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ARTICLE

Social sanctions during Spain's COVID-19 lockdown: costs, values, and emotions

Sanciones sociales durante el confinamiento por COVID-19 en España: costos, valores y emociones

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Abstract: The COVID-19 pandemic generated new social norms, but individuals differed in their willingness to enforce them. While prior research has examined costs, altruism, and anger as drivers of social sanctions, this study examines norm enforcement in a public health crisis, where vulnerability and threat perception were at play. Using a survey of 3,758 individuals in Spain during the 2020 lockdown, this study distinguishes between active enforcement and support for enforcement. Findings show that enforcement is driven more by vulnerability and emotions than by values, except for the modest role played by altruism. Essential workers and those with previous health conditions were more likely to enforce norms, while ideology predicted support for enforcement but not actual enforcement. Contrary to prior research, sadness and fear emerged as relevant emotional predictors of social sanctions. These findings challenge existing models and highlight the need to consider emotions in shaping norm enforcement during crises.

Keywords: Norms; Norm Enforcement; COVID-19, Emotions, Public Health Compliance.

Resumen: La pandemia de COVID-19 generó nuevas normas sociales, pero los individuos difirieron en su propensión a aplicarlas. Mientras que la investigación previa ha destacado el papel de los costes, el altruismo y la ira, este estudio examina este fenómeno en una crisis sanitaria, donde la vulnerabilidad y la percepción de amenaza cobran peso. Partiendo de una encuesta a 3,758 personas en España durante el confinamiento de 2020, se distingue entre la aplicación activa de normas y el mero apoyo a su aplicación. Los resultados muestran que la vulnerabilidad y las emociones tienen más peso que los valores, con la excepción del altruismo. Los trabajadores esenciales y aquellos con peor estado de salud previo ejercieron más sanciones, mientras que las orientaciones ideológicas influyeron principalmente en el apoyo. La tristeza y el miedo emergen como predictores emocionales relevantes, lo que cuestiona los modelos dominantes y subraya la importancia de estudiar la relación entre emociones y sanciones durante las crisis.

Palabras clave: normas; exigencia en el cumplimiento de normas; COVID-19, emociones, cumplimiento de las normas de salud pública.

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Supplementary information ↓

1. INTRODUCTION

The outbreak of COVID-19 led to the swift emergence of new formal and informal social norms designed to curb viral transmission, reinforcing the broader view of public health as a public good (Morrissey et al. 2002). In this exceptional context, some individuals took it upon themselves to enforce these norms—a behavior widely recognized as essential for establishing and maintaining social order (Fehr and Schurtenberger 2018). Understanding why individuals sanction norm violations is thus a critical academic and practical question (Horne 2007).

Most research on citizen norm enforcement and direct social sanctions assumes that these behaviors are primarily driven by anger and rational cost-benefit considerations. This study extends these frameworks to a public health crisis by incorporating context-specific cost factors, in particular vulnerability to the absence of the public good protected by the norm. Additionally, it broadens the range of values and emotions typically examined as predictors of peer norm enforcement. Finally, unlike previous research focusing on attitudinal support for enforcement rather than actual enforcement behavior, this study differentiates between the two, revealing key distinctions. While individuals may endorse punitive measures in principle, directly confronting norm violators requires distinct considerations, including perceived risks, emotional responses, and situational constraints.

To address these gaps, this study adopts a multidisciplinary approach, integrating perspectives from economics, psychology, and political science (Friehe and Schildberg-Hörish 2018). Using a survey of 3,758 respondents in Spain, conducted between April 23 and May 8, 2020, during the country's strict lockdown, this study systematically differentiates between reported norm enforcement and support for norm enforcement. The explanatory scope of prior research is expanded by incorporating factors such as vulnerability to COVID-19, ideological orientations (e.g., authoritarianism and individual freedoms), and a broader set of emotions (anger, fear, anxiety, sadness, hope, and boredom).

Findings reveal a sharp divergence between actual norm enforcement and attitudinal support, underscoring the necessity of treating these as distinct phenomena. While attitudinal support for enforcement is largely driven by ideological factors and social desirability biases, actual norm enforcement is more strongly influenced by situational vulnerability, opportunity to punish, and emotional responses beyond anger—namely sadness and fear. These results highlight the need to reconsider existing theoretical frameworks on norm enforcement by accounting for context-dependent emotional and ideological drivers.

2. THE STATE OF THE ART IN NORM ENFORCEMENT

Social norms are behavioral standards based on widely shared beliefs about how group members should act (Fehr and Fischbacher 2004). They play a critical role in sustaining cooperation and ensuring the provision of public goods (Fehr and Schurtenberger 2018). One of the key mechanisms reinforcing adherence to norms is peer punishment, which deters violations by imposing social or material costs on transgressors (Ostrom et al. 1992; Fehr and Gächter 2000). Understanding what drives individuals to enforce norms is therefore of considerable social and academic significance.

Research on the individual-level determinants of peer norm enforcement has primarily conceptualized this phenomenon as a rational decision-making process, in which individuals weigh the advantages of ensuring norm adherence against the personal risks and costs of taking action (Decker, Stiehler, and Strobel 2003; Friehe and Schildberg-Hörish 2018; Schunk and Wagner 2021). These costs are typically understood as retaliation, reputational damage, or wasted effort if enforcement fails (Horne and Mollborn 2020). However, not all norm violations impose the same costs on individuals or society. Research on collective action and public good suggests that those with greater stakes in the provision of a shared resource—such as economically disadvantaged individuals—tend to be more cooperative and committed to its preservation (Graham et al. 2016). Extending this argument, individuals who are more dependent on a norm-protected public good—whether due to health risks or economic reliance—will be more inclined to actively contribute to its enforcement to secure its continued provision.

Norm enforcement is not purely instrumental; values and ideological orientations also shape punitive behaviors. Much of the literature has emphasized the role of altruism, particularly in third-party punishment, where individuals sanction norm violations despite deriving no direct personal benefit from compliance (Fehr and Fischbacher 2004; Henrich et al. 2006). However, the assumption that norm enforcers are inherently altruistic has been increasingly questioned (Kriss et al. 2016), with some studies suggesting that ideological attitudes, such as conservatism, may also play a role (Claessens et al. 2020). This perspective invites a broader consideration of ideological motivations, which may vary depending on the nature of the public good at stake.

Finally, emotions play a central role in shaping compliance and enforcement, eliciting moral responses to norm violations by inducing shame, guilt, or embarrassment in violators (Von Scheve et al. 2006). The most frequently studied emotion in this context is anger, which is widely assumed to mediate in the causal chain leading to norm enforcement by connecting blame attribution with willingness to punish (Fehr and Fischbacher 2004; Nelissen and Zeelenberg 2009; Jordan and Rand 2019; Gummerum et al. 2016; Seip et al. 2014; Drouvelis and Grosskopf 2016).

However, empirical evidence suggests that the role of anger in punishment may be more limited than traditionally assumed. Some studies indicate that anger has only a modest effect on enforcement behavior (Carpenter and Matthews 2012) and that other emotions—such as sadness and fear—may play a stronger role (Noussair et al. 2023). Sadness, which often follows outrage, has been shown to precede online norm enforcement (Delgado-Ballester, López-López and Bernal 2023), while fear increases norm vigilance (Smith et al. 2008; Cottrell and Neuberg 2005; Soames and Job 1988) and has been found to correlate with sanctioning radical-right views (Álvarez-Benjumea and Valentim 2024). As such, it is crucial to examine whether emotions other than anger influence norm enforcement.

3. THE COVID-19 PANDEMIC AS A CONTEXT FOR EMERGING NORM ENFORCEMENT

The COVID-19 pandemic led to widespread research on norm compliance (Bourgeois et al. 2020; Delmastro 2020; Hume et al. 2021; Kachanoff et al. 2021; Jørgensen et al. 2021; Bor et al. 2020), yet comparatively little attention has been given to why certain individuals actively enforced these norms. Among the studies that have examined citizen norm enforcement, a key limitation is the frequent conflation of support for enforcement with enforcement behavior (Bor et al. 2020; Schunk and Wagner 2020; Fischer, Chaudhuri and Atkinson 2020; Harper and Rhodes 2023). Although attitudes and behaviors often correlate, this relationship is likely to vary depending on the costs associated with enforcement. Experimental findings (Kriss et al., 2016) confirm that third parties often express a willingness to punish norm violators but readily avoid doing so when given an excuse, unlike direct victims of norm violation, who are more willing to punish. This study empirically tests the distinction between support for and engagement in norm enforcement, recognizing the methodological challenges involved in measuring these behaviors separately.

This study also addresses the need to adapt existing frameworks on cost-benefit perceptions, values, and emotions to the specific conditions of the COVID-19 pandemic, incorporating overlooked explanatory factors. A key factor is vulnerability to the virus, as individuals at higher risk —due to age

or preexisting conditions— likely perceived greater personal costs of non-compliance. As a result, they may have been more motivated to enforce public health norms to protect themselves and others. Similarly, those in frontline jobs or with frequent public interactions faced an increased likelihood of exposure, potentially heightening their perceived risks and willingness to sanction violators. More broadly, those most at risk can be seen as "second parties"—direct victims of norm violations—who, as Kriss et al. (2016) suggest, are more resolute in sanctioning transgressions than bystanding "third parties." Thus:

H1) Perceived vulnerability to COVID-19 increased the likelihood of enforcing pandemic norms.

Regarding values, two distinct but coexisting theoretical expectations can be put forward. First, punishing those who violate pandemic norms constitutes a form of third-party punishment, as the benefit at stake (public health) is shared collectively rather than benefiting only the punisher. As such, altruism should play a key role. Second, adherence to pandemic norms is more about maintaining order and compliance than about promoting new social benefits. As such, sanctioning behaviors may be shaped by attitudes toward authority and norm adherence. Prior research has shown that individuals who prioritize security over personal freedom and emphasize obedience to laws are more likely to support strict enforcement measures (Fischer et al. 2023; Harper and Rhodes 2023). Extending this argument, actual norm enforcement is likely reinforced by a general willingness to comply with authorities and uphold regulations. Indeed, attachment to norms and rules tends to correlate with authoritarianism—a predisposition toward obedience and social order—which has also been linked to punitive attitudes toward those who violate established norms (Szekely, Opre, and Miu 2015). Hence:

H2a) As a form of third-party punishment, norm enforcement during the pandemic was positively affected by altruism.

H2b) Individuals who prioritize security over freedom and emphasize obedience to laws and authority were more likely to engage in norm enforcement behaviors during the pandemic.

Regarding emotions, increased anger, disgust, and contempt were linked to stronger support for retributive measures during the pandemic and outrage toward rule-breakers (Fischer, Chaudhuri, and Atkinson 2020). However, this narrow focus overlooks other negative emotions that shaped public responses during the pandemic. Early in the crisis, fear was the dominant emotion, and it was gradually replaced by depression and sadness (Sun, Cui, and Xue 2021), suggesting that these emotions may also influence norm enforcement.

Despite its well-established link to compassion and prosocial behavior (Xiao et al. 2021), sadness remains largely overlooked in norm enforcement research. Sadness, which arises from perceived harm or loss (Smith and Pope 1992), may drive enforcement not as a form of retribution but as an act of collective care. Similarly, fear may heighten threat perception and reinforce the need for compliance. Baldner et al. (2022) found that pandemic-related fear—manifesting as worry or concern—fostered reactions to non-compliance. Their approach, however, intertwines emotions with several key variables, including the outcome. To fully capture the role of emotions in norm enforcement, it is essential to expand the scope beyond anger, incorporating fear and sadness while analyzing them separately and independently. Thus:

H3) Fear will be positively related to norm enforcement during the COVID-19 pandemic.

H4) Sadness will be positively related to norm enforcement during the COVID-19 pandemic.

The theoretical contribution of this study is threefold. First, it focuses on actual norm enforcement behaviors, rather than related constructs, such as support for sanctions, providing a more accurate representation of enforcement dynamics in real-world settings. Second, it integrates vulnerability into enforcement models, recognizing that perceived risk shapes cost-benefit calculations, particularly in life-threatening crises such as the COVID-19 pandemic. Third, it expands the role of emotions beyond anger, hypothesizing that fear and sadness also influence enforcement behavior.

4. RESEARCH DESIGN

4.1. Context

To test these hypotheses empirically, the analysis examines the case of Spain. Spain presents a challenging case for observing citizen norm enforcement, as this phenomenon tends to be more prevalent and effective in high-trust societies (Henrich et al. 2006), whereas Spain is characterized by low levels of social trust (Beilmann, Kööts-Ausmees, and Realo 2018).

The COVID-19 lockdown in Spain began on March 14, 2020, following the declaration of a state of alarm, which remained in place until June 21, 2020. During this period, residents were prohibited from leaving their homes except for essential work or grocery shopping. Strict restrictions remained in effect until May 9. By April 23, the first day of the study's data collection period, the government announced the first steps toward easing lockdown measures. From April 26, children under 14 were allowed outside for one hour a day, accompanied by an adult and within a one-kilometer radius of their homes. On April 28, the Spanish Public Health Office approved a "new normality" plan, outlining conditions for walks and outdoor exercise starting the following week.

The media extensively covered norm violations during the lockdown, and also highlighted instances of citizens confronting rule-breakers, sometimes misjudging situations that were actually permitted under government regulations. These spontaneous enforcers were sarcastically labelled "balcony cops" or "balconazis," reflecting the low social regard for norm enforcers at the time. Reports of aggression against individuals who reminded strangers to comply with pandemic regulations further suggest that citizen norm enforcement carried significant social costs.[1]

4.2. Data

A survey was conducted between April 23 and May 8, 2020, with a sampling procedure that was based on a mixed strategy. First, a sample of alumni from the *Universitat Autònoma de Barcelona* who had previously participated in surveys in exchange for the chance to win vouchers was re-called. In total, 241 alumni responses were collected, constituting a convenience sample. In addition, a link to the survey was posted on large WhatsApp groups and offering the possibility of winning a prize to solicit participation, encouraging snowball spread, and, lastly, a research group's Twitter account was used to spread the call further. This resulted in a large (N = 3758) sample of adults residing in Spain with an average age of 41, of which 56% were women and 70% had a college degree. The main way this sample differed from the official statistics for Spain was the proportion of individuals with a bachelor's degree, which, according to the Instituto Nacional de Estadística (National Statistics Institute), stood at 37%.

Overall, the non-representative character of the sample makes this survey unsuitable for reflecting the Spanish population in terms of the incidence of peer norm enforcement. However, the primary aim of the study is not to produce population-level prevalence estimates, but rather to examine theoretical mechanisms and associations. The data collection took place during the COVID-19 lockdown in Spain, a period marked by severe mobility restrictions and social disruption, which made probabilistic sampling difficult.[2] In this context, reliance on a convenience sample was not only pragmatic but arguably one of

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1 On July 15, 2021, a male nurse was punched in the face and blinded in one eye after he reprimanded another passenger on a Madrid (Spain) Metro train for not wearing a face mask. See https://english.elpais.com/spain/2021-07-19/nurse-assaulted-on-madrid-metro-after-asking-another-passenger-to-wear-a-face-mask.html. A female passenger on a flight from Ibiza to Bergamo was told to wear a mask face on May 26, 2021. She attacked another passenger and a staff member. See https://londonnewstime.com/ryanair-passengers-attack-a-violent-woman-over-a-face-mask-on-a-plane-from-ibiza/274833/. On July 13, 2021, a group of train passengers without face masks were reprimanded by an old man, and they responded violently. See https://www.capgros.com/actualitat/maresme/passatgers-expulsen-tren-viatgers-agressius-sense-mascareta-maresme_803640_102.html.

2 Strict lockdown measures in Spain made alternative sampling strategies virtually unfeasible—especially for researchers themselves confined at home and facing an urgent need to capture unfolding social and psychological dynamics. Although some online and telephone surveys were conducted, there was little time to negotiate collaborations with public survey agencies or mobilize resources for private representative polls. In this context, circulating online questionnaires via social media platforms (e.g., Twitter, WhatsApp, Facebook) became a common and pragmatic solution. A similar strategy was used by Bonal and González (2020) in their study on the educational impact of the pandemic.

the few feasible options. As Peterson (2001) argues, convenience samples can be a necessary and valid approach for conducting timely, theory-driven research, provided their limitations are transparently acknowledged. Moreover, previous studies have shown that correlational findings and theoretically grounded relationships tend to be robust across diverse samples, even when those samples are not demographically representative (Simons, Shoda, and Lindsay 2017). As Leiner (2014: 379) notes, "effects that find support in a convenience pool will also find support in other samples and/or the population: logical inferences about effects are not typically wrong, yet they deserve some caution" (Leiner, 2014: 379). Indeed, even highly biased convenience samples have been used successfully for forecasting election outcomes (Rothschild and Wolfers 2012), returning valid inferences as long as they rely on theory (Wong 2008). In this context, the present sample serves its purpose by enabling a theory-informed exploration of the mechanisms underlying peer norm enforcement. Descriptive findings should therefore be interpreted with caution, while placing greater confidence in the correlational results, which are less sensitive to sampling biases.

4.3. Measures

This study aims to identify the correlates of social sanctions. For this purpose, the survey included a question with the following introduction: "Of the following situations regarding the lockdown during the COVID-19 epidemic, which apply to you?" Three statements followed, the first one being "I have reprimanded a stranger because they had gone out on the street in a way that was against the rules (for example: for going out for a walk or walking with someone else)." The second one stated: "I have confronted a stranger in a public place (street, supermarket) because their behaviour was dangerous or inappropriate." The last one read: "I have reminded a stranger that they should wear gloves and/or a mask, or wear them correctly." Note that the three behaviors constitute direct sanctions in the form of verbally confronting a norm violator (Berger and Hevenston 2016), even though they refer to norms with different degrees of institutionalization and to sanctions that differ in terms of aggressivity and costs.

Going outside without a justifiable reason during the lockdown was a violation of an official norm—one that could even result in a fine—which probably made it easier to enforce. Conversely, the second indicator encompasses situations involving interactions in the public space. At the time there was an official recommendation to respect physical distancing, although it was not officially enforced. Finally, mask-wearing was not yet enforced by the authorities at the time the study was conducted. However, this last statement is formulated in less confrontational terms, which might lead to higher prevalence. The different levels of official enforcement and confrontation levels are designed to represent almost any possible situation at the time, although it is inadvisable to create a scale out of them.[3] Hence, individuals who have answered "yes" to any of these situations are deemed to be "enforcers"; these constitute 28% of the sample.

Another question was introduced with the following wording: "What do you think of these behaviors during the COVID-19 pandemic?" Respondents were asked to select one of five options: 1 = very bad, 2 = bad, 3 = neither good nor bad, 4 = good, and 5 = very good. The item of interest stated: "Scolding a stranger for not complying with shelter-in-place orders," which captures perceptions of citizen norm enforcement (i.e., metanorms) in this context. Responses were rescaled to range from 0 to 1, so that 0 corresponds to "very bad" and 1 to "very good." The purpose of including this variable as an outcome in the analyses is to examine to what extent actual norm enforcement differs from attitudes toward norm enforcement. To this end, estimations were replicated for both dependent variables—reported norm enforcement and opinions regarding norm enforcement. Note, however, that the theoretical expectations apply only to the former (having reported any action that enforces norms). Finally, while

[3] The resulting Cronbach's alpha would be as low as 0.2. We also tested whether the three behavioral indicators could be treated as a cumulative or hierarchical scale using a nonparametric Mokken scale procedure. The analysis yielded a weak scalability coefficient (H = 0.30) for "reprimanding strangers for going out" and "confronting dangerous behaviour," while "reminding others about protective gear" did not meet the minimum scalability threshold. Given this marginal evidence and the conceptual heterogeneity of these actions—ranging from soft reminders to direct confrontations—we decided to analyze them separately rather than as a single additive index.

OLS coefficients are not directly equivalent to logit estimates, rescaling subjective orientations toward social sanctions to the [0,1] range allows for an approximate comparison of the direction and relative strength of associations across models.

As for the independent variables, this study first considers a set of indicators capturing different dimensions of vulnerability to the disease, each reflecting a specific mechanism through which individuals may perceive higher personal costs from others' norm violations. Vulnerability is thus operationalized through four complementary indicators: age-related susceptibility, pre-existing health conditions, personal experience with the disease, and exposure. First, age is included as a proxy for medical vulnerability, under the assumption that older individuals faced greater health risks and therefore perceived norm violations as more threatening. Second, general health conditions were measured against a list of nine potential chronic or acute illnesses. The resulting additive scale indicates the individual's physical vulnerability: higher scores correspond to poorer health status and, consequently, greater perceived danger.[4] Third, personal experience with COVID-19 is captured through three survey items asking whether the respondent had (a) relatives or close friends who experienced symptoms, (b) relatives or close friends who were hospitalized, or (c) lost someone close to them due to COVID-19. These items were combined into an additive index (0–3) reflecting emotional proximity to the disease and perceived severity of its consequences, which may heighten aversion to noncompliance.[5] Finally, the analysis includes whether respondents reported working in essential sectors during the lockdown, which captures occupational exposure to contagion. Essential workers continued to interact daily with others, often in risky conditions, making them especially sensitive to the costs of others' noncompliance. Taken together, these indicators allow us to distinguish between biological, emotional, and situational forms of vulnerability, providing a more nuanced understanding of how different risk profiles may shape attitudes and behaviors toward social norm enforcement.

Regarding values, a dichotomous question asked whether the individual put freedom over security or vice versa, as inspired by the liberties-security spectrum originally conceived by Welzel (2013). Another dichotomous measure tapped into critical attitudes towards authority, asking if the respondent preferred the statement "people should be critical of authority" over the statement "people should respect what those in positions of authority say." Altruism was proxied by a behavioral indicator of whether the individual had (ever) engaged in voluntary work (45% reported that they had). Although voluntary activity does not capture all facets of altruism, it reflects a willingness to devote time and effort to helping others without direct material rewards and is widely used as a behavioral measure of prosocial and civic engagement (Bekkers and Wiepking 2011). Its logic is comparable to that of donations in the dictator game, which are commonly used in experimental economics to gauge altruism. This indicator therefore provides a reasonable approximation of altruistic orientation in the absence of more direct attitudinal measures. Finally, a citizenship norm was included, from a battery tapping the importance of different actions required to be considered "a good citizen" (1 = not important at all, 7 = very important). The item asked about the importance of "always obeying laws and regulations."

As for the role of emotions, this study this study follows Marcus et al. (2019) in tapping into emotional reactions to threatening events. The questionnaire included a battery introduced by the following question: "On a scale of 1 (never) to 7 (all the time), to what extent have you felt the following emotions during the state of alarm?"; the list of emotions included anger, fear, anxiety, sadness, hope and

[4] The conditions were diabetes, high cholesterol, hypertension, circulatory problems, chronic breathing problems, being overweight, diagnosed depression, mental disorder, immunodeficiency. Although McDonald's omega (ω = 0.29) and Cronbach's α (0.32) suggest low internal consistency, these statistics are not appropriate in this context. The nine health-condition items are conceptually independent and together define a formative index of cumulative vulnerability, rather than a reflective scale of a single latent construct. Therefore, psychometric reliability in the traditional sense is neither expected nor required. As Bagozzi (1994, p. 333) notes, "reliability in the internal consistency sense and construct validity in terms of convergent and discriminant validity are not meaningful when indexes are formed as a linear sum of measurements."

[5] Cronbach's alpha = 0.6. The same reasoning regarding reliability applies here: this is a formative additive index designed to summarize distinct empirical components of the construct, not a reflective latent scale. Consequently, low internal consistency does not imply poor measurement quality, since theoretical coherence, not inter-item correlation, is the relevant criterion for this type of composite measure.

boredom.[6] According to the Geneva emotion wheel (Scherer 2005), sadness, boredom, and anxiety fall in the same quadrant (negative, low-power, passive emotions). Fear is a negative but active and obstructive emotion, close to anger—with an even more negative slant—while hope is the only positive emotion of the list and is also considered conducive and passive. These questions referred explicitly to the state of alarm, which had been in place for 55 days when the fieldwork concluded, and they do not explicitly mention norm violations. However, questions about emotions were asked immediately after the battery on opinions about norm deviation and social sanctions, priming respondents with those ideas before asking them to report their emotional states.[7]

A series of socio-demographic controls (sex, education, whether the respondent lives in "a big city," according to their own self-assessment) were also included, along with the respondent's position on the left-right scale (ranging from 0 = left to 10 = right) and indicators of their social capital (Kocher, Martinsson, and Visser 2012).[8] More specifically, a question tapping into generalized trust ("In general, do you think you can trust people, or do you have to be careful?") was included, considering those who picked the "most people can be trusted" option as being trusting people (value 1 against the rest, coded as zero). Similarly, the number of people individuals talk to every day (seven categories, where 0 = no one, 6 = more than 100 people) was considered. We also identify former students, under the assumption that they might have a higher tendency to comply with or at least pay lip service to the emerging pandemic norms. Another control variable captured whether respondents admitted going out either to take care of sick or elderly relatives or to walk their dog—both behaviors permitted under *Real Decreto 463/2020* and subsequent regulations. This variable indirectly captures individuals' potential exposure to rule-breaking or deviant behavior, over and above any exposure that might stem from essential-worker obligations, as these activities were discretionary rather than work-related. Approximately 28% of the sample reported going out for these reasons, beyond grocery shopping or work-related activities Finally, models of sanctioning behavior control for attitudes toward norm enforcement, based on the widely accepted assumption that support for sanctions increases the likelihood of punishing others.[9] The reader can consult the correlation between all independent variables and the five dependent variables—three discrete sanctioning behaviors, a dichotomous indicator of engagement in any of them, and a scale capturing favorable attitudes toward social sanctions—in Table A1 in the appendix.

4.4. Methods

The effects of vulnerability, values, and emotions on the four binary indicators of norm enforcement are estimated using logistic regression, while opinions about norm enforcement—originally measured on a five-point ordinal scale—are modeled with Ordinary Least Squares (OLS) after linearly recoding the variable to a 0–1 range. This transformation allows for a coherent graphical representation and facilitates the comparison of marginal predictions (predicted probabilities and values) across models, even though the raw coefficients are not directly comparable given their different functional forms.

To further assess the relative weight of each motivational domain, post-estimation simulations were conducted grouping predictors into the three conceptual blocks—vulnerability, values, and emotions—and setting each block sequentially to its sample mean while keeping others constant. This decomposition strategy allows the identification of the main motivation behind each respondent's predicted likelihood of enforcement, providing an individual-level view of the mechanisms driving sanctioning behaviors. Together, these estimations provide empirical tests of Hypotheses 1, 2a, 2b, 3, and 4.

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6 When performing an exploratory factor analysis using principal components factor with varimax rotation, two factors emerge. Fear, anxiety, sadness, and anger load mostly in the first factor, while boredom and (lack of) hope load in the second one. The original discrete measures for every emotion have been kept to explore different patterns across the two dependent variables.

7 Note, however, that the literature on public moods indicates that long-term emotional moods also affect judgement and decision-making (Rahn, 2000).

8 Education was coded on a nine-point ordinal scale ranging from 1 = incomplete or completed primary education to 9 = doctoral studies. The "big city" variable derives from the habitat question and distinguishes between 1 = a house in the countryside, 2 = a village, 3 = a small or medium-sized city, 4 = a big city, and 5 = the outskirts of a big city.

9 Alternative model specifications excluding this predictor were estimated, and the main results and conclusions of this study remain unchanged.

4.5. Results

Table 1 presents the prevalence of norm enforcement behaviors, along with the descriptive statistics of all the variables included in the analyses. It becomes apparent that only a minority of people engaged in behaviors that urged other people to follow the rules. Fewer than 4% of people reprimanded strangers for going outside with no apparent justification during the lockdown, 13% confronted strangers in public spaces for their dangerous behavior, and 16% reminded strangers about personal protective equipment. In total, 28% engaged in at least one of the three behaviors described in the survey. Acts depicting social sanctions are seen as "very bad" or "bad" by about 55% of the sample, which is a relatively high percentage and suggests that the metanorm in place did not encourage behaviors that pressurized others to follow the rules, which in turn could explain the low prevalence of social sanctions occurring. After recodification [0,1], this variable yields a mean of 0.38.

Table 1: Items and descriptive statistics of norm enforcement during the COVID-19 lockdown in Spain and its potential predictors

		M	SD	kurtosis	Min	Max
Dependent variables	Reprimanded strangers for going out	0.04	0.19	24.13	0	1
	Confronted strangers for their dangerous behavior	0.13	0.34	5.64	0	1
	Reminded strangers about gloves/mask wearing	0.16	0.37	4.37	0	1
	Reported any norm enforcement	0.28	0.45	1.94	0	1
	Supportive opinions on norm enforcement (after recodification)	0.38	0.28	2.28	0	1
Control variables	Woman	0.56	0.50	1.05	0	1
	Education	6.65	1.96	3.13	1	9
	Left-right scale	2.52	2.07	3.46	1	10
	Habitat: a big city	0.39	0.49	1.22	0	1
	Trust	0.52	0.50	1.00	0	1
	N people speaks to daily	2.37	1.07	2.94	0	6
	Sample: former student	0.06	0.25	13.7	0	1
	Admits going out (care, dog)	0.28	0.45	1.91	0	1
Costs & Vulnerability	Age	41.41	14.18	2.27	18	90
	Essential worker	0.22	0.42	2.81	0	1
	Health conditions	0.65	0.86	6.39	0	8
	Affected by COVID-19	0.82	0.93	2.78	0	3
Values	Freedom before security	0.54	0.50	1.03	0	1
	Critical towards authority	0.71	0.45	1.89	0	1
	Altruism: volunteering	0.46	0.50	1.03	0	1
	Important to obey laws	5.40	1.43	3.46	1	7
Emotions	Fear	3.14	1.67	2.11	1	7
	Anxiety	3.45	1.87	1.85	1	7
	Sadness	3.86	1.71	2.03	1	7
	Anger	2.58	1.67	2.65	1	7
	Hope	4.37	1.65	2.22	1	7
	Boredom	3.32	1.87	1.95	1	7

Note: Given the normative and potentially sensitive nature of several survey items—where social desirability or discomfort could bias responses—no "don't know" or "no answer" options were provided in order to encourage thoughtful engagement and minimize satisficing or avoidance behavior.

Table 2: Estimation models for norm enforcing

	Reprimanded outings	Confronted danger	Reminded about gear	Any norm enforce-ment	Opinions on norm enforce-ment
Controls					
Woman	-0.00	-0.09	-0.55***	-0.34***	-0.00
	(0.19)	(0.11)	(0.10)	(0.08)	(0.01)
Education	0.03	-0.05	0.04	0.01	-0.01**
	(0.05)	(0.03)	(0.03)	(0.02)	(0.00)
Left-right scale	-0.11*	0.01	0.03	0.00	0.01***
	(0.04)	(0.02)	(0.02)	(0.02)	(0.00)
Habitat: a big city	0.20	0.12	-0.46***	-0.18*	-0.01
	(0.18)	(0.10)	(0.10)	(0.08)	(0.01)
Trust	-0.28	-0.11	0.18	0.02	-0.07***
	(0.19)	(0.11)	(0.10)	(0.08)	(0.01)
N people speaks to daily	-0.17*	0.06	0.05	0.03	0.01***
	(0.08)	(0.05)	(0.04)	(0.04)	(0.00)
Former student	-0.02	0.01	-0.35	-0.06	0.11***
	(0.34)	(0.20)	(0.22)	(0.16)	(0.02)
Admits going out	0.72***	0.36***	0.69***	0.63***	-0.02
	(0.18)	(0.11)	(0.10)	(0.08)	(0.01)
Costs & vulnerability					
Age	-0.00	-0.01	0.00	-0.00	0.00***
	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
Essential worker	0.22	0.44***	1.06***	0.77***	-0.00
	(0.20)	(0.11)	(0.10)	(0.09)	(0.01)
N. health conditions	0.34***	0.05	0.04	0.10*	-0.00
	(0.08)	(0.06)	(0.05)	(0.04)	(0.00)
Affected by COVID-19	0.04	0.10	0.06	0.06	0.01
	(0.09)	(0.05)	(0.05)	(0.04)	(0.00)
Values					
Freedom before security	0.17	-0.20	0.05	-0.05	-0.07***
	(0.19)	(0.11)	(0.10)	(0.08)	(0.01)
Critical towards authority	-0.03	0.01	-0.05	-0.07	-0.01
	(0.20)	(0.11)	(0.11)	(0.09)	(0.01)
Altruism: volunteering	0.42*	0.20*	0.01	0.18*	0.00
	(0.18)	(0.10)	(0.10)	(0.08)	(0.01)
Important to obey laws	0.01	0.00	-0.02	-0.02	0.03***
	(0.07)	(0.04)	(0.04)	(0.03)	(0.00)
Emotions					
Fear	-0.05	0.11**	0.03	0.03	0.02***
	(0.06)	(0.04)	(0.04)	(0.03)	(0.00)
Anxiety	0.01	0.03	0.00	0.03	-0.01**
	(0.06)	(0.04)	(0.03)	(0.03)	(0.00)
Sadness	0.07	0.03	0.05	0.06*	-0.00

	(0.07)	(0.04)	(0.03)	(0.03)	(0.00)
Anger	0.14*	0.01	-0.00	0.01	0.01**
	(0.06)	(0.03)	(0.03)	(0.03)	(0.00)
Hope	0.05	0.03	0.02	0.04	0.01***
	(0.06)	(0.03)	(0.03)	(0.02)	(0.00)
Boredom	0.00	0.00	0.02	0.02	-0.00
	(0.05)	(0.03)	(0.03)	(0.02)	(0.00)
Opinions on norm enforcement	2.12***	1.40***	-0.33	0.64***	
	(0.32)	(0.18)	(0.18)	(0.14)	
Constant	-4.80***	-2.60***	-2.81***	-1.98***	0.26***
	(0.76)	(0.42)	(0.40)	(0.32)	(0.02)
Observations	3750	3750	3750	3750	3750
Pseudo R^2 / R^2	0.109	0.086	0.111	0.088	0.166

Columns 1 to 4 logit regression estimates (estimated changes in the log-odds of the outcome for a one-unit increase in the predictor variable.). Column 5 depicts the unstandardized coefficients of an OLS regression. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Pseudo R^2 is Nagelkerke's.

Table 2 presents the results of logistic estimations for the four binary dependent variables (reprimanding strangers for going out, confronting dangerous behavior, reminding others about protective gear, and any norm enforcement), and an OLS model for opinions on norm enforcement.[10] Regarding the controls, and consistent with previous research (Balafoutas and Nikiforakis 2012), women are less likely to enforce norms, but just as keen as men to support norm enforcement. Education and trust show no systematic association with enforcement behaviors but higher education and trust levels are associated with less support for punishment. Individuals further to the right of the ideological spectrum are more supportive of norm enforcement, but are also less prone to reprimanding strangers out in the street. Those living in larger municipalities are about five percentage points less likely to remind strangers about protective gear and also about five percentage points less likely to enforce any norm, perhaps due to lower social capital, visibility, and accountability in urban contexts. In turn, reporting more daily social contacts reduces the likelihood of reprimanded unjustified activity outdoors while having the opposite effect on opinions about sanctioning.

The non-significant effects of the variable identifying former students of the university conducting the survey allow us to rule out compliance bias regarding reported behaviors, although this group shows more favorable opinions about sanctioning, potentially reflecting college students' tendency to offer lip service to perceived social norms. Respondents who admitted going out during the confinement for activities other than work or shopping—but still considered acceptable within the exceptional legal framework—are more likely to engage in any form of social sanction (with effects ranging from a 3- to 10-percentage-point increase, the latter in the case of reminding others about protective gear). However, this factor does not affect opinions on norm enforcement. Finally, supportive opinions on social sanctions (included as a predictor in Models 1–4) are positively associated with all enforcement behaviors except reminding others about protective gear. Marginal effects indicate that increasing positive views of social sanctioning from "bad" to "very good" leads to an estimated 7.5-percentage-point increase in the likelihood of reprimanding strangers and a 15-percentage-point increase in the likelihood of confronting strangers for their dangerous behavior, holding all other variables constant. This is a remarkable effect that, nonetheless, is not observed when the sanction is more subtle and involves talking to strangers about their use of protective gear in the context of the pandemic.

[10] All interpretations in this section referring to changes in predicted probabilities as independent variables vary are derived from post-estimation simulations—predicted probabilities and marginal effects obtained with margins after each logit and OLS model. Figures A1–A6 display the marginal effects for the six variables considered the most explanatory and substantively relevant.

As for the factors capturing vulnerability, age exerts a significant and positive effect only on opinions about sanctions, indicating that older people are more supportive of such behaviors. Being an essential worker emerges as one of the strongest predictors of enforcement: compared to non-essential workers, their probability of confronting strangers when perceiving dangerous behavior increases by about five percentage points, and their likelihood of reminding others about protective gear rises by roughly fifteen percentage points. They are also sixteen percentage points more likely to engage in any enforcement act, except for reprimanding those found outdoors without justification. This pattern confirms that exposure and opportunity—rather than values—drive rule enforcement during crises. Similarly, respondents with more health conditions were also more prone to sanctioning others: moving from zero to three reported conditions increases the likelihood of reprimanding those perceived to be outside unjustifiably by about five percentage points and of engaging in any enforcement behavior by around six. Finally, all else being equal, the degree of personal affectation by the pandemic does not appear to play a significant role in explaining any of the dependent variables.

The effects of values are selective, although they largely disconfirm H2b. A freedom-before-security orientation only significantly impacts opinions about norm enforcement, as those preferring freedom are less supportive of social sanctioning. Similarly, believing that good citizens should always obey laws is associated with more positive opinions about social sanctions, but is unrelated to reported sanctioning behaviors. Being critical of authority does not have any significant effect on any of the dependent variables. Finally, altruism, measured through previous volunteering, again predicts actual enforcement (except for reminders about protective gear) but not attitudes, suggesting that some forms of punishment during the pandemic were indeed altruistic rather than punitive in nature. Those with a history of volunteering are between two and four percentage points more likely to engage in punitive behaviors.

The results highlight the distinct roles of emotions in norm enforcement. First, boredom shows no significant effect on any of the dependent variables. Second, anxiety and hope only influence the attitudinal outcome: anxious individuals are less supportive of sanctioning behaviors, whereas hopeful ones are more supportive. Third, fear and anger display consistent effects on both attitudes and behaviors. When anger rises from its minimum to its maximum value, the likelihood of reprimanding strangers for going out increases by more than three percentage points. Similarly, when fear moves from its minimum to its maximum, the probability of commenting on strangers' protective gear increases by more than seven percentage points. Sadness, in line with hypothesis 4, also raises the likelihood of engaging with any sanctioning behavior by about four percentage points across its full range. These findings challenge the conventional assumption that anger is the primary driver of punitive action. Instead, individuals experiencing higher levels of sadness or fear are significantly more likely to confront norm violators. This contrast underscores a key distinction: emotions that enhance attitudinal support (hope and anxiety) do not necessarily translate into enforcement behaviors.

To assess the relative importance of different motivational domains behind norm-enforcing behaviors, a decomposition analysis was performed based on post-estimation simulations from logistic models.[11] Each model's predictors were grouped into three conceptual blocks—vulnerability, values, and emotions—and counterfactual probabilities were calculated by setting each block to its sample mean in turn. Across all models, results indicate that the dominant motivational profile varies depending on the type of enforcement behavior, with vulnerability factors generally prevailing in less confrontational acts, and emotional motivations playing a larger role in more direct forms of sanctioning. More specifically, among those who actually reprimanded strangers for going out, motivational profiles are relatively balanced, with emotional drivers (37%) and vulnerability (38%) contributing similarly. This means that, for 37% of those who scolded passers-by, emotional factors were the most explanatory component of their predicted probability of sanctioning, whereas for 38% vulnerability-related factors

[11] Simulations were implemented in Stata using the fitstat command to estimate the average marginal contribution of each block to individual predicted probabilities. Respondents were then classified according to the block that most strongly determined their likelihood of enforcement.

played that dominant role. The sanctioning behavior that consisted of confronting strangers for behavior deemed to be dangerous is primarily driven by emotional factors (49%). Among those who reminded others about protective gear, vulnerability clearly dominates (91%), while emotional factors play a secondary role (25%), suggesting that this behavior combines practical and moral elements but remains largely rooted in perceived risk exposure rather than psychological or affective orientations. Finally, among those reporting at least one enforcement behavior, vulnerability remains the largest group (68%), followed by emotions (25%) and values (6%). As such, both affective activation and situational vulnerability appear to drive participation in citizen sanctioning, though through different psychological mechanisms.

5. CONCLUSIONS

Understanding why some individuals actively enforced social norms during the COVID-19 pandemic is not only a key academic question but also a matter of practical importance for policymakers. Future public health crises may again require the implementation of restrictive norms, and their effectiveness will likely depend on both institutional enforcement and spontaneous citizen norm enforcement. The pandemic provides an exceptional context in which cost perceptions were shaped by vulnerability to the disease, work conditions, and social exposure. It also allowed for the examination of values that are often overlooked in social sanction research. Additionally, this study expands the emotional landscape of norm enforcement beyond the predominant focus on anger by showing that different emotions play distinct roles across attitudinal and behavioral dimensions.

One of the central contributions of this research is the distinction between actual norm enforcement and attitudes toward norm enforcement. While most previous studies have examined support for punitive measures (Song et al. 2024), this study explicitly differentiates between reported enforcement behaviors and metanorms (i.e., social approval of citizen enforcement). In the present study, norm enforcement was relatively rare, with only 28% of respondents engaging in any form of sanctioning, which aligns with the growing recognition that norm enforcement is relatively infrequent in real-world settings (Balafoutas and Nikiforakis 2012). This underscores the significant social costs of confronting strangers and the limited enforcement opportunities in lockdown settings. Additionally, 55% of respondents held negative views (very bad or bad) of norm enforcement, suggesting that metanorms did not strongly support citizen-driven punishment during the lockdown.

A second key finding is that norm enforcement and attitudes toward enforcement are shaped by distinct sets of factors. While previous research often assumes that positive views about social sanctioning translate into actual enforcement behaviors, the multivariate models nuance this assumption. Support for peer punishment predicts most sanctioning behaviors under study, but not the one involving reminders about protective gear. Moreover, socio-demographic predictors such as gender, education, and social capital operate differently—sometimes in opposite directions—for attitudinal and behavioral outcomes. This divergence extends to cost perceptions and values, reinforcing the idea that support for norm enforcement is a less costly, lower-stakes position than actual engagement in social sanctions. Consequently, research on norm enforcement should move beyond attitudinal measures. Just as public opinion surveys distinguish between voting intentions and past behavior, studies on social norms should ask directly about respondents' experiences with peer enforcement to obtain a more realistic picture of its prevalence and determinants.

A major contribution of this study lies in showing that cost perceptions—shaped by personal risk and exposure—outweigh other orientations in predicting social sanctions during crises. Post-estimation simulations confirmed that vulnerability-related factors dominate for less confrontational behaviors, reminding others about protective equipment. In contrast, more direct forms of sanctioning (such as confronting strangers for dangerous behaviour) are more strongly driven by emotional factors. These findings broaden existing theories by incorporating situational costs that go beyond resources and retaliation (Horne and Mollborn 2020). Results largely support Hypothesis 1: older individuals were more approving of enforcement in principle but not more likely to act, while essential workers and

those reporting multiple health conditions were substantially more likely to intervene. This suggests that informal enforcement was driven less by morals or ideology than by perceived exposure and responsibility.

The role of essential workers is particularly noteworthy. Their enforcement behaviors may reflect both personal risk and professional duty. Unlike most citizens, they maintained high levels of social interaction during lockdown and were often positioned as de facto enforcers of regulations. Future research should further explore whether their enforcement extended beyond workplaces, and policymakers should formally recognize their informal governance role. Institutional support—through communication protocols, clear guidelines, and psychological assistance—could mitigate the emotional burden and potential conflicts inherent in such roles.

In contrast, values played a weaker role than expected, though not negligible. Post-estimation simulations reveal that values were the dominant motivation for about 25% of those reprimanding strangers for being out in the streets unjustifiably, 14% of those confronting dangerous behavior, and 6% of those engaging in any sanction. Hypothesis H2a, predicting a positive link between altruism and norm enforcement, was supported: altruistic individuals were more likely to sanction norm violations. However, H2b, anticipating a role for security-seeking and authoritarian attitudes, was not confirmed. Instead, those valuing freedom over security were less likely to support norm enforcement in principle, but such preferences had no bearing on behavior. The influence of altruism, in turn, reveals that norm enforcement during crises is not purely punitive but often motivated by prosocial intentions. Policymakers could therefore mobilize volunteer networks and civic associations during emergencies, framing peer enforcement as care-driven solidarity rather than moral policing.

Regarding emotions, this study highlights the affective underpinnings of norm enforcement, challenging the long-standing view of anger as its dominant driver. Post-estimation simulations confirmed the prevalence of emotional motivations—particularly anger—in explaining direct confrontations, such as reprimanding strangers for unjustified outings. Yet, emotions accounted for about one quarter of all enforcement acts, with fear and sadness also emerging as significant predictors. These results indicate that affective activation can motivate enforcement through multiple emotional pathways, which challenges the dominant role of anger in norm enforcement theories (Nelissen and Zeelenberg 2009; Baldner et al. 2022). Public messaging should therefore balance threat-based appeals (e.g., fear) with compassionate emotional frames (e.g., sadness, care, hope). Overly alarmist or moralistic narratives risk polarization, whereas messages emphasizing empathy and shared responsibility can foster constructive citizen engagement.

While this study provides new theoretical and empirical insights, several limitations must be acknowledged. First, the survey is based on a non-representative sample, which limits the generalizability of incidence rates. Nonetheless, similar research designs have successfully identified psychological and behavioral mechanisms (Leiner 2014; Rothschild and Wolfers 2012). Second, although the measures of emotions refer to the “state of alarm” lockdown period, they do not explicitly capture emotional reactions to specific norm violations. The questionnaire was structured to prime respondents with norm-related content before asking about emotions, partially mitigating this issue, yet this remains an inherent limitation of observational research. Third, the models predicting sanctioning behaviors show a modest fit, as expected given the complexity of informal enforcement and the limited availability of contextual indicators. Importantly, these models were not intended to have high predictive accuracy but to test theoretically grounded hypotheses. The relatively low explanatory power likely reflects the absence of situational factors—such as informal pressures and contextual cues—that were beyond the scope of this study. Future research could integrate richer contextual data and experimental designs, for instance through real-time emotion tracking, to better isolate causal mechanisms. Finally, this study focuses on a single country during an exceptional crisis, raising questions of external validity. The strict lockdown measures and unique social dynamics in Spain may not generalize to other contexts. Comparative analyses could therefore test whether similar patterns of citizen enforcement emerge under different cultural or institutional settings.

Overall, this study shows that citizens' informal norm enforcement during crises is neither purely punitive nor detached from prosocial motivations. The decomposition analysis further reveals that the dominant motivational profile varies across enforcement types: vulnerability factors prevail in routine or low-conflict acts, while emotional drivers are more prominent in highly confrontational situations. In all cases, ideological or moral values play only a secondary role. Taken together, these results point to a dual logic of informal enforcement—a pragmatic logic rooted in self- and collective protection, and an emotional logic grounded in affective activation. Recognizing this duality can help policymakers design communication strategies that appeal simultaneously to empathy and responsibility, fostering compliance and solidarity without deepening moral polarization.

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Statement on the use of Artificial Intelligence

AI tools (DeepL and Copilot) were used exclusively for language editing and did not affect the study's design, analysis, or conclusions.

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APPENDIX

Table A1: Correlation matrix between the independent and the dependent variables

Variables	(1) Reprimanded outings	(2) Confronted dangerous behaviour	(3) Reminded about gear to wear mask, gloves	(4) Any norm enforcement	(5) Opinions on norm enforcement
(1) Reprimanded outings	1.00				
(2) Confronted dangerous behaviour	0.15*	1.00			
(3) Reminded about gear	0.04*	0.08*	1.00		
(4) Any norm enforcement	0.32*	0.63*	0.70*	1.00	
(5) Opinions on norm enforcement	0.11*	0.16*	-0.03	0.08*	1.00
(6) Woman	0.02	0.03	-0.08*	-0.04*	0.05*
(7) Education	-0.01	-0.05*	0.02	-0.01	-0.08*
(8) Left-right scale	-0.02	0.04*	0.02	0.02	0.19*
(9) Habitat: a big city	0.00	0.00	-0.08*	-0.05*	-0.05*
(10) Trust	-0.05*	-0.06*	0.03*	-0.02	-0.18*
(11) N people speaks to daily	-0.03	0.04*	0.05*	0.04*	0.07*
(12) Former student	0.02	0.02	-0.03	0.00	0.03*
(13) Admits going out during confinement	0.07*	0.06*	0.12*	0.13*	-0.02
(14) Age	0.01	-0.01	0.01	0.00	0.17*
(15) Essential worker	0.01	0.08*	0.19*	0.16*	0.04*
(16) N health conditions	0.08*	0.03	0.02	0.05*	0.05*
(17) Affected by COVID-10	0.03	0.06*	0.03	0.05*	0.03
(18) Freedom before security	-0.01	-0.08*	0.01	-0.04*	-0.21*
(19) Critical towards authority	-0.01	-0.02	-0.01	-0.03	-0.08*
(20) Altruism: volunteering	0.04*	0.03*	-0.01	0.03*	-0.03*
(21) Important to obey laws	0.01	0.05*	-0.01	0.01	0.27*
(22) Fear	0.03	0.10*	0.01	0.06*	0.09*
(23) Anxiety	0.04*	0.07*	0.00	0.04*	-0.05*
(24) Sadness	0.05*	0.07*	0.02	0.06*	0.00
(25) Anger	0.06*	0.05*	0.01	0.04*	0.02
(26) Hope	0.01	0.03*	0.02	0.04*	0.13*
(27) Boredom	0.01	0.01	0.01	0.02	-0.04*

*** p<0.01, ** p<0.05, * p<0.1

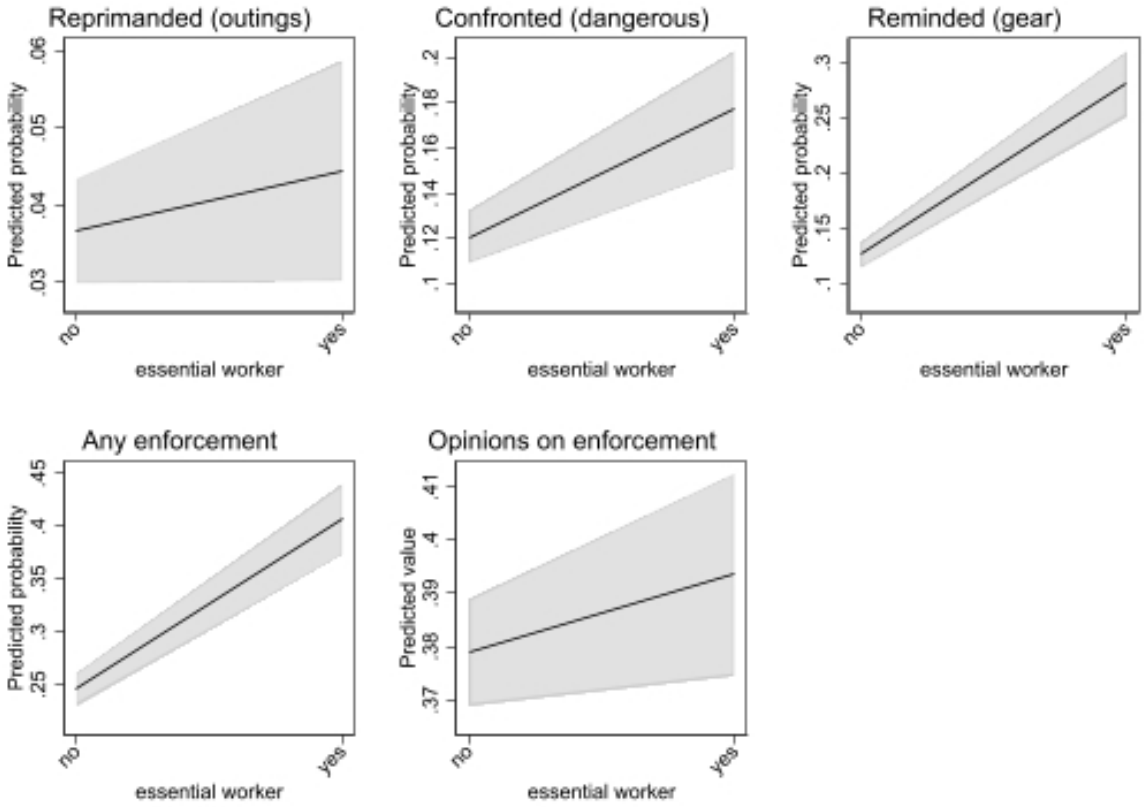


Figure A1: Predicted probabilities of norm enforcement by essential-worker status.

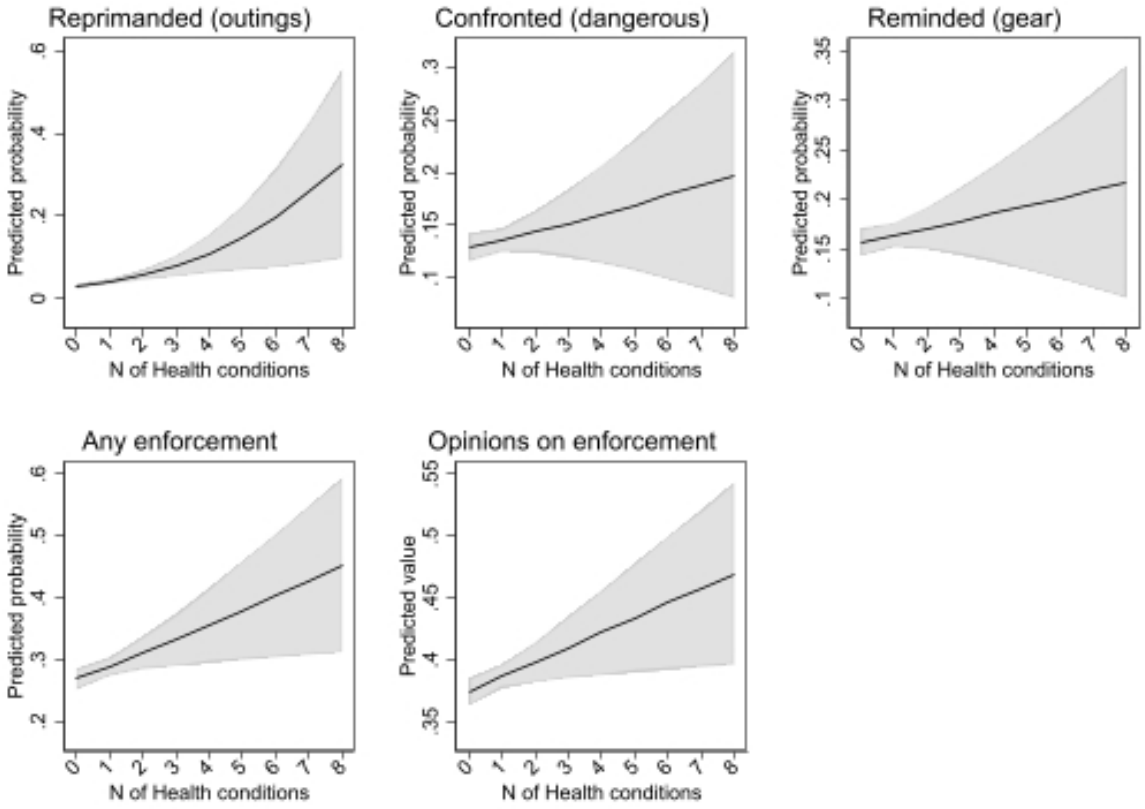


Figure A2: Predicted probabilities of norm enforcement by health conditions.

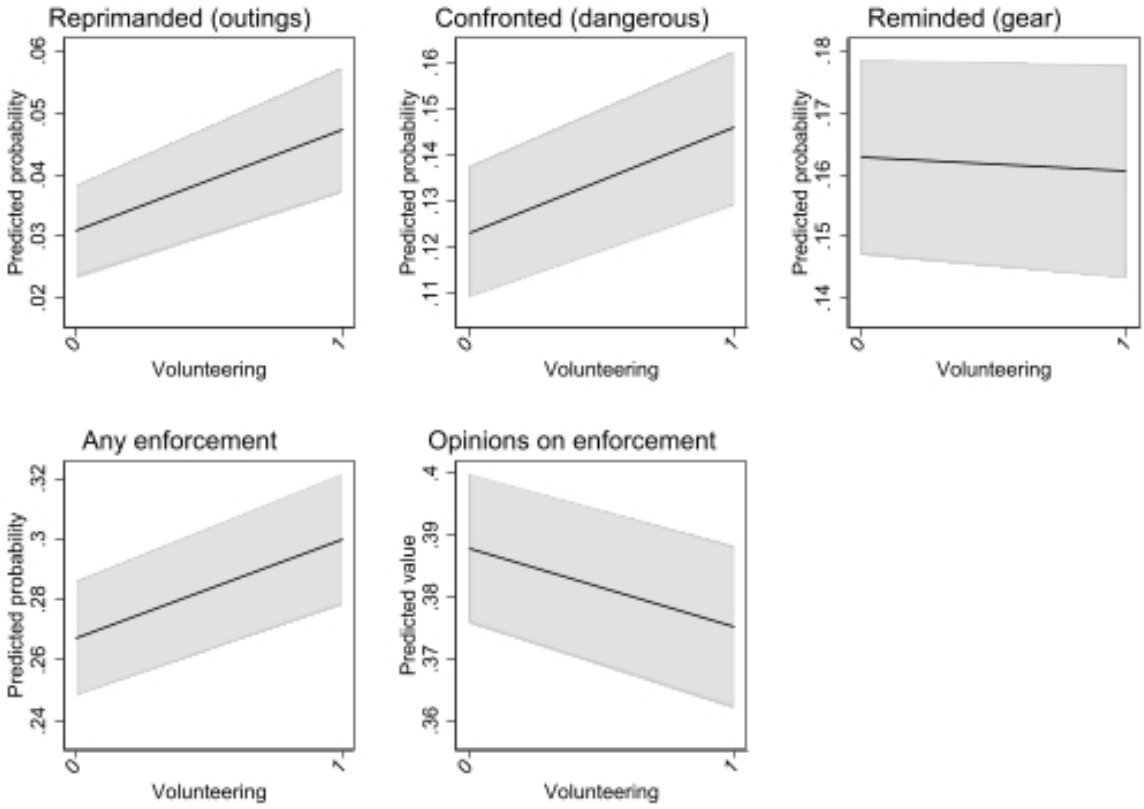


Figure A3: Predicted probabilities of norm enforcement by volunteering.

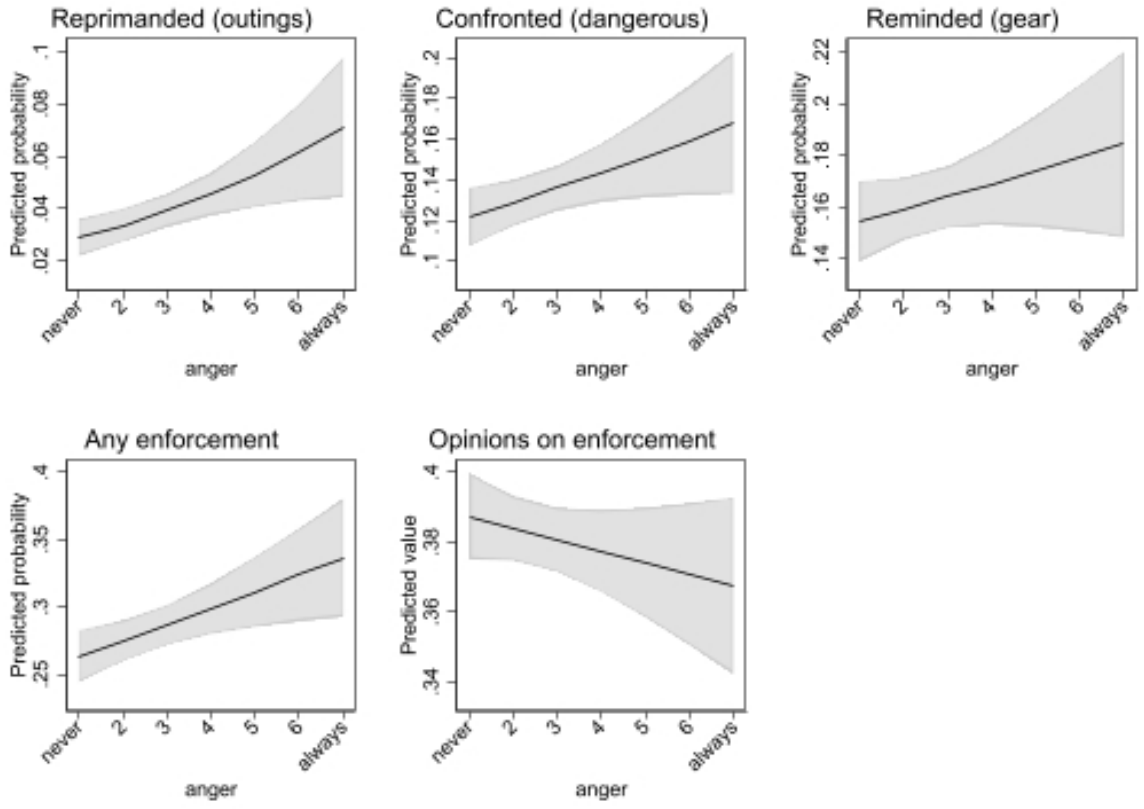


Figure A4: Predicted probabilities of norm enforcement by anger.

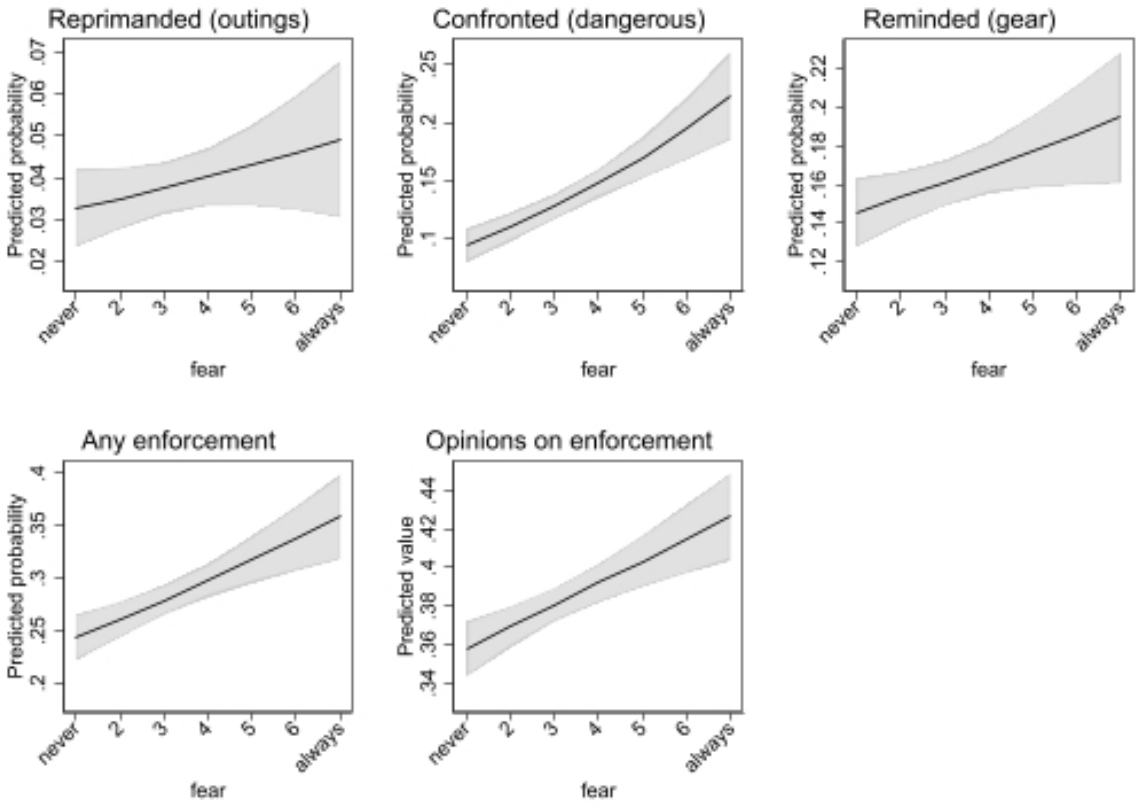


Figure A5: Predicted probabilities of norm enforcement by fear.

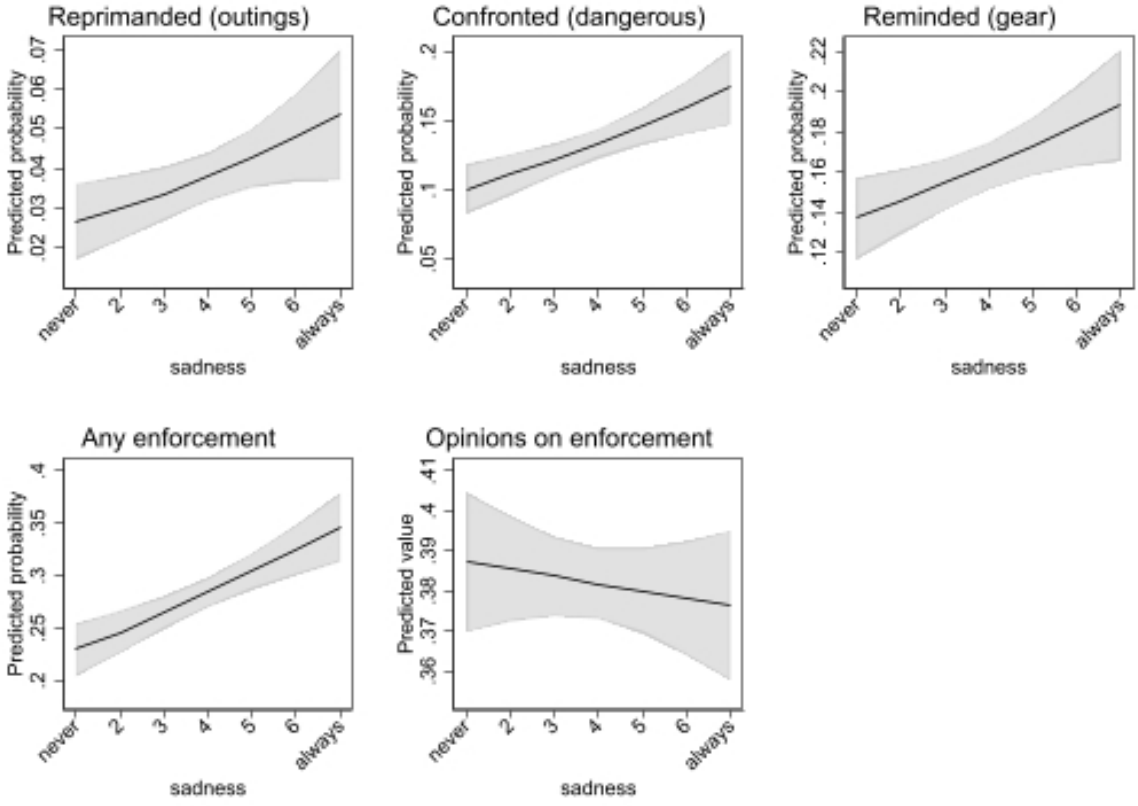


Figure A6: Predicted probabilities of norm enforcement by sadness.