Immigrant Stereotype Spillover Effect: The Mediating Role of Intergroup Emotion in the Association Between Intergroup Contact and Incidental Threat

Abstract

The uncertain and evolving nature of COVID-19 in times of global mass migration has introduced an additional layer of threat and perceived competition for resources between host nationals and newcomers. The convergence of these perceived threats may exacerbate implicit immigrant stereotypes perhaps resulting in increased intergroup animosity. This study examines whether implicit stereotypes of immigrants as disease carriers/spreaders have a spillover effect on the way host nationals feel about their presence during a public health crisis. Using panel data and a linear structural equation model, we measured intergroup emotions (positive and negative) and prejudice mediating effect between prior intergroup contact with immigrants and symbolic and realistic pandemic threat not directly related to immigrants (incidental intergroup threat) among host nationals from 7 European countries, the United States, and Colombia (total *N*=13,645). We controlled for political predispositions (ideology, SDO, RWA, and populism) and socio-demographics. Our study offers novel evidence that (a) intergroup emotions serve in such mediating role over and above prejudice, and that (b) in times of public health crisis and mass migration, implicit stereotypes of immigrants may exert a spillover effect on host nationals' affective response to the presence of immigrants, which is not explained by prejudice. Interventions designed to address pandemic-related intergroup hostility could benefit from integrating threat regulation strategies and a social identity approach to the prevention of incidental intergroup threat in immigrant-receiving societies.

KEYWORDS: Intergroup emotion, perceived threat, COVID-19, immigrants, host nationals.

Introduction

Global migration has more than tripled since 1960 (Pew Research Center, 2016) with a record 280 million people living outside their home countries in 2022 (United Nations, 2022). Typically, countries with long standing histories of receiving immigrants, such as the United States and Germany, continue to rank amongst the top destination choices for immigrant settlement (Kreichauf, 2021). Simultaneously, host nationals (individuals who are not first or second-generation migrants) from countries with little or no established tradition of large-scale immigration, such as Hungary and Colombia, are now experiencing some of the societal changes (e.g., demographic and cultural transformations) associated with the recent arrival of large numbers of immigrants (Selee & Bolter, 2022). In turn, the rapid change in demographic composition of destination countries may result in intergroup conflict (Enos, 2014) sometimes associated with a rise of anti-immigrant rhetoric portraying the presence of newcomers as a threat to both, the culture, values, and traditions of destination societies (Albarello et al., 2023), but also as a threat to resources and opportunities perceived as intended only for natives.

Furthermore, outcomes of intergroup process (i.e., contact, emotion, and threat perception) may be subject to the convergence of conditions associated with the macrosocial context and temporal circumstances in which such intergroup process takes place (Kauff et al., 2021). That is, intergroup outcomes may vary based upon the compiling effects of contextual landscapes at a particular point time (e.g., global health crisis) and space (e.g., countries experiencing mass migration for the first time) whereby individuals may be influenced by the behavior of others in their social context (Kauff et al., 2021). For example, large-scale movements of people across borders over short periods of time are often not well received by host nationals (Coenders at al., 2008). Indeed, the massive influx of newcomers is perceived as a source of inflation to the labor

supply and as increased competition for resources between host nationals and newcomers (Demirtas-Madran, 2020). Simultaneously, the COVID-19 pandemic—considered now as the largest global crisis since World War II—has introduced an additional layer of perceived threat due to competition for resources (e.g., goods) and opportunities (e.g., jobs) between host nationals and immigrants (Demirtas-Madran, 2020). Intrinsically, the COVID-19 provides a natural global context to examine the effects of conditions associated with the macrosocial context (i.e., mass international migration) at a given point in time.

In this study, we (1) measured the mediating effect of intergroup emotions and prejudice on the association between prior intergroup contact with immigrants and symbolic and realistic pandemic threat not directly related to newcomers (incidental intergroup threat) among host nationals; and (2) examined whether implicit stereotypes of immigrants as disease carriers/spreaders exert a spillover effect (i.e., influencing distal outcomes not directly related to the outgroup(s) in question) (Valenzuela & Schwartz, 2023) on host nationals' affective reactions to the presence of immigrants in receiving societies during the COVID-19 pandemic. Our hypothesized model is shown in Figure 1.

Historical occurrence of anti-immigrant sentiment during infectious disease outbreaks

In face of infectious disease outbreaks, people tend to distance themselves from those perceived as a potential source of contagion and to become more dependent on the ingroup (Blumer, 1958). Such behavior may be guided by self-preservation and the need to decrease risk, and/or by tenuous beliefs that those who may be infected bear responsibility for the spread of disease (Van Daalen et al., 2021). Groups who are perceived as responsible for the spread of pathogens are more likely to be feared (Mula et.al. 2022) and are often perceived as a threat to the health and well-being of the ingroup (Parmet & Sinha, 2017). Immigrants have been

historically scapegoated for the spread of disease (Jedwab, Khan, Russ, & Zaveri, 2021). During epidemics, immigrants and other minority groups tend to be stereotyped as a threat to public health (stereotype threat), and have become frequent targets of prejudice (Madeira et al., 2018)

During the early phase of the COVID-19 pandemic, Lin (2022) found that, compared to their host national counterparts, immigrants experienced an almost two-fold increase in fear of being stigmatized. Moreover, the volume of news headlines describing various ways and contexts in which host nationals discriminate against and scapegoate immigrants for negative societal outcomes continues to rise (De Coninck et al., 2022). These findings are in alignment with Realistic Group Conflict Theory (LeVine & Campbell, 1972), which states that disputes over scarce resources during times of crisis (e.g., economic and public health crises) may increase animosity toward the outgroup as a function of competition over limited resources and opportunities.

Within the COVID-19 pandemic context, evidence related to intergroup threat among host national and immigrants is conflicting. For example, Mula et al. (2022) found that the co-occurrence of the COVID-19 pandemic and mass international migration may contribute to exacerbating expressions of antipathy towards immigrants; particularly among those who felt more threatened by the pandemic and expressed a higher desire for stronger sanctions and more strict social norms to mitigate the spread of the virus. Contrastingly, a study conducted in the Netherlands using panel data (Muis & Reeskens, 2022) found that anti-immigrant sentiments associated with the perception of COVID-19 threat did not increase during the first wave of the pandemic. Furthermore, Adam-Troian & Bagci (2021) found that the perception of threat posited by the pandemic was associated with both, pro and anti-immigrant sentiments, in what they described as “the pathogen paradox.” That is, an increase in anti-immigrant sentiments

associated with the perception of COVID-related intergroup threat, but also an increase in positive attitudes toward refugees as a function of a "sense of common identity" due to perceiving one's ingroup and the outgroup in the 'same boat' (Adam-Troian & Bagci, 2021, p. 1).

Stereotype, Prejudice, and Discrimination

The COVID-19 pandemic has introduced a new form of collective threat and emotional distress around the world affecting intergroup dynamics (e.g., prejudice and discrimination), and adding complexity to the ongoing debate about immigration policy (Demirtas-Madran, 2020). Levels of acceptance, or lack thereof, of mass migration in receiving societies may be determined by a multiplicity of macro-level factors. These factors include the strength of the national economy (Dennison & Drazanová, 2018), the number of lower-income migrants present in the destination country (especially in poorer destination countries with higher unemployment rates; Tabellini, 2020), political elites' democratic versus nationalist and extreme populist views and aspirations (Kende & Krekó, 2020), and levels of perceived threat that mass migration may pose to the receiving society's cultural traditions (Schwartz et al., 2018). Even minor changes in the demographic composition of immigrant receiving communities can lead to exclusionary reactions, possibly because of "the activation of negative stereotypes" (Enos, 2014, pg. 3702).

There is also considerable variation in migrant acceptance among individuals across countries (Araujo et al., 2020). For example, despite increased divisiveness among Americans on immigration policy issues in recent years, the United States remains one of the countries with the most positive intergroup attitudes toward immigrants (Card et al., 2022). Conversely, Eastern European countries, such as Hungary, have the most negative attitudes toward newcomers (Gessler, Tóth, & Wachs, 2021), whereas Western European (such as Austria, Belgium, and

Germany) and other EU (Italy, Spain, and Sweden) host nationals tend to hold more moderate attitudes toward immigrant (De Coninck et al., 2021). Mass migration may also lead to increased discrimination over time. For example, in Colombia, acceptance of Venezuelans (the dominant immigrant group in the country) among host nationals has become increasingly unfavorable over time (Rozo & Vargas, 2021).

An important distinction to be drawn relates to the interchangeable use of "stereotypes" with concepts of "prejudice" and "discrimination." Bias has been conceptualized as having three psychological components, namely affects (i.e., prejudice), cognition (i.e., stereotypes), and behavior (i.e., discrimination) (Hagiwara et al., 2020). Each of these psychological components is composed of individual experiences between non-marginalized and marginalized groups, structural and social factors (e.g., power dynamics), historical contexts, and macro-level factors (Stuber et al., 2008).

Prejudice responds to intergroup affect components, such as threats and fear (Stephan et al., 2009). According to Allport et al. (1954), prejudice is "… an aversive or hostile attitude toward a person who belongs to a group, simply because he belongs to that group, and is therefore presumed to have the objectionable qualities ascribed to the group" (p. 7). Although stereotypes and prejudice are often used as interchangeable constructs, they are indeed regarded as distinct concepts (Phills et al., 2020). Prejudice refers to the affective response towards individuals based on their group membership, whereas stereotypes are considered a type of cognitive structure that allows individuals to make quick and efficient judgments about others relying on mental shortcuts (Bodenhausen et al., 1994). Stereotypes can serve as the basis for prejudice, as negative attitudes and affective response towards a group may stem from attributes that individuals hold about that group. Similarly, the activation of stereotypes can shape behavior (i.e., discrimination)

toward members of a social group, lead individuals to make negative assumptions, and affect decision-making (Blair, 2001).

Stereotypes can emerge in contexts of intergroup disparities, such as differences in power (Fiske, 1993), social hierarchies (Sidanius, 1993), intergroup conflict (Robinson et al., 1995), or intergroup threat (Kunda & Spencer, 2003). Furthermore, implicit stereotypes, or the automatic mental associations that people make between certain social groups and particular traits or characteristics (Amodio & Devine, 2006) are often based on societal norms, cultural beliefs, and personal experiences. For example, implicit stereotypes of immigrants as a threat to public health (stereotype threat) may be rooted in mental associations of immigrants with stereotypical traits, such as "do not have health prevention practices" (Madeira et al., 2018, pg. 5). Overall, biases (i.e., stereotype, prejudice, and discrimination) can be triggered spontaneously and effortlessly (Hagiwara et al., 2020) by a variety of factors associated to people's features (e.g., accent and ethnicity), the environment they are in, and can lead to detrimental intergroup outcomes (Blair, 2013).

Intergroup Processes and Social Identity

Evidence from the intergroup literature, more broadly, suggest that the relationship between intergroup process (e.g.., intergroup contact, intergroup emotions, and intergroup threat perception) is associated with the activation of one's social identity via group membership. People tend to define themselves in terms of group affilliation, especially when those group memberships are perceived as being threatened (Maitner et al., 2017). As such, intergroup process may be a function not only of whom group members interact with and where they live, but also of contextual events surrounding intergroup contact at a given point in time (Schmid, 2014). Extensive research indicates that features of intergroup contact such as frequency

(Lawrence & Bentley 2018), contact with friends/ acquaintances (Marinucci et al., 2021), and quality of contact (Paolini et al., 2021) between groups is directly associated with decreased or increased levels of prejudice towards the outgroup, respectively. For example, a seminal meta-analysis of 515 studies conducted by Pettigrew and Tropp (2006) found that positive intergroup contact was associated with reduced prejudice towards including immigrants, and a wide range of outgroups. In contrast, negative intergroup contact was associated with increased prejudice towards the outgroup. Furthermore, the effects of intergroup contact have been closely associated with intergroup emotion. For example, Kauff et al. (2017a) reported that, along with happiness, the effects of prior intergroup contact on prejudice were mediated by intergroup fear. Another study (Visintin et al., 2017) found that certain negative emotions, such as anger and disgust, serve as strong predictors of prejudice towards the outgroup – whereas positive encounters with immigrants may help to reduce such prejudice.

According to Mackie et al. (2016), intergroup emotion is embedded in identity dynamics and may be better equipped to capture the richness of intergroup relations and predict distinct intergroup outcomes than are traditional models of general prejudice (Cottrell, 2009). Until recently, it had been commonly believed that intergroup fear constituted the dominant emotional response to intergroup threat (Stephan & Stephan, 2000), particularly toward outgroups perceived as threatening to an ingroup's physical safety (realistic threat) (Cottrell & Nichols, 2010). Research rooted in the Integrated Threat Theory (Stephan & Stephan, 1996) have proposed three basic types of intergroup threat, namely realistic threat (i.e., perceiving immigrants as competition for access to essential resources, such as jobs), symbolic threat (i.e., perceiving immigrants as overtaking the destination society's linguistic, religious, and cultural

traditions) (Stephan & Stephan, 2000), and negative stereotypes (e.g., believing that immigrants are carriers and spreaders of disease) (Stephan et al., 1999).

In the context of COVID-19 vis-à-vis immigration, She, Hou, and Xi (2022, p. 210) found that despite, the risks the pandemic presented, "more people are impacted by the fear of disease than by the disease itself." Recent research by Wamsler et al. (2022) found that, compared to fear, anger towards the outgroup may more strongly mediate the link between COVID-19 exposure and perceived threat to the ingroup. Intergroup disgust ensues when the outgroup is perceived as a symbolic threat by promoting values or ideals that strongly oppose those of the ingroup (Cottrell & Neuberg, 2005), or when immigrants are perceived as carriers of infectious disease (Dhanani & Franz, 2021). Whereas it is common for people to experience strong emotional responses to public health threats (Kim, 2021), if left unchecked these negative affective reactions to the perception of intergroup threat might exert a wide array of disruptions on other intergroup processes in immigrant-receiving contexts.

To a lesser extent, positive intergroup emotions have been associated with reduced negative intergroup attitudes, such as decreased prejudice between members of traditionally opposed social groups (Pettigrew & Tropp, 2006), and increased prosocial behavior. For example, sympathy has been positively associated with prosociality (Rudolph et al., 2004). A recent study in Germany (Thravalou et al., 2021) found that host nationals who sympathized with immigrants were more likely to express prosocial inclinations towards newcomers. Intergroup happiness tends to occur through direct and positive contact with immigrants and stimulates additional positive attitudes (Kauff et al., 2017), whereas intergroup hope has been associated with positive reappraisals of migrant groups, especially those escaping war (Halperin & Gross, 2011).

Intergroup Process and Political Predispositions

Although political predispositions, such as right-wing authoritarianism (RWA), social dominance orientation (SDO), populism, and general political ideology (liberal versus conservative) were not of direct interest in the present study, it is nonetheless important to account for their effects. Except for a few studies (Levin et al., 2013; Mathews & Levin, 2012), empirical research on the relationships among intergroup emotions, perceived intergroup threat, and political predispositions remains relatively scarce. Levin et al. (2013) reported the mediating effect of intergroup threat perceptions between RWA and disgust, and a negative relationship between SDO— support for social hierarchies— and anger toward members of the outgroup. Another study (van Prooijen et al., 2015) found that, compared to moderates, people with extreme political ideologies (left- and right-wing extremists) are more prone to higher SDO and to derogate immigrant groups. Van Prooijen et al. reported that such intergroup responses were found to be mediated by fear that, in turn was triggered by the perception of realistic threat (i.e., social, and economic) attributed to the outgroup. Recent pandemic studies have reported an association between political predispositions, such as SDO, RWA, and populism, with increased prejudice toward immigrant groups (Hartman et al., 2021; Yerly, 2022). Blasi and Jost identified stereotypes of minorities as key mechanisms in maintaining hierarchical social arrangements, such as SDO (Blasi & Jost, 2006).

Implications of The Stereotype Spillover Effect

The spillover effect, defined as the influence of distal outcomes not directly related to the outgroup(s) in question) (Valenzuela & Schwartz, 2023), can have a number of negative implications, both for individuals and for immigrant receiving societies as a whole. One implication of the stereotype spillover effect is that it can lead to increased prejudice, discrimination towards immigrants, and intergroup animosity. Another implication of the

stereotype spillover effect is that it can lead to the internalization of negative stereotypes among minority groups, including immigrants. The emotional toll resulting from intergroup hostility is often experienced by immigrants in the form of cultural stress (e.g., experiences of discrimination, being shut out of opportunities). This can have negative consequences for immigrants' self-esteem, sense of belonging, and mental health. (Schwartz et al., in press). Cultural stress is generally the result of host nationals' threat perceptions and defensive responses, in which host nationals use exclusionary reactions and policies as attempts to "defend" their national groups' culture and livelihood against the perception of threat posed by the arrival of large waves of immigrants (Schwartz et al. 2022).

At the individual level, evidence suggests that harmful effects of stereotype threat can spill over into other domains beyond the circumstances in which stereotype threat was first experienced among those who are stereotyped (Inzlicht et al., 2012). For example, immigrants who have been subject to negative stereotyping (e.g., as disease spreaders in the supermarket) may suffer psychological effects in areas unrelated to the source of threat (e.g., anxiety at work). However, to our knowledge, no research has assessed whether immigrant stereotyping has a spillover effect at the intergroup level, nor its potential underlying mechanisms among those who are perceivers of the threat (host nationals, in this case). Similarly, the role that intergroup emotions may play in such association remains unexplored.

The Present Study

The present research investigated whether (1) the association between prior intergroup contact with immigrants (frequency of encounter, number of immigrant friends/acquaintances, and quality of experiences) and the perception of infectious disease threat (realistic and symbolic), not directly related to newcomers (i.e., incidental intergroup threat) is mediated by

intergroup emotion—three positive (happiness, hope, and sympathy) and three negative (anger, fear, and disgust)—and prejudice. We hypothesized that (H1) intergroup emotions would play a distinct mediating role between intergroup contact and incidental COVID-related threat, over and above the role of prejudice against immigrants; and that (H2) positive emotions would be associated with a lower likelihood of incidental COVID-related threat, whereas negative emotions would be associated with a higher likelihood of incidental COVID-related threat.

To assess this gap in the literature, we estimated a linear structural equation model where the intergroup contact variables predicted intergroup emotions and prejudice, which in turn predicted COVID-19 incidental threat using panel data from seven European countries, the United States, and Colombia (N=13,645). We controlled for political predispositions (political ideology, SDO, RWA, and populism), country of residence, and demographics (sex, age, college education attainment, and whether participants were first-generation migrants, second-generation migrants, or host nationals). We selected participants from these countries so as to provide not only geographic diversity (e.g., Eastern Europe, Western Europe, North America, and South America), but also to include individuals from traditional immigrant-receiving countries (e.g., Germany, the United States), participants from countries with somewhat less experience with immigration (e.g., Italy, Sweden), and individuals from countries with almost no history of immigration prior to the current wave of mass migration (e.g., Hungary, Colombia).

Method

This research was approved by the Institutional Review Board at the University of Texas at Austin. Respondents were contacted through e-mail with the request to take part in the study. Between May and June of 2021, a polling agency[1] distributed the survey to residents aged 25 to

[1] Bilendi & Rispindi https://www.bilendi.co.uk/static/group#group-sec-2

65 in Austria, Belgium, Germany, Hungary, Italy, Spain, and Sweden; and residents aged 18 to 65 in the United States and Colombia (total *N*=13,645 respondents, about 1,500 per country). The polling agency drew a representative quota sample out of their available panels in each country, with heterogeneity across age and gender. Participation rates ranged from 12% to 31%.

The survey was developed in English and translated into each country's official or dominant language by professional translators, ensuring that respondents would view the terminology used in the questions as "everyday language" in the country or region where they resided. Attention or invalid-responding checks were not included in the survey, participants were unable to skip questions, and therefore there were no intentionally missing data. However, some questions did have a 'no answer' option. Participants who were underage (below 18 or 25, according to country); not residing in any of the countries in the study; and/or not completing all survey questions were not included in the sample. Participants received financial compensation from the survey company directly, in the form of points that can be exchanged for gift cards and other rewards. The dataset used in generating our findings are openly accessible at https://data.mendeley.com/datasets/8mgpmdstp2/2

Measures

To reduce participant burden, we assessed some of the constructs in our study using single-item or reduced versions of established measures. Such practices are common in large panel studies that evaluate a wide array of constructs (De Coninck et al., 2021). The single items used in our research were taken from established scales, and the consistency of our results with theoretical expectations may strengthen the validity of our measurement approach.

Intergroup Contact. To measure prior intergroup contact with immigrants, we distinguished among three types of intergroup contact: frequency of encounter, casual contact, and quality of

contact (Miller, Smith, & Mackie, 2004). To assess these types of contact we ask participants "*How often do you personally come into contact with immigrants"* (frequency of contact), *"How many of your friends or acquaintances are immigrants*?" (Casual contact), *and "If you think about all the experiences with immigrants you have in the present or had in the past, how would you rate your experience with immigrants?"* (Quality of contact). These single-item measures were adapted from Miller et al. (2004). Responses were recorded on a 5-point scale (1 = *never*, 5 = *everyday*) for frequency of encounter, (1 = *none*, 5 = *all*) for casual contact, and (1 = *very negative*, 5 = *very positive*) for quality of contact. These items were kept separate and not summed.

Intergroup Emotions. To measure intergroup emotions, we asked host nationals "*When you think about immigrants coming to [country], how strongly do you feel the following emotions [happiness, hope, sympathy, anger, fear, and disgust]?* These intergroup emotions items were adapted from Cottrell and Neuberg (2005), selecting three primary negative emotions (fear, anger, and disgust) from their scale and adding three positive emotions (hope, happiness, and sympathy) to complement these negative intergroup emotions. Participants responded to each item using a 7-point scale (1 = not at all, 7 = a lot).

Prejudice Toward Immigrants. To assess prejudice toward immigrants, we used a feeling thermometer (Velasco González et al., 2008). Participants were asked to rate their overall feelings toward immigrants using a continuous rating between zero degrees (feeling as cold and negative as possible toward immigrants) and 100 degrees (feeling as warm and positive as possible toward immigrants). Scores were reverse coded so that higher scores reflect higher prejudice.

Incidental COVID-19-Related Threat. To assess incidental COVID-19-related threat (symbolic and realistic), we asked respondents various questions not directly related to immigrants, such as: "*How much of a threat, if any, is the coronavirus outbreak for [country's] values and traditions"*

(symbolic threat), and "*How much of a threat, if any, is the coronavirus outbreak for [country's] economy"* (realistic threat). We used the COVID-19 threat scale developed and validated by Kachanoff et al. (2021), which uses 10 items to assess realistic (related to physical well-being) and symbolic (related to sociocultural identity) COVID-19 related threat. Responses were recorded on a 5-point scale (1 = low perceived threat, 5 = high perceived threat). Cronbach's alpha values for scores on realistic (.81) and symbolic threat (.85) indicated high internal reliability for both subscales.

Political Predispositions (Ideology, RWA, SDO, and Populism). To assess political ideology, we asked participants *"When it comes to politics, people sometimes talk of 'left' and 'right'. Where would you place yourself on the scale below, where 1 stand for the left and 11 for the right?"* Responses were recorded on a 11-point scale (0 = far left, 10 = extreme right). To measure SDO, we used an SDO scale consisting of eight items (for more information, see Ho et al., 2015). A sample SDO item is "An ideal society requires some groups to be on top and others to be on the bottom." We asked participants to indicate, using a 7-point scale, the extent to which they favor or oppose each statement (1 = *strongly oppose*, 7 = *strongly favor*). Cronbach's alpha value for SDO alpha was .76. To measure populism, we used three items from Spruyt, Keppens, and Van Droogenbroeck (2016). Sample items include statements such as "politicians talk too much and take too little action," responded to using a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). Cronbach's alpha value for populism was .82. We used Bizmumic and Duckett's (2018) 6-item scale to measure RWA. We asked participants to indicate the extent to which they agree with each of the six the statements on a 7-point scale (1 = *strongly disagree*, 7= *strongly agree*). Cronbach's alpha value for RWA alpha was .46. Despite the low alpha, RWA correlates above .30 with both SDO and political ideology.

Sociodemographic Factors. Participants were asked to indicate their age; sex (*0 = male, 1 = female)*; college educational attainment *(0 = no college degree, 1 = college degree)*, and country of residence—entered into analysis as dummy-coded variables with Belgium as the reference group. To assess participants' migration background, we asked participants about their own and their parents' countries of origin (e.g., *Were you born in [country of residence]? Were both your parents born in [country of residence]?*). We then created a dummy variable indicating participant migration background *(0=first generation migrant, 1=second generation migrant)*, with third or later generation as the reference group. Because these are international data and not all participating countries use race as a construct, data for race were not collected. We also did not assess income because income levels and brackets vary widely across the countries included in our study.

Analytic Strategy

The analyses for the present study proceeded in three general steps. First, we computed a bivariate correlation table among the study variables using SPSS 29. Because our sample size provided enough statistical power for extremely small correlations to reach statistical significance, we focused on correlations of $r \geq |.20|$ - that is, those that would represent at least 4% shared variability. Second, we used M*plus* 8.1 (version 1.8.8 (1)) to estimate a linear structural equation model where the three intergroup contact variables predicted the six intergroup emotions and prejudice, which in turn predicted incidental realistic and symbolic COVID-19 threats. Political ideology, RWA, SDO, and populism were used as political predispositions control variables. Age, sex, college attainment, immigrant generation, and country of residence were used as demographic control variables. Other potential control

variables (e.g., religion, employment status) did not emerge as statistically significant predictors in any of our analyses, so they were omitted from the results reported here.

We evaluated model fit using standard structural equation modeling fit indices (Kline, 2015) – the chi-square value (χ^2), the comparative fit index (CFI), and the root mean square of approximation (RMSEA). The chi-square value tests the null hypothesis of perfect model fit and is generally overpowered with large samples. The CFI value reflects the extent to which the specified model represents an improvement over a null model with no paths or latent variables. The RMSEA value indexes the extent to which the covariance structure implied by the model deviates from the covariance structure observed in the data. Acceptable fit is generally characterized as CFI > .90 and RMSEA < .08, whereas excellent fit is characterized as CFI > .95 and RMSEA < .05.

In the final step of analysis, we evaluated the extent to which the intergroup emotions and prejudice served as mediators of the predictive effect of intergroup contact with immigrants on incidental COVID-related realistic and symbolic threats. We used MacKinnon's (2008) asymmetric distribution of products test to evaluate the hypothesis that intergroup emotions and prejudice would mediate these predictive effects. This test computes a 95% confidence interval around the product of the path coefficients that comprise the mediating pathway, and if this confidence interval does not include zero, then mediation is assumed at $p < .05$. The test also provides standardized estimates and *p*-values for each mediated path. However, due to the extremely high statistical power, we focused on mediated paths with coefficients of |.01| or greater. We adopted a lower threshold for mediated paths than for correlations because each mediated path is computed as the product of two numbers between 0 and 1 (MacKinnon, 2008).

Results

Age and gender distributions of the sample are provided in Table 1. Bivariate correlations are provided in Table 2. To provide validity evidence for the study items, we examined intercorrelations among the intergroup contact, intergroup emotions, and COVID-related variables. Across countries, the intergroup contact variables were interrelated at an average r = .48 (range .32 to .63). The positive intergroup emotions were interrelated at an average of r = .70 (range .65 to .75); the negative intergroup emotions were interrelated at an average of r = .64 (range .58 to .69); and the positive and negative intergroup emotions were interrelated at an average of r = -.11 (range -.02 to -.19). The positive intercorrelations among the positive emotions, and among the negative emotions, support the validity of our intergroup emotion items. The perceived COVID-related variables we interrelated at r = .54. The political predispositions control variables (political ideology, SDO, RWA, and populism) were interrelated at an average of r = .19 (range -.01 to .39).

Higher numbers of friends and acquaintances who are immigrants positively predicted all negative and positive intergroup emotions, except sympathy (.09), with disgust (.19) and happiness (.19) being the strongest predictions. Compared to number of friends and acquaintances, positive experiences with immigrants (quality of contact), positively and more strongly predicted all the positive intergroup emotions, especially sympathy (.25), and negatively predicted all the negative intergroup emotions (anger, fear, and disgust), particularly anger (-.17). However, number of friends/acquaintances was a slightly stronger predictor of happiness than positive contact (.19 vs .17). Something to note was the counteractive effect of positive experiences with immigrants on negative experiences with immigrants, suggesting that having positive experiences with newcomers offer a reversing and protective effect on negative experiences with the outgroup.

Prejudice emerged as a positive predictor of all negative intergroup emotions (-.18 to -.21), and as an even stronger negative predictor of all the positive intergroup emotions (.34 to .36) above all other intergroup contact covariates, and control variables (i.e., political predispositions and demographics).

Among the political predispositions control variables, populism did not predict any of the intergroup emotions and RWA positively predicted fear (.13), whereas ideology and SDO positively predicted all the negative emotions. SDO was not only a strong predictor of negative emotions above ideology, particularly anger (.18) and disgust (.24), and mildly and negatively predicted sympathy (-.11).

Among the demographic control variables, younger respondents scored lower on anger, fear, hope and sympathy, and highest on disgust and happiness. Women scored positively higher than men on fear and sympathy, and negatively lower in disgust. Compared to individuals who were not from immigrant families, both first- and second-generation immigrant respondents scored negatively low on anger, fear, and disgust. Although, most of these the covariates were statistically significant, none of their standardized regression coefficients reached .10.

In terms of differences in intergroup emotions among individuals across all countries in our sample, with Belgium as the reference country, only participants from Italy and the United States have significant estimate values equal or greater than .10. Participants from Italy scored highest on sympathy (.10), and participants from the United States scored highest on disgust (.15), happiness (.14), hope (.11), and anger (.10).

In terms of predictors of COVID-19 symbolic and realistic threat (see Table 4), fear toward immigrants and populism emerged as a significant positive predictor of both types of threat. with fear being a stronger predictor than populism. Anger and disgust positively predicted symbolic

threat but not realistic threat. Conversely, sympathy positively predicted realistic threat but not symbolic threat. Prejudice did not significantly predict either type of threat. This positioned fear as the strongest predictor among all intergroup emotions, particularly symbolic threat (.18).

Regarding between-country differences in incidental pandemic symbolic and realistic threat, with Belgium as the reference country, participants from Colombia scored positively and particularly high on realistic threat (.21) and extremely low on symbolic threat (.01). Although the other countries were statistically significant at the $p < .000$ level regarding COVID-related symbolic and realistic threat, none of them had an estimate value equal or larger than 0.10. For example, study participants from Sweden scored negatively highest on symbolic threat (-.08) followed by those from Hungary (-.07), whereas individuals from Spain scored positively (.08) and participants from Austria negatively (-.08) on realistic threat.

Similarly, in terms of the demographic control variables none of the estimate values were equal or larger than .10. Younger respondents scored negatively on symbolic and realistic threat, and college graduates scored negatively on symbolic threat. Women scored slightly higher than men on positive realistic threat, and there were no significant migrant-generation differences in either type of threat.

When we *tested for mediation*, 12 of the 24 potential mediated paths (50%) were statistically significant and were associated with standardized path coefficients of $\beta > |.01|$ (Table 5). Ten of the 12 indirect paths were associated with negative intergroup emotions as follows: four of the indirect effects involved fear, another four involved anger, and two involved disgust. As for positive intergroup emotions, only happiness appeared to have an indirect effect between intergroup contact and perceived incidental threat, with two of the 12 indirect paths associated with happiness. Fear of immigrants positively and indirectly predicted the effects of number of

immigrant friends/acquaintances on incidental COVID-related realistic threat (.025) and of number of immigrant friends/acquaintances on incidental COVID-related symbolic threat (.021). Similarly, fear of immigrants negatively and indirectly predicted the effects of positive quality of contact on incidental pandemic-related realistic threat (-.024) and of positive quality of contact on incidental COVID-19 symbolic threat (-.020). Anger toward newcomers had an indirect effect between number of immigrant friends/acquaintances and both COVID-19 symbolic threat (.017) and realistic threat (.010), and inversely and indirectly predicted the association between positive quality of contact with newcomers and pandemic symbolic threat (-.016) and realistic threat (.010). Disgust toward immigrants indirectly predicted the effects of number of immigrant friends/acquaintances on incidental COVID-19 symbolic threat (.019) and negatively predicted the effects of positive quality of contact and incidental COVID-19 symbolic threat (-.016). Finally, intergroup happiness positively predicted the links of number of immigrant friends/acquaintances (.013) and quality of contact (.010) with incidental COVID-19 symbolic threat, suggesting that the frequency of encounters with acquaintances who are immigrants, and the perception of incidental pandemic-related threat (symbolic and realistic), is indirectly predicted (to a small extent) by feeling happy about immigrants' presence in the country. Prejudice did not significantly predict any of the relationships of intergroup contact with incidental COVID-related symbolic and realistic threats.

We estimated post-hoc analysis with separate models for each intergroup emotion as the indirect effect. We did this to ascertain the extent to which the various positive and negative emotions might have overruled one another's effects vis-à-vis intergroup contact and incidental COVID-related symbolic and realistic threats. Results, reported in supplemental tables S1 and

S2, indicated that the indirect effects of each of the negative emotions became stronger when each emotion was modeled separately.

Discussion

Our findings suggested two primary themes. The *first theme* that emerges is that both intergroup contact with and prejudice towards migrants are reliable predictors of host nationals' affective responses toward the presence of newcomers. However, not all types of intergroup contact have similar intergroup-emotional effects on host nationals. Increased numbers of friends and acquaintances who are immigrants was associated with increased happiness and hope, but also with increased threat-based emotions (anger, fear, and disgust) towards the presence of immigrants. Not surprisingly, positive quality of experiences with newcomers, exerted a strong predictive effect on all positive intergroup emotions, especially sympathy (which was not predicted by number of immigrant friends/acquaintances). Conversely, we found that positive intergroup contact yielded lower levels of threat-based emotion (anger, fear, and disgust), suggesting a potential protective effect against the occurrence of negative intergroup emotions. This set of results is in alignment with the intergroup contact literature, which suggests that positive interactions with members of the outgroup predicts more favorable emotional reactions towards them (Wang et al., 2022).

The *second primary theme* emerging from our results is that intergroup emotions, but not prejudice, appeared as reliable indirect predictors of incidental COVID-19 realistic and symbolic threats. Particularly, fear towards the presence of immigrants emerged as the strongest predictor among all intergroup emotions (positive and negative), positively predicting both incidental pandemic realistic and symbolic threat. Anger and disgust positively predicted symbolic threat but not realistic threat. In terms of positive intergroup emotions as predictors of incidental

pandemic threat, sympathy positively predicted incidental realistic threat but not incidental symbolic threat. No other positive emotions (happiness or hope) emerged as indirect predictors of incidental pandemic threat (symbolic and realistic). Prejudice also did not emerge as an indirect predictor, as we discuss later in this section.

In keeping with our first hypothesis, the indirect effect of intergroup emotions in the link between intergroup contact (frequency, number of friends, and quality of contact) and incidental pandemic threat (realist and symbolic) was significant in some cases, but the indirect effect of prejudice was not significant in any instance. These results are somewhat unsurprising given the documented success of intergroup emotions in predicting intergroup outcomes beyond general prejudice toward the outgroup (Cottrell, 2009). One plausible explanation for this finding involves the link between intergroup emotions and activation of one's social identity. Prior work suggests that this link is particularly strong among individuals who highly identify with the ingroup and for whom an appraisal of events as affecting the ingroup is likely to activate a social identity associated with that ingroup (Tajfel & Turner 2004). That is, individuals' emotional responses vis-à-vis the outgroup appear to be linked with the level of identification with the ingroup and determined by the centrality and salience of the social identity that was activated (Mackie, Maitner, & Smith, 2016).

This pattern of results also suggests some empirical novelties. First, in times of public health crisis, implicit stereotypes of immigrants as disease carriers and spreaders (see Jedwab, Khan, Russ & Zaveri, 2021, for a related argument) may exert a spillover effect on host nationals' affective reactions to the presence of newcomers in receiving societies during COVID-19. One potential explanation for this finding involves the historical tradition of immigrants being stereotyped (Stephan, Ybarra, & Bachman, 1999) as a threat to public health (stereotype threat)

and scapegoated for the spread of disease (Madeira et al., 2018). Our finding is also in alignment with the intergroup process literature, which has extensively documented the link between stereotypes and intergroup relations (Koeing & Eagly, 2019; Stephan & Stephan, 2018). Because stereotypes work as "mental images" (Lippman, 1922) that serve as shortcuts (heuristics) for incoming information related to the outgroup during times of threat, stereotypes may be a key element of intergroup relations responsible for shaping intergroup emotion and behavior towards the outgroup (Yzerbyt, 2016). However, because ours is one of the first study to our knowledge, to introduce the concept of incidental threat and to examine the immigrant stereotype spillover effect in the context of incidental pandemic threat, further longitudinal and experimental evidence is needed.

The second empirical novelty introduced by our findings suggests that implicit stereotypes of immigrants as a health threat (Kim, 2021) may exert a spillover effect on both negative and positive intergroup emotions. The finding that positive intergroup emotions were largely unrelated to COVID-related realistic and symbolic threats partially contradicts our second hypothesis that positive emotions would be associated with a lower likelihood of incidental COVID-related threat, whereas negative emotions would be associated with a higher likelihood of incidental COVID-related threat. Indeed, the only link between positive intergroup emotions and COVID-related threats was a *positive* association between sympathy and incidental realistic threat. A potential explanation for this unexpected finding could be that positive emotions may amplify people's reliance on stereotypes (Schwarz & Clore, 2007). Specifically, positive emotions (sympathy in this case) may short-circuit people's evaluations of the outgroup and its members, thereby rendering ingroup members more prone to stereotype-based judgements (Lambert et al., 1997). That is, positive affect may contribute to increased stereotype activation,

stereotype application, or both, unless counter-stereotypic tools (such as thoughts and action tendencies) are available (Huntsinger et al., 2010).

The Colombian case

In addition to the primary themes suggested by our results, a notable finding relates to Colombia's exceptionally high score on incidental pandemic realistic threat (.21) and marginally elevated score on incidental symbolic pandemic threat (.09). None of the other countries in our study were associated with similarly elevated COVID-related threat scores.

This set of results are not surprising considering that rates of immigrant acceptance among host nationals in Colombia have become increasingly unfavorable over time (Rozo & Vargas, 2021). The convergence of several critical socioeconomic factors may be responsible for these elevated levels of perceived incidental threat in Colombia. First, prior to the mass Venezuelan migration that began in 2015, Colombia had no sustained tradition of receiving large numbers of immigrants—yet the country has absorbed an extremely large number of Venezuelan immigrants in a relatively short period of time (Selee & Bolter, 2022). Moreover, it is possible that the significant financial constraints that many Venezuelan migrants experience when they first arrived in Colombia (Salas-Wright et al., 2022) might be construed as a source of threat and increased competition for resources between host nationals and newcomers (Demirtas-Madran, 2020). Second, when compared to developed countries and like most developing nations, Colombia has higher poverty and unemployment rates (Tabellini, 2020), which may have rendered the country more susceptible to the unprecedented challenges introduced by the pandemic (Cuesta & Pico, 2020). Given our proposition that the perception of incidental COVID-19 threat is not directly related to immigrants (hence its incidental nature), this finding

might be suggesting higher rates of implicit immigrant stereotyping as carriers and spreaders of disease among the Colombian population than in any other country in our sample.

Recommendations

Because the world is still facing the consequences of the coronavirus and mass migration continues to increase, addressing key factors contributing to intergroup hostility among host nationals holds significant relevance. Future initiatives and programs may benefit from (a) integrating threat regulation strategies to address implicit immigrant stereotypes, and (b) using a social identity approach to prevent incidental intergroup threat in immigrant-receiving societies during public health crises.

Similarly important is the design and implementation of interventions aimed to increase positive and decrease negative intergroup emotions, particularly fear. Moreover, our findings indicate that promoting close relationships and positive experiences between host nationals and newcomers may be of great relevance. Finally, given the global nature of both mass migration and the coronavirus, scalable and low-cost interventions, such as online apps, are needed. We hope that the present study inspires further work in this direction.

Limitations and Future Directions

Although the present study has made several novel scholarly contributions to the literature, some limitations must be noted. One important limitation lies in the methodology used. Although cross-sectional designs and online surveys enable researchers to collect data on large multiple samples (multisite) in a short period of time, this design does not allow us to draw causal conclusions. This important shortcoming may be addressed by conducting longitudinal or experimental studies in the future. Moreover, given that we used panel data, our findings may not generalize to people who do not participate in survey panels. Additionally, we do not know

whether similar findings would have emerged from respondents in the Middle East, Asia, or Africa. Finally, some of our scales – especially the RWA scale, produced scores with low internal consistency reliability. It is essential to revise these scales for future work with similar populations.

Conclusions

Our findings offer novel empirical evidence indicating that positive and negative intergroup emotions–especially negative intergroup emotions–among host nationals represent a reliable set of mediators in the associations between intergroup contact and incidental pandemic threat, over and above the effects of prejudice toward immigrants. This set of results also indicates that, in times of public health emergencies, implicit stereotypes of immigrants as disease carriers and spreaders may exert a spillover effect on host nationals' emotional reactions to the presence of newcomers. In turn, implicit stereotypes could help to inflate the perception of incidental pandemic threat in immigrant-receiving contexts. The novelty of our findings adds to the emerging body of scientific evidence designed to inform initiatives to address pandemic-related intergroup hostility and improve the quality of intergroup relations. Such interventions could benefit from integrating threat regulation strategies and a social identity approach to the prevention of incidental intergroup threat within immigrant destination communities.

References

Abrams, D., & Hogg, M. A. (1988). Comments on the motivational status of self-esteem in social identity and intergroup discrimination. *European Journal of Social Psychology*, *18*(4), 317–334. https://doi.org/10.1002/ejsp.2420180403

Adam-Troian, J., & Bagci, S. C. (2021). The pathogen paradox: Evidence that perceived COVID-19 threat is associated with both pro- and anti-immigrant attitudes. *International Review of Social Psychology*, *34*(1), 11. https://doi.org/10.5334/irsp.469

Albarello, F., Mula, S., Contu, F., Baldner, C., Kruglanski, A. W., & Pierro, A. (2023). Addressing the effect of concern with COVID-19 threat on prejudice towards immigrants: The sequential mediating role of need for cognitive closure and desire for cultural tightness. *International Journal of Intercultural Relations*, *93*, 101755. https://doi.org/10.1016/j.ijintrel.2023.101755

Allport, G. W., Clark, K., & Pettigrew, T. (1954). The nature of prejudice.

Amodio, D. M., & Ratner, K. G. (2011). A memory systems model of implicit social cognition. Current Directions in Psychological Science, 20(3), 143-148. https://doi.org/10.1177/0963721411408562

Araújo, R. de C. R., Bobowik, M., Vilar, R., Liu, J. H., Gil de Zuñiga, H., Kus-Harbord, L., Lebedeva, N., & Gouveia, V. V. (2020). Human values and ideological beliefs as predictors of attitudes toward immigrants across 20 countries: The country-level moderating role of threat. *European Journal of Social Psychology*, *50*(3), 534–546. https://doi.org/10.1002/ejsp.2635

Bennett, B. (2022, October 23). *Trump compares migrants to an invading army at Texas rally*. Time. https://time.com/6224120/trump-rally-immigration-army-border/

Bizumic, B., & Duckitt, J. (2018). Investigating right wing authoritarianism with a very short authoritarianism scale. *Journal of Social and Political Psychology*, *6*(1), 129–150. https://doi.org/10.5964/jspp.v6i1.835

Blair, I. V. (2013). Implicit stereotypes and prejudice. *Cognitive social psychology*, 354-369.

Blasi, G., & Jost, J. T. (2006). System Justification Theory and Research: Implications for Law, Legal Advocacy, and Social Justice. *California Law Review*, *94*(4), 1119. https://doi.org/10.2307/20439060

Blumer, H. (1958). Race Prejudice as a Sense of Group Position. *The Pacific Sociological Review*, *1*(1), 3–7. https://doi.org/10.2307/1388607

Bodenhausen, G. V., Kramer, G. P., & Süsser, K. (1994). Happiness and stereotypic thinking in social judgment. *Journal of Personality and Social Psychology*, *66*(4), 621–632. https://doi.org/10.1037/0022-3514.66.4.621

Card, D., Chang, S., Becker, C., Mendelsohn, J., Voigt, R., Boustan, L., Abramitzky, R., & Jurafsky, D. (2022). Computational analysis of 140 years of US political speeches reveals more positive but increasingly polarized framing of immigration. *Proceedings of the National Academy of Sciences*, *119*(31), e2120510119. https://doi.org/10.1073/pnas.2120510119

Carothers, T., & O'Donohue, A. (Eds.). (2019). *Democracies divided: The global challenge of political polarization*. Brookings Institution Press.

Christ, O., Schmid, K., Lolliot, S., Swart, H., Stolle, D., Tausch, N., Al Ramiah, A., Wagner, U., Vertovec, S., & Hewstone, M. (2014). Contextual effect of positive intergroup contact on outgroup prejudice. *Proceedings of the National Academy of Sciences*, *111*(11), 3996–4000. https://doi.org/10.1073/pnas.1320901111

Cikara, M., Martinez, J. E., & Lewis Jr, N. A. (2022). Moving beyond social categories by incorporating context in social psychological theory. *Nature Reviews Psychology*, *1*(9), 537-549. https://doi.org/10.1038/s44159-022-00079-3

Coenders, M., Lubbers, M., Scheepers, P., & Verkuyten, M. (2008). More than Two Decades of Changing Ethnic Attitudes in the Netherlands. *Journal of Social Issues*, *64*(2), 269–285. https://doi.org/10.1111/j.1540-4560.2008.00561.x

Cottrell, C. A., & Neuberg, S. L. (2005). Different Emotional Reactions to Different Groups: A Sociofunctional Threat-Based Approach to "Prejudice". *Journal of Personality and Social Psychology*, *88*(5), 770–789. https://doi.org/10.1037/0022-3514.88.5.770

Cottrell, C. A., Richards, D. A. R., & Nichols, A. L. (2010). Predicting policy attitudes from general prejudice versus specific intergroup emotions. *Journal of Experimental Social Psychology*, *46*(2), 247–254. https://doi.org/10.1016/j.jesp.2009.10.008

Cuesta, J., & Pico, J. (2020). The Gendered Poverty Effects of the COVID-19 Pandemic in Colombia. *The European Journal of Development Research*, *32*(5), 1558–1591. https://doi.org/10.1057/s41287-020-00328-2

De Coninck, D., Duque, M., Schwartz, S. J., & d'Haenens, L. (2021). Public attitudes towards immigration, news and social media exposure, and political attitudes from a cross-cultural perspective: Data from seven European countries, the United States, and Colombia. *Data in Brief*, *39*, 107548. https://doi.org/10.1016/j.dib.2021.107548

De Coninck, D., Van Assche, J., & D'Haenens, L. (2022). Right-Wing Authoritarianism and Social Dominance Orientation as Mediators Between News Media Consumption and Perceived Migrant Threat. *Mass Communication and Society*, 1–24. https://doi.org/10.1080/15205436.2022.2144746

Demirtaş-Madran, H. A. (2020). Exploring the Motivation Behind Discrimination and Stigmatization Related to COVID-19: A Social Psychological Discussion Based on the Main Theoretical Explanations. *Frontiers in Psychology*, *11*, 569528. https://doi.org/10.3389/fpsyg.2020.569528

Dennison, J., & Dražanová, L. (2018). *Public attitude on migrations: Rethinking how people perceive migration.* International Center for Migration Policy Development. https://www.icmpd.org/file/download/48432/file/Public0attitudes0on0migration_0rethinking0how0people0perceive0migration0EN.pdf

Dhanani, L. Y., & Franz, B. (2021). Why public health framing matters: An experimental study of the effects of COVID-19 framing on prejudice and xenophobia in the United States. *Social Science & Medicine*, *269*, 113572. https://doi.org/10.1016/j.socscimed.2020.113572

Dimock, M. (2016, July 5). *Global Migration's Rapid Rise*. The Pew Charitable Trusts. https://www.pewtrusts.org/en/trend/archive/summer-2016/global-migrations-rapid-rise

Dovidio, J. F., Love, A., Schellhaas, F. M., & Hewstone, M. (2017). Reducing intergroup bias through intergroup contact: Twenty years of progress and future directions. Group Processes & Intergroup Relations, 20(5), 606-620. https://doi.org/10.1177/1368430217712052

Eagly, A. H., & Chaiken, S. (1998). Attitude structure and function. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 269–322). McGraw-Hill.

Enos R. D. (2014). Causal effect of intergroup contact on exclusionary attitudes. *Proceedings of the National Academy of Sciences of the United States of America*, *111*(10), 3699–3704. https://doi-10.1073/pnas.1317670111

Gessler, T., Tóth, G., & Wachs, J. (2022). No Country for Asylum Seekers? How Short-Term Exposure to Refugees Influences Attitudes and Voting Behavior in Hungary. *Political Behavior*, *44*(4), 1813–1841. https://doi.org/10.1007/s11109-021-09682-1

Hagiwara, N., Kron, F. W., Scerbo, M. W., & Watson, G. S. (2020). A call for grounding implicit bias training in clinical and translational frameworks. *The Lancet*, *395*(10234), 1457-1460. https://doi.org/10.1016/S0140-6736(20)30846-1

Halperin, E., & Gross, J. J. (2011). Emotion regulation in violent conflict: Reappraisal, hope, and support for humanitarian aid to the opponent in wartime. *Cognition and Emotion*, *25*(7), 1228–1236. https://doi.org/10.1080/02699931.2010.536081

Hartman, T. K., Stocks, T. V. A., McKay, R., Gibson-Miller, J., Levita, L., Martinez, A. P., Mason, L., McBride, O., Murphy, J., Shevlin, M., Bennett, K. M., Hyland, P., Karatzias, T., Vallières, F., & Bentall, R. P. (2021). The Authoritarian Dynamic During the COVID-19 Pandemic: Effects on Nationalism and Anti-Immigrant Sentiment. *Social Psychological and Personality Science*, *12*(7), 1274–1285. https://doi.org/10.1177/1948550620978023

Huntsinger, J. R., Sinclair, S., Dunn, E., & Clore, G. L. (2010). Affective Regulation of Stereotype Activation: It's the (Accessible) Thought That Counts. *Personality and Social Psychology Bulletin*, *36*(4), 564–577. https://doi.org/10.1177/0146167210363404

Ho, A. K., Sidanius, J., Kteily, N., Sheehy-Skeffington, J., Pratto, F., Henkel, K. E., Foels, R., & Stewart, A. L. (2015). The nature of social dominance orientation: Theorizing and measuring preferences for intergroup inequality using the new SDO_7 scale. *Journal of Personality and Social Psychology*, *109*(6), 1003–1028. https://doi.org/10.1037/pspi0000033

Inzlicht, M., Tullett, A. M., & Gutsell, J. N. (2012). Stereotype threat spillover: The short- and long-term effects of coping with threats to social identity. In M. Inzlicht & T. Schmader (Eds.), *Stereotype threat: Theory, process, and application* (pp. 107–123). Oxford University Press.

Jedwab, R., Khan, A. M., Russ, J., & Zaveri, E. D. (2021). Epidemics, pandemics, and social conflict: Lessons from the past and possible scenarios for COVID-19. *World Development*, *147*, 105629. https://doi.org/10.1016/j.worlddev.2021.105629

Kachanoff, F. J., Bigman, Y. E., Kapsaskis, K., & Gray, K. (2021). Measuring Realistic and Symbolic Threats of COVID-19 and Their Unique Impacts on Well-Being and Adherence to Public Health Behaviors. *Social Psychological and Personality Science*, *12*(5), 603–616. https://doi.org/10.1177/1948550620931634

Kauff, M., Asbrock, F., Wagner, U., Pettigrew, T. F., Hewstone, M., Schäfer, S. J., & Christ, O. (2017). (Bad) Feelings about Meeting Them? Episodic and Chronic Intergroup Emotions Associated with Positive and Negative Intergroup Contact As Predictors of Intergroup Behavior. *Frontiers in Psychology*, *8*, 1449. https://doi.org/10.3389/fpsyg.2017.01449

Kauff, M., Beneda, M., Paolini, S., Bilewicz, M., Kotzur, P., O'Donnell, A. W., Stevenson, C., Wagner, U., & Christ, O. (2021). How do we get people into contact? Predictors of intergroup contact and drivers of contact seeking. *Journal of Social Issues*, *77*(1), 38–63. https://doi.org/10.1111/josi.12398

Kende, A., & Krekó, P. (2020). Xenophobia, prejudice, and right-wing populism in East-Central Europe. *Current Opinion in Behavioral Sciences*, *34*, 29–33. https://doi.org/10.1016/j.cobeha.2019.11.011

Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford publications.

Koenig, A. M., & Eagly, A. H. (2019). Typical Roles and Intergroup Relations Shape Stereotypes: How Understanding Social Structure Clarifies the Origins of Stereotype Content. *Social Psychology Quarterly*, *82*(2), 205–230. https://doi.org/10.1177/0190272519850766

Kreichauf, R. (2021). Forced migration and legal-spatial violence in the United States and Germany. *Political Geography*, *87*, 102371. https://doi.org/10.1016/j.polgeo.2021.102371

Kunda, Z., & Spencer, S. J. (2003). When do stereotypes come to mind and when do they color judgment? A goal-based theoretical framework for stereotype activation and application. *Psychological Bulletin*, *129*(4), 522–544. https://doi.org/10.1037/0033-2909.129.4.522

Lambert, A. J., Khan, S. R., Lickel, B. A., & Fricke, K. (1997). Mood and the correction of positive versus negative stereotypes. *Journal of Personality and Social Psychology*, *72*(5), 1002–1016. https://doi.org/10.1037/0022-3514.72.5.1002

Laurence, J., & Bentley, L. (2018). Countervailing contact: Community ethnic diversity, anti-immigrant attitudes and mediating pathways of positive and negative inter-ethnic contact in European societies. *Social Science Research*, *69*, 83–110. doi:10.1016/j.ssresearch.2017.09.007.

Lerner, J. S., Gonzalez, R. M., Small, D. A., & Fischhoff, B. (2003). Effects of Fear and Anger on Perceived Risks of Terrorism: A National Field Experiment. *Psychological Science*, *14*(2), 144–150. https://doi.org/10.1111/1467-9280.01433

Levine, R. A., & Campbell, D. T. (1972). Realistic group conflict theory. *Ethnocentrism: Theories of Conflict, Ethnic Attitudes and Group Behavior* (pp. 29-43). John Wiley&Sons, Inc.

Levin, S., Pratto, F., Matthews, M., Sidanius, J., & Kteily, N. (2013). A dual process approach to understanding prejudice toward Americans in Lebanon: An extension to intergroup threat perceptions and emotions. *Group Processes & Intergroup Relations*, *16*(2), 139–158. https://doi.org/10.1177/1368430212443866

Lin, S. (2022). COVID-19 Pandemic and Im/migrants' Elevated Health Concerns in Canada: Vaccine Hesitancy, Anticipated Stigma, and Risk Perception of Accessing Care. *Journal of Immigrant and Minority Health*, *24*(4), 896–908. https://doi.org/10.1007/s10903-022-01337-5

Lippman, W. (1992). *Public Opinion.* New York, NY: Harcourt, Brace and Company.

Lüders, A., Jonas, E., Fritsche, I., & Agroskin, D. (2016). Between the Lines of Us and Them: Identity Threat, Anxious Uncertainty, and Reactive In-Group Affirmation: How Can Antisocial

Outcomes be Prevented? In S. McKeown, R. Haji, & N. Ferguson (Eds.), *Understanding Peace and Conflict Through Social Identity Theory* (pp. 33–53). Springer International Publishing. https://doi.org/10.1007/978-3-319-29869-6_3

M., Maunder, R., Sanchez, K., Thai, M., McKeown, S., Turner, R. N., & Stevenson, C. (2021). Intimate intergroup contact across the lifespan. *Journal of Social Issues*, *77*(1), 64-85. https://doi.org/10.1111/josi.12399

Mackie, D. M., Maitner, A. T., & Smith, E. R. (2016). Intergroup emotions theory. In T. D. Nelson (Ed.), *Handbook of prejudice, stereotyping, and discrimination* (pp. 149–174). Psychology Press.

Madeira, A. F., Pereira, C. R., Gama, A., & Dias, S. (2018). Justifying treatment bias: The legitimizing role of threat perception and immigrant-provider contact in healthcare. *Cultural Diversity & Ethnic Minority Psychology*, *24*(2), 294–301. https://doi.org/10.1037/cdp0000187

Maitner, A. T., Smith, E. R., & MacKie, D. M. (2016). Intergroup Emotions Theory: Prejudice and Differentiated Emotional Reactions toward Outgroups. In C. G. Sibley & F. K. Barlow (Eds.), *The Cambridge Handbook of the Psychology of Prejudice* (1st ed.; pp. 111–130). Cambridge University Press. https://doi.org/10.1017/9781316161579.006

Matthews, M., & Levin, S. (2012). Testing a dual process model of prejudice: Assessment of group threat perceptions and emotions. *Motivation and Emotion*, *36*(4), 564–574. https://doi.org/10.1007/s11031-012-9280-y

Miller, D. A., Smith, E. R., & Mackie, D. M. (2004). Effects of Intergroup Contact and Political Predispositions on Prejudice: Role of Intergroup Emotions. *Group Processes & Intergroup Relations*, *7*(3), 221–237. https://doi.org/10.1177/1368430204046109

Muis, Q., & Reeskens, T. (2022). Are we in this together? Changes in anti-immigrant sentiments during the COVID-19 pandemic. *International Journal of Intercultural Relations*, *86*, 203–216. https://doi.org/10.1016/j.ijintrel.2021.12.006

Mula, S., Di Santo, D., Resta, E., Bakhtiari, F., Baldner, C., Molinario, E., Pierro, A., Gelfand, M. J., Denison, E., Agostini, M., Bélanger, J. J., Gützkow, B., Kreienkamp, J., Abakoumkin, G., Abdul Khaiyom, J. H., Ahmedi, V., Akkas, H., Almenara, C. A., Atta, M., … Leander, N. P. (2022). Concern with COVID-19 pandemic threat and attitudes towards immigrants: The mediating effect of the desire for tightness. *Current Research in Ecological and Social Psychology*, *3*, 100028. https://doi.org/10.1016/j.cresp.2021.100028

~~Onyeador, I. N., Hudson, S. K. T., & Lewis Jr, N. A. (2021). Moving beyond implicit bias training: Policy insights for increasing organizational diversity. *Policy Insights from the Behavioral and Brain Sciences*, 8(1), 19-26. https://doi.org/10.1177/2372732220983840~~

Paolini, S., White, F. A., Tropp, L. R., Turner, R. N., Page-Gould, E., Barlow, F. K., & Gómez, Á. (2021). Intergroup contact research in the 21st century: Lessons learned and forward progress if we remain open. *Journal of Social Issues*, *77*(1), 11-37.https://doi.org/ 10.1111/josi.12427

Parmet, W. E., & Sinha, M. S. (2017). A panic foretold: Ebola in the United States. *Critical Public Health*, *27*(1), 148–155. https://doi.org/10.1080/09581596.2016.1159285

Phills, C. E., Hahn, A., & Gawronski, B. (2020). The bidirectional causal relation between implicit stereotypes and implicit prejudice. *Personality and Social Psychology Bulletin*, *46*(9), 1318-1330. https://doi.org/10.1177/0146167219899234

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of personality and social psychology*, *90*(5), 751–783. https://doi.org/10.1037/0022-3514.90.5.751

Rozo, S. V., & Vargas, J. F. (2021). Brothers or invaders? How crisis-driven migrants shape voting behavior. *Journal of Development Economics*, *150*, 102636. https://doi.org/10.1016/j.jdeveco.2021.102636

Rudolph, U., Roesch, S., Greitemeyer, T., & Weiner, B. (2004). A meta-analytic review of help giving and aggression from an attributional perspective: Contributions to a general theory of motivation. *Cognition & Emotion*, *18*(6), 815–848. https://doi.org/10.1080/02699930341000248

Salas-Wright, C. P., Maldonado-Molina, M. M., Pérez-Gómez, A., Trujillo, J. M., & Schwartz, S. J. (2022). The Venezuelan diaspora: Migration-related experiences and mental health. *Current Opinion in Psychology*, *47*, 101430. https://doi.org/10.1016/j.copsyc.2022.101430

Schmuck, D., & Matthes, J. (2015). How Anti-immigrant Right-wing Populist Advertisements Affect Young Voters: Symbolic Threats, Economic Threats and the Moderating Role of Education. *Journal of Ethnic and Migration Studies*, *41*(10), 1577–1599. https://doi.org/10.1080/1369183X.2014.981513

Schwartz, N., & Clore, G. (2006). Feelings and Phenomenal Experiences. In A. Kruglanski & T. Higgins (Eds), *Social Psychology Handbook of basic principles* (2nd ed.; pp 385-407). New York, NY: Guilford.

Schwartz, S. J., Salas-Wright, C. P., Cobb, C. L., Zeledon, I., Duque, M., Stuart, J., Montero-Zamora, P., Perazzo, P. A., Scaramutti, C., & Ozer, S. (in press). Examining the lives of youth from immigrant families: Identity, cultural stress, and crisis migration. In G. A. D. Liem & D. McInerney (Eds), *Research on sociocultural influences on motivation and learning* (14th ed.). Charlotte, NC: Information Age Publishing.

Schwartz, S. J., Salas-Wright, C. P., Pérez-Gómez, A., Mejía-Trujillo, J., Brown, E. C., Montero-Zamora, P., Meca, A., Scaramutti, C., Soares, M. H., Vos, S. R., Javakhishvili, N., & Dickson-

Gomez, J. (2018). Cultural stress and psychological symptoms in recent Venezuelan immigrants to the United States and Colombia. *International Journal of Intercultural Relations*, *67*, 25–34. https://doi.org/10.1016/j.ijintrel.2018.09.001

Seger, C. R., Banerji, I., Park, S. H., Smith, E. R., & Mackie, D. M. (2017). Specific emotions as mediators of the effect of intergroup contact on prejudice: Findings across multiple participant and target groups. *Cognition and Emotion*, *31*(5), 923–936. https://doi.org/10.1080/02699931.2016.1182893

Selee, A., & Bolter, J. (2022). Colombia's open-door policy: An innovative approach to displacement? *International Migration*, *60*(1), 113–131. https://doi.org/10.1111/imig.12839

Sidanius, J., & Pratto, F. (1993). The inevitability of oppression and the dynamics of social dominance. In P. M. Sniderman, P. E. Tetlock, & E. G. Carmines (Eds.), *Prejudice, politics, and the American dilemma* (pp. 173–211). Stanford University Press.

Smith, E. & Mackie, D. (2016). It's about time: Intergroup emotions as time-dependent phenomena. In R. Brown & D. Capozza (Eds.), *Social Identities (*pp. 173-188). Psychology Press. https://doi.org/10.4324/9780203002971

Spruyt, B., Keppens, G., & Van Droogenbroeck, F. (2016). *Who* Supports Populism and *What* Attracts People to It? *Political Research Quarterly*, *69*(2), 335–346. https://doi.org/10.1177/1065912916639138

Stephan, W. G., Stephan, C. W. (2000). An integrated threat theory of prejudice. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 23–45). Lawrence Erlbaum Associates Publishers.

Stephan, W. G., Stephan, C. W., & Stephan, C. W. (1996). *Intergroup relations*. Westview Press.

Stephan, W. G., & Stephan, C. W. (1996). Predicting prejudice. *International Journal of Intercultural Relations*, *20*(3–4), 409–426. https://doi.org/10.1016/0147-1767(96)00026-0

Stephan, W. G., Ybarra, O., & Bachman, G. (1999). Prejudice Toward Immigrants1. *Journal of Applied Social Psychology*, *29*(11), 2221–2237. https://doi.org/10.1111/j.1559-1816.1999.tb00107.x

Stephan, W. G., Ybarra, O., & Morrison, K. R. (2009). Intergroup threat theory. In T. D. Nelson (Ed.), *Handbook of prejudice, stereotyping, and discrimination* (pp. 43–59). Psychology Press.

Tabellini, M. (2020). Gifts of the Immigrants, Woes of the Natives: Lessons from the Age of Mass Migration. *The Review of Economic Studies*, *87*(1), 454–486. https://doi.org/10.1093/restud/rdz027

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin, & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-37). Monterey, CA: Brooks/Cole.

Tajfel, H., & Turner, J. C. (2004). The Social Identity Theory of Intergroup Behavior. In J. T. Jost & J. Sidanius (Eds.), *Political Psychology* (0 ed., pp. 276–293). Psychology Press. https://doi.org/10.4324/9780203505984-16

Thravalou, E., Martinovic, B., & Verkuyten, M. (2021). Humanitarian Assistance and Permanent Settlement of Asylum Seekers in Greece: The Role of Sympathy, Perceived Threat, and Perceived Contribution. *International Migration Review*, *55*(2), 547–573. https://doi.org/10.1177/0197918320949826

United Nations. (2022, December 17). *International migrants day: 280 million people leave home for 'A better life'*. https://news.un.org/en/story/2022/12/1131822

U.S. Customs and Border Protection. (2022, February 10). *Southwest Land Border Encounters.* https://www.cbp.gov/newsroom/stats/southwest-land-border-encounters

Valenzuela, M. A., & Schwartz, S. J. (2023). Acculturation spillovers between work and nonwork settings. *Journal of International Management*. https://doi.org/10.1016/j.intman.2023.101013

Van Daalen, K. R., Cobain, M., Franco, O. H., & Chowdhury, R. (2021). Stigma: The social virus spreading faster than COVID-19. *Journal of Epidemiology and Community Health*, *75*(4), 313–314. https://doi.org/10.1136/jech-2020-214436

Van Prooijen, J.-W., Krouwel, A. P. M., Boiten, M., & Eendebak, L. (2015). Fear Among the Extremes: How Political Ideology Predicts Negative Emotions and Outgroup Derogation. *Personality and Social Psychology Bulletin*, *41*(4), 485–497. https://doi.org/10.1177/0146167215569706

Velasco González, K., Verkuyten, M., Weesie, J., & Poppe, E. (2008). Prejudice towards Muslims in The Netherlands: Testing integrated threat theory. *British Journal of Social Psychology*, *47*(4), 667–685. https://doi.org/10.1348/014466608X284443

Visintin, E. P., Green, E. G. T., Pereira, A., & Miteva, P. (2017). How positive and negative contact relate to attitudes towards Roma: Comparing majority and high-status minority perspectives. *Journal of Community & Applied Social Psychology*, *27*(3), 240–252. https://doi.org/10.1002/casp.2309

Wamsler, S., Freitag, M., Erhardt, J., & Filsinger, M. (2022). The pandemic and the question of national belonging: Exposure to covid-19 threat and conceptions of nationhood. *European Journal of Political Research*, 1475-6765.12515. https://doi.org/10.1111/1475-6765.12515

Wang, C., Cocco, V. M., & Vezzali, L. (2022). Testing the association of positive and negative extended contact with intergroup contact intentions in China: The mediating role of intergroup anger, empathy, and happiness. *Journal of Applied Social Psychology*, *52*(5), 305–315. https://doi.org/10.1111/jasp.12860

Yerly, G. (2022). RIGHT-WING Populist Parties' Bordering Narratives in Times of Crisis: ANTI-IMMIGRATION Discourse in the Genevan Borderland during the COVID -19 Pandemic. *Swiss Political Science Review*, *28*(4), 675–695. https://doi.org/10.1111/spsr.12516

Yzerbyt, V. (2016). Intergroup stereotyping. *Current Opinion in Psychology*, *11*, 90–95. https://doi.org/10.1016/j.copsyc.2016.06.009

Figure 1. Mediation model

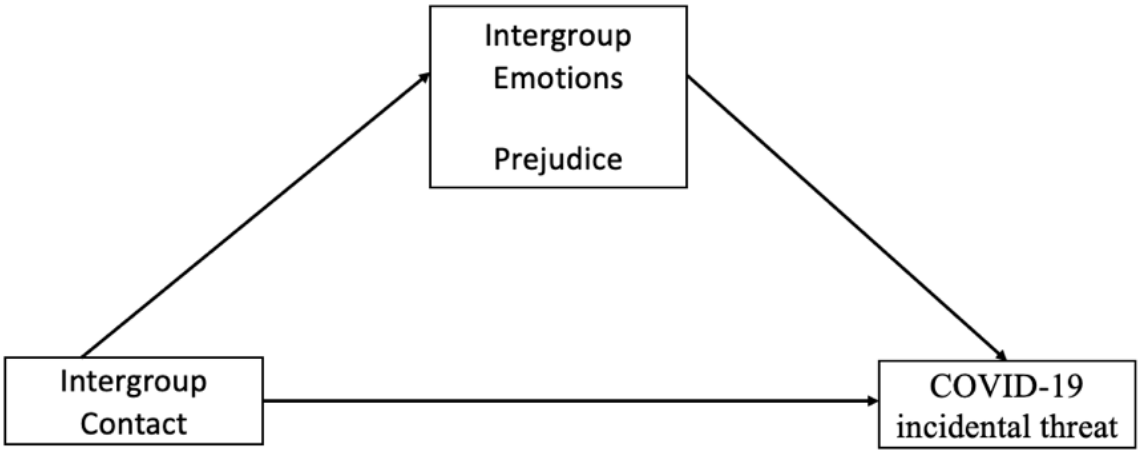

Table 1. Age and Gender Distribution of the Sample (N = 13,645)

	Austria	Belgium	Colombia	Germany	Hungary	Italy	Spain	Sweden	U.S.
In %									
Gender									
Male	50.6	48.1	43.3	49.0	46.5	48.8	50.5	50.3	51.8
Female	49.4	51.9	56.7	51.0	53.5	51.2	49.5	49.7	48.2
Age									

Table 1. Age and Gender Distribution of the Sample (N = 13,645)

	Austria	Belgium	Colombia	Germany	Hungary	Italy	Spain	Sweden	U.S.
In %									
Gender									
Male	50.6	48.1	43.3	49.0	46.5	48.8	50.5	50.3	51.8
Female	49.4	51.9	56.7	51.0	53.5	51.2	49.5	49.7	48.2
Age									
Under 30 years	12.2	9.0	33.8	9.7	8.9	6.6	8.7	10.1	13.1
Between 30 and 45 years	42.1	39.0	41.3	41.2	45.8	40.6	44.6	41.9	43.3
Between 45 and 60 years	35.7	40.4	19.8	38.4	34.4	42.2	37.2	38.7	22.0
Over 60 years	10.0	11.6	5.1	10.7	10.9	10.6	9.5	9.4	21.6
N	1,520	1,505	1,543	1,521	1,514	1,510	1,512	1,517	1,503
Cooperation rate (in %)	23	22	19	22	31	19	16	12	17

Table 2. Correlations Among Study Variables

Variable	Casual Contact	Valance	RWA	SDO	Populism	Ideo	Anger	Fear	Hope	Sympathy	Disgust	Happiness	Prejudice	Symbolic Threat	Realistic Threat
Contact															
Frequency	.63	.32	-.07	-.01	-.01	.06	.07	.04	.22	.20	.07	.03	.19	.07	.08
# Friends	-------	.42	.02	.11	-.10	.07	.11	.07	.34	.29	.14	.41	.31	.14	.08
Quality		-------	-.18	-.24	-.02	-.15	-.24	-.22	.47	.50	-.24	.46	.49	-.09	.07
Political															
RWA			-------	.34	-.03	.35	.26	.26	-.06	-.11	.25	-.04	-.12	.21	.11
SDO				-------	-.17	.39	.36	.30	-.14	-.22	.43	-.07	-.18	.21	-.08
Populism					-------	-.01	.03	.05	-.12	-.05	-.03	-.14	-.08	.12	.16
Ideology						-----	.33	.31	-0.13	-.16	.35	-.08	-.16	.24	.05
Emotions															
Anger							-------	.62	-.09	-.15	.69	-.05	-.27	.33	.14
Fear								------	-.09	-.12	.58	-.07	-.26	.33	.18
Hope									-------	.69	-.09	.75	.54	.00	.08
Sympathy										-------	-.19	.65	.53	-.03	.13
Disgust											-------	-.02	-.28	.31	.06
Happiness												-------	.56	-.05	.08
Prejudice													-------	-.06	.06
COVID															
Threat															
Symbolic														-------	.54
Realistic															-------

Note: RWA = Right-Wing Authoritarianism; SDO = Social Dominance Orientation. Correlations ≥ .20 are italicized. All values above .03 are significant at $p < .001$.

Table 3. Standardized Path Coefficients Predicting Intergroup Emotions

Predictor	Anger	Fear	Disgust	Happiness	Hope	Sympathy
Contact						
Frequency	.06***	.05***	.04***	.01	.01	.03**
# Friends	.17***	.14***	.19***	.19***	.13***	.09***
Quality	-.17***	-.13***	-.16***	.17***	.20***	.25***
Prejudice						
Prejudice	-.20***	-.18***	-.21***	.36***	.35***	.34***
Political Controls						
Ideology	.15***	.15***	.13***	-.04***	-.06***	-.06***
RWA	.08***	.13***	.06***	.02**	.03***	.01
SDO	.18***	.12***	.24***	.00	-.05***	-.11***
Populism	.06***	.07***	.03***	-.08***	-.08***	-.03***
Country Controls						
Austria	-.02*	.01	.01	.01	-.01	-.07***
Germany	-.03**	-.01	.01	.03***	.01	-.04***
Spain	.04***	.01	-.03**	.04***	.04***	-.01
Italy	.05***	.02	.01	.01	.07***	.10***
Hungary	-.01	.02	.02	-.01	.03**	.09***
Sweden	.00	-.01	.01	.02*	-.02*	-.02*

United States	.10***	.05***	.15***	.14***	.11***	.07***
Colombia	.03**	-.03*	-.07***	.08***	.03**	.05***
Demographic Control						
Age	-.04***	-.03***	-.08***	-.07***	-.03***	-.04***
College Graduate	-.03**	-.01*	-.03***	-.00	.02*	.02**
Sex	.01	.06***	-.02**	.01	.01	.04***
1st Generation Migrant	-.04***	-.04***	-.02**	.01	.01	.01
2nd Generation Migrant	-.03***	-.04***	-.03***	.01	.01	-.01

* p < .05; ** p < .01; *** p < .001.

RWA = Right-Wing Authoritarianism; SDO = Social Dominance Orientation.

Belgium is the reference category for the country controls, and native born with native born parents is the reference group for the 1st and 2nd generation migrant categories.

Table 4. Standardized Path Coefficients Predicting COVID-19 Threat Perceptions

Predictor	COVID-19 Symbolic Threat	COVID-19 Realistic Threat
Emotions		
Anger	.10***	.06***
Fear	.15***	.18***
Disgust	.10***	-.01
Hope	-.01*	-.01
Sympathy	.00	.10***
Happiness	.07***	-.02
Prejudice		
Prejudice	.01	.02*
Political Controls		
Ideology	.08***	.03**
RWA	.07***	.05***
SDO	.07***	-.12***
Populism	.14***	.14***
Country Controls		
Austria	.02	-.08***
Germany	-.03*	-.07***
Spain	-.03**	.08***

Italy	-.01*	.02*
Hungary	-.07***	-.06***
Sweden	-.08***	-.05***
United States	.03**	-.01
Colombia	.09***	.21***
Demographic Controls		
Age	-.04***	-.05***
College Graduate	-.03**	.01
Sex	.02**	.04***
1st Generation Migrant	.01	.01
2nd Generation Migrant	-.01	-.01

* $p < .05$; ** $p < .01$; *** $p < .001$.

Belgium is the reference category for the country controls, and native born with native born parents is the reference group for the 1st and 2nd generation migrant categories.

Table 5. Significant Indirect Effects

Predictor	Mediator	Outcome	β	95% CI
# Friends	Fear	COVID Realistic Threat	.025	.020 to .030
# Friends	Anger	COVID Realistic Threat	.010	.006 to .014
# Friends	Fear	COVID Symbolic Threat	.021	. 016 to .026
# Friends	Anger	COVID Symbolic Threat	.017	.012 to .021
# Friends	Disgust	COVID Symbolic Threat	.019	.013 to .024
# Friends	Happiness	COVID Symbolic Threat	.013	.008 to .018
Quality	Anger	COVID Realistic Threat	-.010	-.014 to -.006
Quality	Fear	COVID Realistic Threat	-.024	-.029 to -.019
Quality	Sympathy	COVID Realistic Threat	.024	. 019 to .029
Quality	Anger	COVID Symbolic Threat	-.016	-. 021 to -.012
Quality	Disgust	COVID Symbolic Threat	-.016	-. 020 to -.011
Quality	Happiness	COVID Symbolic Threat	.012	.008 to .017
Quality	Fear	COVID Symbolic Threat	-.020	-. 025 to -.016
Quality	Sympathy	COVID Symbolic Threat	.022	. 017 to .026

Note: All findings in this table are significant at $p < .001$.

Note: Because the values in this table are all below .03, these values are presented to 3 decimal places for increased accuracy.