes: The graph reports the sampling-weighted proportion of respondents who stated their intention to increase, maintain, or reduce their compliance with self-isolation measures, by (mis)match between the hypothesized extension scenarios and their expectation about this extension. We group together the "much shorter" and "shorter categories under the "Shorter" label, and the "longer" and "much longer" categories under the "Longer" label. "Increase self-isolation" corresponds to the intention to either "increase substantially" or "increase somewhat" self-isolation; "Reduce self-isolation" includes the options "reduce somewhat" or "consider not complying with restrictions"; "Maintain self-isolation" indicates intention to "continue with current self-isolation behavior".

Table C1
Socio-demographic characteristics, by sub-group.

	Respondents Age 18–59	Respondents Age 60+	Respondents in Red Zone regions	Respondents in the rest of the country
Women	50.3%	55.3%	51.7%	52.4%
Age	41.0	70.7	50.5	51.0
Completed high school	65.7%	66.1%	67.3%	63.6%
College degree	23.8%	10.7%	19.5%	19.5%
Lives alone	12.6%	17.2%	14.1%	14.2%
Lives with parents	18.2%	0.3%	12.4%	12.2%
Married	57.2%	73.7%	63.2%	61.7%
Has children	51.5%	88.2%	64.4%	62.3%
Employed	68.4%	18.1%	49.8%	54.6%
Economically comfortable	45.3%	44.2%	42.7%	48.5%
Facing economic difficulties	54.7%	55.8%	57.3%	51.5%
Compliance with social-isolation measures	4.2	4.4	4.2	4.3
Adopting all social-isolation measures	44.0%	50.5%	45.0%	47.7%
Age 60+			32.3%	33.6%
Lives in Red Zone	39.2%	40.6%		
Lives in Lombardia	16.3%	19.2%		43.4%
N	1835	862	1648	1049

Notes: The table reports the average age of the participants belonging to various sub-categories. Red Zone includes residents of the following regions: Emilia Romagna, Lombardia, Marche, Piemonte, Veneto. The variable "economically comfortable" is equal to 1 if respondents reported that their household income allows them to live "comfortably" or "without concerns", whereas "Facing economic difficulties" is equal to 1 if the respondent replied that they "are having economic difficulties", "make to the end of the month with much struggling", or "are poor and their income does not allow them to make it to the end of the month". "Compliance with social-isolation measures" is the number of social-isolation measures respondents report having adopted, and "adopting all social-isolation measures is a dummy variable indicating respondents who reported adopting all recommended measures (see Appendix Table C2 for details). We used sampling weights to adjust these statistics.

Table C2
Compliance with COVID-19 preventive and social distancing measures.

% of respondents adopting each preventive and social distancing measure	Round 1	Round 3
(i) I wash my hands very often	78.6%	69.3%
(ii) I walk around with a mask	42.1%	69.5%
(iii) I don't shake hands anymore	72.1%	64.0%
(iv) I try to keep a safe distance from people	74.0%	68.5%
(v) I do not go to crowded places	75.2%	68.8%
(vi) I go to supermarkets as seldom as possible	71.1%	65.7%
(vii) I no longer meet with friends	72.5%	64.7%
(viii) I no longer meet with relatives	67.1%	59.5%
(ix) I do not leave home except in an emergency	80.2%	75.4%
None of these	0.9%	1.1%
I prefer not to answer	1.3%	1.2%

% adopting all nine preventive and social distancing measures (i)-(ix)	Round 1 Full sample	Round 3 Full sample
	29.1%	37.6%

% adopting all six social distancing measures (iv)-(ix)	Round 1 Full sample	Round 3 Full sample
	49.9%	42.2%
N. respondents	885	904

Notes: We used sampling weights (provided by SWG) to compute these statistics.

Table C3
Compliance with COVID-19 preventive and social distancing measures, by sub-groups.

% of respondents adopting each preventive and social distancing measure	Round 1 >60 years old	Red zone	Round 3 >60 years old	Red zone
(i) I very often wash my hands	84.3%	74.8%	70.7%	66.1%
(ii) I walk around with a mask	47.5%	41.1%	71.4%	71.4%
(iii) I don't shake hands anymore	75.6%	75.0%	69.5%	64.0%
(iv) I try to keep a safe distance from people	77.0%	75.8%	70.7%	68.8%
(v) I do not go to crowded places	74.1%	78.0%	69.1%	68.6%
(vi) I go to supermarkets as seldom as possible	71.4%	73.2%	69.5%	65.0%
(vii) I no longer meet with friends	73.5%	72.0%	64.2%	63.9%
(viii) I no longer meet with relatives	70.8%	66.9%	59.3%	61.9%
(ix) I do not leave home except in an emergency	88.3%	78.4%	78.5%	80.3%
None of these	1.6%	1.6%	0.0%	1.1%
I prefer not to answer	0.1%	0.3%	1.6%	1.5%

% adopting all nine preventive and social distancing measures (i)-(ix)	>60 years old	Red zone	>60 years old	Red zone
	35.9%	29.2%	42.3%	38.6%

% adopting all six social distancing measures (iv)-(ix)	>60 years old	Red zone	>60 years old	Red zone
	55.3%	51.5%	45.3%	43.5%
N. respondents	310	355	267	353

Notes: We used sampling weights (provided by SWG) to compute these statistics.

Table C4
Knowledge of end date of current stay-at-home measures.

	Full sample	Round 1	Round 2	Round 3
% reporting correct date:				
Overall	77.2%	73.5%	64.7%	93.4%
Age 18–59	76.9%	76.5%	61.5%	92.4%
Age 60+	77.6%	67.3%	71.0%	95.5%
Red zone residents	77.3%	77.0%	62.7%	92.8%
Residents outside red zone	77.2%	73.5%	64.7%	93.4%

Table C5
Expected end date of self-isolation measures, by sub-groups.

% of respondents reporting the stay-at-home measures would (be) …	Round 1	Round 2	Round 3
	Residents of "red zone" regions		
End as planned	2.0%	3.8%	39.6%
Extended by a few weeks	43.8%	73.8%	49.8%
Extended by a few months	21.1%	9.2%	4.6%
Extended indefinitely	33.0%	13.2%	6.0%
	Residents of non-red zone regions		
End as planned	3.3%	2.7%	40.1%
Extended by a few weeks	41.9%	69.2%	44.5%
Extended by a few months	19.9%	14.0%	7.1%
Extended indefinitely	34.9%	14.1%	8.4%
	Respondents ages 18–59		
End as planned	2.5%	3.9%	40.4%
Extended by a few weeks	41.2%	68.6%	46.0%
Extended by a few months	22.5%	13.5%	6.8%
Extended indefinitely	33.8%	14.1%	6.9%
	Respondents ages 60+		
End as planned	3.2%	1.7%	38.9%
Extended by a few weeks	45.8%	75.5%	47.9%
Extended by a few months	16.2%	9.6%	4.6%
Extended indefinitely	34.8%	13.3%	8.6%

Table C6
Self-isolation intentions: multinomial logit estimates, alternative specification.

		(1) Increase compliance	Reduce compliance	(2) Increase compliance	Reduce compliance
Scenario	A few months	1.254***	1.256**	1.059	1.446***
		(0.102)	(0.130)	(0.0716)	(0.112)
	Until Needed	1.328**	1.302**	0.997	1.521***
		(0.159)	(0.168)	(0.0946)	(0.137)
Expectations	A few weeks			0.766	0.475***
				(0.192)	(0.0917)
	A few months			1.169	0.508**
				(0.347)	(0.137)
	Until needed			1.334	0.515**
				(0.414)	(0.171)
Length of hypothesized extension, relative to expectations:	Shorter	1.160	1.049	0.827*	0.980
		(0.143)	(0.186)	(0.0865)	(0.147)
	Longer	0.811*	1.679***	1.021	1.305**
		(0.0930)	(0.246)	(0.0928)	(0.150)
Round	Round 2	0.808	0.841	0.853	0.881
		(0.127)	(0.160)	(0.137)	(0.172)
	Round 3	0.636***	1.964***	0.616**	1.593**
		(0.108)	(0.327)	(0.116)	(0.306)
Adjusted Wald test of differences (F-stat)	Longer - Shorter	3.27*	3.39*	1.82	2.16
	Control variables	Yes		Yes	
	Observations	7917		7917	
	F-statistic	6.4		6.5	
	N. respondents	2639		2639	

Notes: The baseline option is “maintain current behavior”, the omitted length scenario is “a few weeks”, the omitted expectations group is “end as planned”, and the omitted round is Round 1. We report the estimates as relative risk ratios. Each respondent selected one option from each of three questions, therefore there are up to three observations per individual in the regression sample. The control variables include gender, age, education, whether the respondent lives alone or with her/his parents, marital status, whether the respondent has children, whether s/he is currently employed, whether the respondents’ household is currently facing economic difficulties, and whether they live in one of the “Red Zone” regions. The regressions include sampling weights. Linearized standard errors are in parenthesis. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table C7
Fear of getting sick with COVID-19, by expectation of lockdown duration.

Following the events related to the Coronavirus, how afraid are you of getting sick?	Expected end date of self-isolation measures: End as planned	Extended by a few weeks	Extended by a few months	Extended indefinitely
Very afraid	10.0%	14.7%	24.6%	27.0%
Quite afraid	40.0%	50.4%	52.0%	47.9%
Not very afraid	35.0%	30.4%	20.1%	22.8%
Not afraid at all	15.0%	4.5%	3.4%	2.3%
N. repondents	20	401	179	259

Table C8
Self-isolation intentions, controlling for fear of getting sick with COVID-19.

	Option:	(1) Increase compliance	Reduce compliance	(2) Increase compliance	Reduce compliance	(3) Increase compliance	Reduce compliance
Scenario	A few months	1.296***	1.234	1.108	0.832	1.087	0.855
		(0.129)	(0.161)	(0.185)	(0.206)	(0.183)	(0.213)
	Until Needed	1.508**	1.095	1.775**	0.853	1.702**	0.905
		(0.243)	(0.225)	(0.426)	(0.360)	(0.414)	(0.386)
Expectations	A few weeks						
	A few months						
	Until needed						
Length of hypothesized extension, relative to expectations:	Much shorter	1.378*	1.026	1.293	0.665	1.242	0.703
		(0.266)	(0.285)	(0.368)	(0.269)	(0.357)	(0.285)
	Shorter	1.106	0.993	1.239	0.887	1.208	0.914
		(0.131)	(0.163)	(0.204)	(0.213)	(0.202)	(0.225)
	Longer	0.865	1.535***	0.823	1.495	0.837	1.457
		(0.0886)	(0.212)	(0.138)	(0.407)	(0.141)	(0.398)
	Much longer	0.686**	2.032***	0.473***	2.092	0.494***	1.974
		(0.121)	(0.454)	(0.121)	(0.948)	(0.128)	(0.902)
Round:	Round 2	0.824	0.826				
		(0.130)	(0.160)				
	Round 3	0.665**	1.856***				
		(0.116)	(0.330)				
Strong fear of COVID						1.475 (0.377)	0.577 (0.204)
Adjusted Wald test of differences (F-stat)	Longer - Shorter	2.21	3.97**	2.88*	2.09	2.27	1.62
	Much longer - much shorter	4.59**	2.45	4.72**	2.46	3.88**	1.96
	Observations	7917		2574		2574	
	F-statistic	6.2		2.515		3.082	
	N. respondents	2639		858		858	

Notes: In all regressions, the baseline option is "maintain current behavior", the omitted length scenario is "a few weeks", the omitted relative expectations length is "scenario matches with expectations", and the omitted round is Round 1. We report the estimates as relative risk ratios. Each respondent selected one option from each of three questions, therefore there are up to three observations per individual in the regression sample. The control variables include gender, age, education, whether the respondent lives alone or with her/his parents, marital status, whether the respondent has children, whether s/he is currently employed, whether the respondents' household is currently facing economic difficulties, and whether they live in one of the "Red Zone" regions. "Strong fear of COVID" is an indicator variable for whether respondents Reported being "quite afraid" or "very afraid" to get sick with COVID. The regressions include sampling weights. Linearized standard errors are in parenthesis. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table C9
Self-isolation intentions, controlling for baseline levels of compliance with social-isolation measures.

	Option:	(1) Increase compliance	Reduce compliance	(2) Increase compliance	Reduce compliance	(3) Increase compliance	Reduce compliance	(4) Increase compliance	Reduce compliance
Scenario	A few months	1.269**	1.062	1.293**	1.078	1.285**	1.419***	1.025	1.362***
		(0.147)	(0.149)	(0.149)	(0.152)	(0.131)	(0.142)	(0.0880)	(0.112)
	Until Needed	1.667***	0.885	1.707***	0.901	1.373**	1.514***	0.933	1.462***
		(0.307)	(0.189)	(0.315)	(0.194)	(0.187)	(0.173)	(0.109)	(0.136)
Length of hypothesized extension, relative to expectations:	Much shorter	1.328	0.831	1.373	0.831				
		(0.309)	(0.230)	(0.320)	(0.227)				
	Shorter	1.104	0.910	1.091	0.915				
		(0.155)	(0.169)	(0.155)	(0.169)				
	Longer	0.878	1.528***	0.837	1.539***				
		(0.104)	(0.231)	(0.100)	(0.230)				
	Much longer	0.581***	2.321***	0.553***	2.287***				
		(0.116)	(0.562)	(0.112)	(0.544)				
Length of hypothesized extension relative to expectations * expectations	Shorter * Expect lockdown to be extended by a few months					1.189	1.105	0.671	1.102
						(0.271)	(0.303)	(0.213)	(0.422)
	Shorter * Expect lockdown to be extended indefinitely					1.082	0.879	0.687**	0.893
						(0.203)	(0.204)	(0.124)	(0.225)
	Matching * Expect lockdown to be extended by a few weeks							0.493***	0.978
								(0.128)	(0.316)

(*continued on next page*)

Table C9 (*continued*)

	Option:	(1) Increase compliance	Reduce compliance	(2) Increase compliance	Reduce compliance	(3) Increase compliance	Reduce compliance	(4) Increase compliance	Reduce compliance
	Matching * Expect lockdown to be extended by a few months							0.718	1.153
								(0.217)	(0.421)
	Longer * Expect lockdown to end on announced date					0.674	2.515***	0.455**	2.558***
						(0.182)	(0.564)	(0.147)	(0.867)
	Longer * Expect lockdown to be extended by a few weeks					0.706**	1.203	0.536***	1.242
						(0.109)	(0.185)	(0.122)	(0.358)
	Longer * Expect lockdown to be extended by a few months					1.054	1.020	0.876	1.053
						(0.246)	(0.277)	(0.250)	(0.378)
Baseline Compliance				0.666**	0.663**	0.675**	0.665**	0.671**	0.667**
				(0.108)	(0.106)	(0.111)	(0.107)	(0.111)	(0.108)
Round:	Round 3	0.638***	1.747***	0.628***	1.720***	0.612***	1.515**	0.632**	1.523**
		(0.111)	(0.315)	(0.110)	(0.312)	(0.109)	(0.300)	(0.114)	(0.307)
Adjusted Wald test of differences (F-stat)	Longer - Shorter	1.50	5.57**	1.76	5.13**				
	Much longer - much shorter	4.88**	5.77**	5.58**	5.27**				
	Observations	5229		5229		5229		5229	
	F-statistic	5.4		5.4		5.3		4.8	
	N. respondents	1743		1743		1743		1743	

Notes: In all regressions, the baseline option is "maintain current behavior", the omitted lockdown length scenario is "a few weeks", and the omitted round is Round 1. In specifications (1) and (2), the omitted relative expectations length is "scenario matches with expectations"; in specification (3), the omitted interactions are those with "scenario matches with expectations"; and in specifications (4), the omitted interaction is "Matching*Expected lockdown to be extended indefinitely". We report the estimates as relative risk ratios. Each respondent selected one option from each of three questions, therefore there are up to three observations per individual in the regression sample. The control variables include gender, age, education, whether the respondent lives alone or with her/his parents, marital status, whether the respondent has children, whether s/he is currently employed, whether the respondents' household is currently facing economic difficulties, and whether they live in one of the "Red Zone" regions. "Compliance" is an indicator variable for whether respondents reported adopting all six social-isolation measures listed in the survey (see Appendix Table C2). The regressions include sampling weights. Linearized standard errors are in parenthesis. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table C10
Self-isolation intentions: multinomial logit estimates, by area and age.

	Sample	Red zone (1) Increase compliance	Reduce compliance	Outside red zone (2) Increase compliance	Reduce compliance	Ages 18–58 (3) Increase compliance	Reduce compliance	Ages 60+ (4) Increase compliance	Reduce compliance
Scenario	A few months	1.751***	1.302	1.106	1.186	1.387***	1.163	1.136	1.336
		(0.304)	(0.244)	(0.134)	(0.208)	(0.170)	(0.159)	(0.191)	(0.370)
	Until Needed	2.280***	1.026	1.252	1.137	1.538**	0.979	1.514	1.276
		(0.628)	(0.296)	(0.247)	(0.317)	(0.297)	(0.209)	(0.435)	(0.566)
Length of hypothesized extension, relative to expectations:	Much shorter	2.565***	0.857	0.961	1.135	1.497*	0.720	1.214	1.682
		(0.778)	(0.361)	(0.239)	(0.395)	(0.345)	(0.211)	(0.424)	(0.803)
	Shorter	1.528**	1.022	0.953	0.996	1.201	0.912	0.903	1.140
		(0.301)	(0.258)	(0.140)	(0.208)	(0.163)	(0.189)	(0.215)	(0.280)
	Longer	0.699**	1.434*	0.968	1.624***	0.869	1.597***	0.851	1.485
		(0.123)	(0.298)	(0.123)	(0.295)	(0.111)	(0.236)	(0.141)	(0.430)
	Much longer	0.441***	2.010**	0.839	2.085**	0.745	2.219***	0.551*	1.892
		(0.128)	(0.630)	(0.184)	(0.633)	(0.156)	(0.527)	(0.170)	(0.886)
Round	Round 2	0.798	0.658*	0.867	0.975	0.746	0.737	1.041	1.009
		(0.206)	(0.162)	(0.174)	(0.262)	(0.139)	(0.146)	(0.311)	(0.415)
	Round 3	0.703	1.623**	0.667*	2.052***	0.612**	1.783***	0.804	1.912*
		(0.207)	(0.394)	(0.142)	(0.509)	(0.118)	(0.337)	(0.288)	(0.718)
Adjusted Wald test of differences (F-stat)	Longer - Shorter	8.06***	1.38	1.11	2.69	3.46*	7.58***	1.61	0.02
	Much longer - much shorter	11.14***	2.01	0.11	1.11	2.85*	6.31**	0.03	0.34
	Control variables	Yes		Yes		Yes		Yes	
	Observations	3108		4809		5364		2553	
	F-statistic	4.1		3.8		4.7		3.4	
	N. respondents	1036		1603		1788		851	

Notes: In all regressions, the baseline option is "maintain current behavior", the omitted lockdown length scenario is "a few weeks", the omitted relative expectations length is "scenario matches with expectations", and the omitted round is Round 1. We report the estimates as relative risk ratios. Each respondent selected one option from each of three questions, therefore there are up to three observations per individual in the regression sample. The control variables include gender, age, education, whether the respondent lives alone or with her/his parents, marital status, whether the respondent has children, whether s/he is currently employed, whether the respondents' household is currently facing economic difficulties, and whether they live in one of the "Red Zone" regions. The regressions include sampling weights. Linearized standard errors are in parenthesis. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table C11
Self-isolation intentions: multinomial logit estimates, ordering effects.

	Sample:	(1) Round 3		(2) Round 3: first observed scenario		(3) Round 3		(4) Round 3		(5) Round 3: first observed scenario	
	Option:	Increase compliance	Decrease compliance	Increase compliance	Decrease compliance	Increase compliance	Decrease compliance	Increase compliance	Decrease compliance	Increase compliance	Decrease compliance
Scenario:	A few months	1.553**	1.161	1.987*	1.297	1.300**	1.759***	1.388**	1.320**	2.095*	1.551
		(0.295)	(0.201)	(0.819)	(0.496)	(0.133)	(0.167)	(0.206)	(0.160)	(0.831)	(0.511)
	Until needed	1.525	0.886	1.415	0.987	1.108	1.674***	1.192	1.216	1.864	1.839*
		(0.503)	(0.214)	(0.636)	(0.446)	(0.135)	(0.157)	(0.238)	(0.157)	(0.730)	(0.606)
Length of hypothesized extension, relative to expectations (five categories):	Much shorter	1.475	1.201	0.789	1.954						
		(0.708)	(0.483)	(0.812)	(1.902)						
	Shorter	0.767	1.012	0.406	0.297**						
		(0.271)	(0.323)	(0.316)	(0.171)						
	Longer	0.944	1.755***	0.472*	0.819						
		(0.180)	(0.339)	(0.211)	(0.329)						
	Much longer	0.679	2.656***	0.754	2.185*						
		(0.246)	(0.780)	(0.328)	(0.991)						
Length of hypothesized extension, relative to expectations (three categories):	Much shorter/ Shorter							0.967	1.084	0.461	0.487
								(0.330)	(0.323)	(0.320)	(0.269)
	Much longer/ Longer							0.870	1.964***	0.567	1.196
								(0.202)	(0.393)	(0.221)	(0.417)
Ordering:	"Few months" question first					1.238	0.962				
						(0.391)	(0.226)				
	"Indefinitely" question first					1.254	1.208				
						(0.388)	(0.279)				
	Observations	2646		882		2646		2646		882	
	F-statistic	3.045		2.080		2.570		2.540		1.750	
	Respondents	882		882		882		882		882	

Notes: In all regressions, the baseline option is "maintain current behavior", and the omitted lockdown length scenario is "a few weeks". In specifications (1) through (5), the omitted relative expectations length is "scenario matches with expectations". We report the estimates as relative risk ratios. Each respondent selected one option from each of three questions, therefore there are up to three observations per individual in the regression sample. The control variables include gender, age, education, whether the respondent lives alone or with her/his parents, marital status, whether the respondent has children, whether s/he is currently employed, whether the respondents' household is currently facing economic difficulties, and whether they live in one of the "Red Zone" regions. Model (1) include all observations from the third round, for which we have information on ordering effects. Model (2) limits the observations of the third round to one per respondent, the one relative to the first hypothetical scenario they considered. In Model (3) we include again all responses in the third round, and include among the regressors indicators for what was the extension scenario that each respondent saw first. Models (4) and (5) include the same samples as models (1) and (2), respectively, but the indicators for the different scenario-expectations (mis)matches are more aggregated to account for the smaller sample size. Linearized errors are in parenthesis. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table C12
Self-isolation intentions: Multinomial Logit estimates, by compliance with recommended preventative behaviors.

		Partly compliant (1)		Fully compliant (2)	
		Increase compliance	Reduce compliance	Increase compliance	Reduce compliance
Scenario	A few months	1.300	1.384*	1.219	0.674
		(0.224)	(0.241)	(0.178)	(0.170)
	Until Needed	1.706**	1.271	1.655*	0.464*
		(0.447)	(0.328)	(0.439)	(0.190)
Length of hypothesized extension, relative to expectations	Much shorter	1.533	1.312	1.203	0.424*
		(0.531)	(0.462)	(0.383)	(0.204)
	Shorter	1.003	1.090	1.248	0.548*
		(0.213)	(0.244)	(0.231)	(0.188)
	Longer	0.912	1.179	0.827	2.501***
		(0.158)	(0.226)	(0.132)	(0.672)
	Much longer	0.650	1.398	0.459***	5.939***
		(0.178)	(0.401)	(0.138)	(2.849)
Round	Round 3	0.693	1.857***	0.558**	1.520
		(0.158)	(0.364)	(0.155)	(0.571)
	Observations	2685		2544	
	F statistics	2.766		4.957	
	N Respondents	895		848	

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