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Muis, Quita; Reeskens, Tim

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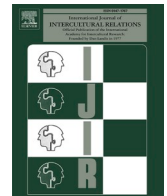
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# Are we in this together? Changes in anti-immigrant sentiments during the COVID-19 pandemic

Quita Muis<sup>\*</sup>, Tim Reeskens

Department of Sociology, Tilburg School of Social and Behavioral Sciences, Tilburg University, PO Box 90153, 5000 LE Tilburg, Netherlands

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## ABSTRACT

The COVID-19 pandemic is posing a threat to people all across the globe. According to traditional literature, threat perceptions induce anti-immigrant sentiments, as ingroup identity and self-interest are strengthened at the expense of the outgroup. In this study, we investigate whether the COVID-19 pandemic indeed increases anti-immigrant sentiments, or that this type of threat elicits other or no group related responses. We also look at whether such responses are expressed more strongly among specific subgroups in Dutch society. To do so, we use unique longitudinal panel data based on the European Values Study 2017, with a repeated measure in May 2020, during the national 'intelligent lockdown' in the Netherlands. Based on structural equation modeling, we demonstrate that anti-immigrant sentiments have not increased due to (perceived threat of) the COVID-19 pandemic. In fact, negative opinions towards immigrants decreased between 2017 and 2020 in the Netherlands, for which we provide alternative explanations. Although some subgroups do experience more threat than others due to the coronavirus, such as women, first generation immigrants, and the elderly, this does not lead to more negative feelings towards outgroups. Whether this is due to the fact that individuals feel threatened by everyone, regardless of group membership, should be explored in future research.

## Introduction

The COVID-19 pandemic that affected all corners of the world confronted many with unknown insecurities. A common reaction to such threat is a (temporal) reliance on the ingroup. Existing research proposes that increases in ingroup love due to existential threats go at the expense of love for the outgroup, leading to stronger anti-immigrant sentiments (Blumer, 1958; Bobo, 1983; Pettigrew, Fredrickson & Glazer, 1982; Quillian, 1995). Increases in such sentiments have been reported for previous crises in which economic or social order was disrupted, such as economic crises (Billiet, Meuleman, & De Witte, 2014), natural disasters (Vezzali, Andrighetto, Drury, Di Bernardo & Cadamuro, 2017), and terrorist attacks (Echebarria-Echabe & Fernández-Guede, 2006). Initial media responses to the looming COVID-19 pandemic in Western societies, such as "Chinese virus pandemonium", "China kids stay home" and "China is the real sick man of Asia" (Wen, Aston, Liu & Ying, 2020, p. 332), suggest that a similar mechanism might be at play for health crises as well. Such discriminatory responses are namely typical to perceived threat, as they indicate that *they* are responsible for the imminent threat posed to *us* (Allport, 1954).

Traditionally, scholars distinguish between two main types of threat that induce negative feelings towards outgroups, namely realistic threat (i.e. loss of welfare) and symbolic threat (i.e. loss of cultural hegemony) (Bobo, 1983; Kinder & Sears, 1981; Stephan,

<sup>\*</sup> Corresponding author.

E-mail addresses: [Q.Muis@tilburguniversity.edu](mailto:Q.Muis@tilburguniversity.edu) (Q. Muis), [T.Reeskens@tilburguniversity.edu](mailto:T.Reeskens@tilburguniversity.edu) (T. Reeskens).

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Ybarra, & Morrison, 2009). These threats relate to the perception that the interests of the majority and minority groups are in zero-sum conflict: gains for the outgroup would imply losses for the ingroup (Quillian, 1995). Yet, in case of the COVID-19 pandemic, such in- and outgroup differentiation is less clear-cut, as the threat was soon posed universally by *everyone* towards *everyone*. This could either imply that every individual is perceived as a threat or competitor, or that our shared fate is creating a sense of global collectiveness (Adam-Troian & Bagci, 2021; Van Bavel et al., 2020). These different implications raise the question whether threat, and perceptions thereof, caused by the COVID-19 pandemic induce in- and outgroup differentiation as described in traditional literature or whether other mechanisms are at play.

Applied to the pandemic, we propose three alternative theories that all lead to different expectations regarding the relationship between threat perceptions and changes in anti-immigrant sentiments. According to the Epidemic Psychology Model (Strong, 1990), the coronavirus crisis could trigger the perception that every person individually is a potential threat, leading to no increases in negative outgroup affect specifically. The Common Ingroup Identity Model (Gaertner & Dovidio, 2000) suggests a decrease in anti-immigrant sentiments during the pandemic, because all are fighting the same threat, leading to identification with a common ingroup. Lastly, we use the traditional Realistic Group Conflict Theory (LeVine & Campbell, 1972; Sherif, 1966) to argue that the threatening competition over scarce resources following the pandemic could increase anti-immigrant sentiments.

In addition, we investigate among which groups threat perceptions and potential changes in anti-immigrant sentiments are most pronounced. The socio-demographics best predicting anti-immigrant sentiments in ‘normal’ circumstances seem to be similar to the socio-demographic groups that are most strongly affected by the coronavirus, such as the elderly, men, and people with a lower socio-economic status (Braveman, Cubbin, Egerter, Williams & Pamuk, 2010; RIVM, 2020a). These groups are thus expected to perceive the most threat due to the pandemic.

In this manuscript, we will examine individual changes in anti-immigrant sentiments before and during the pandemic. We focus on whether some groups are experiencing stronger threat due to the coronavirus, and whether this has caused within-individual changes in anti-immigrant sentiments during the crisis. To do so, we use unique panel data collected during the first wave of the pandemic in the Netherlands (May 2020), when the national ‘intelligent lockdown’ was still in effect, but measures were announced to be eased slowly (Dutch Government, 2020a). These panel data supplement the European Values Study 2017 and are representative of the Dutch population. Compared to other studies that address a similar research question (e.g. Adam-Troian & Bagci, 2021; Sorokowski et al., 2020; Tabri, Hollingshead & Wohl., 2020), this study is unique due to the availability of a ‘pre-test’, which enables us to approach this question from a longitudinal perspective.

## Literature review

### *Explaining anti-immigrant sentiments in pandemic times*

A common framework to understand negative outgroup affect is the Intergroup Threat Theory (ITT) (Stephan et al., 2009). According to ITT, anti-immigrant sentiments result from experienced group threat: the perception that an outgroup could possibly harm (the position of) an ingroup (Blumer, 1958; Pettigrew et al., 1982; Quillian, 1995). There are two main types of threat that induce this kind of affect (Bobo, 1983; Kinder & Sears, 1981; Stephan et al., 2009). First of all, realistic group threat refers to “threats to a group’s power, resources, and general welfare” (Stephan et al., 2009, p. 44). This could also apply to an individual, as a member of a group, for example when an individual’s health, material resources or personal security is threatened. The second type of threat is symbolic threat, including “threats to a group’s religion, values, belief system, ideology, philosophy, morality, or worldview” (Stephan et al., 2009, p. 44). On an individual, group member level, this implies a loss of face, identity or self-esteem. Outgroups that are perceived to be in a position to tangibly or moralistically threaten the ingroup are thus faced with aversion.

The relationship between perceived threat and anti-immigrant sentiments is grounded in the importance of group membership to humans (Stephan et al., 2009). We derive identity and meaning from group membership by defining our place within the social world and creating distinctiveness from others (Tajfel & Turner, 1986). Groups guide us through life by norms, values, and rules, and provide a sense of belonging and security. Consequently, group identity is important to us, and even more so when our group is in danger (Branscombe, Ellemers, Spears & Doosje, 1999; Tajfel & Turner, 1986). Group thinking is enhanced as defense mechanism against threats, and thus leads to more favoritism towards the ingroup and hostility towards the outgroup. Schlueter & Scheepers (2010) show that the positive relationship between perceived threat and anti-outgroup sentiments exists in the Netherlands.

Precisely in the ongoing COVID-19 pandemic, people are threatened in their health and even their existence. Yet, contrary to assumptions of the ITT, the pandemic does not involve clear, distinctive in- and outgroups whereby an outgroup (member) poses a threat to an ingroup (member). Theoretically, this leads to three alternative expectations regarding changes in anti-immigrant sentiments during the pandemic. First of all, the Epidemic Psychology Model proposed by Strong (1990, p. 258) describes the situation of a spreading virus as a potential “war of all against all”. Although “strangers” may be feared above all (ibid., p. 255), suspicion and stigma can rise in everyone towards everyone, because there is an overall lack of knowledge on how, when and by whom the disease is transmitted. In case of a relatively new and unexpected threat – such as the novel coronavirus (WHO, 2020b) – these effects are even more pronounced (Strong, 1990). This could mean that anti-immigrant sentiments are unaffected by the perceived threat caused by the pandemic, since the universality of the threat does not elicit group-specific responses. Therefore, we formulate the following hypotheses:

*Anti-immigrant sentiments have remained stable at the onset of the COVID-19 pandemic (H1a), because perceived threat caused by the pandemic is unrelated to such affect (H2a).*

Secondly, the Common Ingroup Identity Model predicts that if a threat is posed to both (ethnic) in- and outgroups, their shared fate creates a common ingroup identity (Gaertner & Dovidio, 2000). The fact that members of both groups may perceive themselves as belonging to the same endangered group would actually reduce negative outgroup affect (Adam-Troian & Bagci, 2021; Andrighetto, Vezzali, Bergamini, Nadi & Giovannini, 2016; Van Bavel et al., 2020). This is in accordance with several other theories, such as the Social Identity Model of Collective Resilience (Drury, 2012), which predicts more solidarity and ‘togetherness’ in times of disasters, due to newly created shared identities. According to Drury (2012), this resilience stands in sharp contrast with the assumption of human vulnerability from which mass panic can arise, as predicted by the Epidemic Psychology Model of Strong (1990) described above. Instead of approaching the disastrous situation interpersonally, Drury (2012) argues, people shift to an overarching group perspective due to their shared experience. Similarly, the ‘inclusive victimhood’ (Vollhardt & Bilali, 2015) and ‘common enemy’ (De Jaegher, 2021) approaches show that identification with the same (hence, inclusive compared to exclusive) victim consciousness or interaction with the same enemy lead to more group cooperation and unification. Adam-Troian & Bagci (2021) show that these theories also apply to the COVID-19 pandemic, as negative affect towards Syrian refugees has decreased in Turkey, through the creation of a common identity. This leads to the following hypotheses:

*Anti-immigrant sentiments have decreased at the onset of the COVID-19 pandemic (H1b), because perceived threat caused by the pandemic weakens the perception of immigrants as an outgroup (H2b).*

Thirdly, scholarship on anti-immigrant sentiments in times of natural disasters – which are generally not caused by an identifiable group of people – shows that a clear threatened ingroup and threatening outgroup distinction may not be a prerequisite for rising negative outgroup affect. Existential threats posed by natural disasters could still induce anti-immigrant sentiments, even if both the (ethnic) in- and outgroup face the threat (Vezzali et al., 2017). Andrighetto et al. (2016) argue that these sentiments are not rooted in the existential threat posed by the natural disaster (or virus) per se, but in the realistic threat of losing remaining resources and competing for them. This refers to the Realistic Group Conflict Theory: the idea that hostility between groups arises when they have to compete for limited resources (LeVine & Campbell, 1972; Sherif, 1966). In fact, Bobo (1983; 1999) claims that both types of traditional threat (i.e. realistic and symbolic) are related to the same mechanism of intergroup conflict, based on self-interest. The competition over material or symbolic resources poses a threat to the welfare or cultural interests of the involved groups, and hence leads to more anti-immigrant sentiments.

In case of the coronavirus crisis, competition arises over medical resources, including ICU beds (Phua et al., 2020), vaccines or other therapeutics (Pang et al., 2020). Economically, the recession resulting from lockdown measures makes groups compete over financial aid provided by the government (Netherlands Chamber of Commerce, 2020), and this competition over scarce economic resources may intensify when the looming financial crisis does eventually hit (World Bank, 2020). Indeed, research among the Dutch population shows an immense growth in worries about public health (care) and the future of the Dutch economy due to the pandemic (Dekker, den Ridder, Van Houwelingen & Miltenburg, 2020). Reactions to the European Union debate regarding national financial support in the form of ‘corona bonds’ show how conflict over scarce financial resources could increase negative sentiments towards outgroups. Dutch Finance Minister Wopke Hoekstra questioned the budgetary margins of Southern European countries and therefore refused to provide financial support without conditions (Von der Burchard, Oliveira & Schaart, 2020). This stirred up the public debate in the Netherlands, including stereotyping Southern Europeans as lazy and thriftless (Bakker & Van der Ploeg, 2020).

Reviewing empirical research conducted in other countries during the pandemic supports the idea that the coronavirus crisis is likely to have strengthened anti-immigrant sentiments. An experiment among American citizens suggests that people who perceive the coronavirus as existentially threatening hold more negative sentiments towards Chinese people (Tabri et al., 2020). As the first cluster of infected cases was identified in China (WHO, 2020c), its inhabitants could thus by some be perceived as the threatening outgroup. Research conducted in the United Kingdom and Poland suggests that media exposure increases negative feelings towards foreign groups via increased anxiety, particularly towards inhabitants of Italy, the first European country where the initial virus outbreak was extremely severe (Sorokowski et al., 2020). This perception of threat posed by an (ethnic) outgroup can spillover and be projected on other, uninvolved (ethnic) groups (Echebarria-Echabe & Fernández-Guede, 2006), such as the general group of ‘immigrants’ that we are investigating in this study. Such process that links threat perceptions to negative sentiments towards outgroups in general is also embedded in Terror Management Theory (Greenberg, Pyszczynski, & Solomon, 1986); to cope with the threat of death, people strengthen their self-esteem, close relationships, and reliance on shared beliefs, all at the expense of outgroups. The COVID-19 pandemic has raised the salience of mortality, which could thus increase intergroup conflict or general anti-outgroup sentiments (Greenberg & Kosloff, 2008; Pyszczynski, Lockett, Greenberg & Solomon, 2021). Combined, these theoretical and empirical findings lead to the following hypotheses:

*Anti-immigrant sentiments have increased at the onset of the COVID-19 pandemic (H1c), because perceived threat caused by the pandemic strengthens the perception of immigrants as an outgroup (H2c).*

### *Socio-demographics and perceived pandemic threat*

First of all, the Epidemic Psychology Model (Strong, 1990) predicts a ‘war of all against all’ in which no clear distinction is made between those who perceive more or less threat. Strong (1990, p. 253) indicates that “such panic and irrationality can extend even to those who are nominally best informed about the disease”, such as doctors and natural scientists. This leads to the expectation that no significant group differences exist in the level of perceived threat caused by the pandemic:

*Threat perceptions caused by the pandemic are equally prevalent among socio-demographic groups within society (H3a).*

However, according to both the Common Ingroup Identity Model (Gaertner & Dovidio, 2000) and the Realistic Group Conflict Theory (LeVine & Campbell, 1972; Sherif, 1966), the level of perceived threat and its effect on anti-immigrant sentiments are dependent on the position a group has within society (Andrighetto et al., 2016; Blumer, 1958; Bobo, 1999; Gaertner & Dovidio, 2000; Quillian, 1995; Stephan et al., 2009; Tajfel & Turner, 1986). First of all, the creation of a common ingroup identity due to feelings of shared fate primarily occurs among ethnic minority groups (Andrighetto et al., 2016). They feel more connected to others, especially the ethnic majority, when all are victim of the same threat. Obviously, ethnic minorities are already less likely to discriminate against ‘their own ingroup’, although such sentiments are not fully absent in society (e.g. Perlmutter, 2002). Ethnic majority groups, on the other hand, are less likely to emphasize the commonality of the threat and more likely to perceive intergroup conflict in such threatening situations, arguably because they have more to lose in terms of status, power, and resources (Blumer, 1958; Bobo, 1999; Gaertner & Dovidio, 2000; Quillian, 1995; Tajfel & Turner, 1986).<sup>1</sup>

The Realistic Group Conflict Theory further explains that within the (ethnic) majority group, relatively lower status subgroups typically express more anti-immigrant sentiments as they encounter more realistic threat and are more susceptible to symbolic threat (Inglehart & Norris, 2016; Quillian, 1995; Stephan et al., 2009). Generally, (i.e. in non-pandemic times), they are more likely to compete with ethnic minority groups over jobs and other economic resources such as welfare benefits. Due to lower education and often more insecure circumstances during their childhood, they are also socialized into resistance to cultural change (Bobo, 1999; Inglehart & Norris, 2016; Kinder & Sears, 1981). Those who typically express most anti-immigrant sentiments due to strong threat perceptions include older, male natives with a lower socio-economic status (Inglehart & Norris, 2016; Quillian, 1995).

Applying these theories to the COVID-19 pandemic, the coronavirus seems to threaten some people more than others. Increased risk of infection and illness depends on “the conditions in which people live, learn, work, and play” (CDC, 2020), and largely runs along the lines of the well-known socio-demographic indicators of anti-immigrant sentiments mentioned above. For example, symptoms develop more severely among people in bad health (RIVM, 2020a) – which are more often the poor, lower educated, lower classes (e.g. Braveman et al., 2010) – and mortality rates are disproportionately high among older men (RIVM, 2020a). Individuals with a lower socio-economic status are also more likely to occupy ‘essential jobs’ that continued during national lockdown, and they often work in worse conditions which enables the virus to spread more easily (Hammonds & Kerrissey, 2020).<sup>2</sup> According to the same report, protesting against such poor working conditions have resulted in job loss, which increases material insecurity. Lastly, hospitals in the Dutch province of Noord-Brabant, the epicenter of the coronavirus outbreak in the Netherlands, had limited resources to provide medical care to all incoming patients, and therefore asked the national government and other provinces for help (Van den Brink & Van de Klundert, 2020). Overall, these increased health risks, material insecurity, and fear of competing for scarce resources seems to be more prevalent among some social groups than among others. Therefore, we formulate the following hypothesis:

*Threat perceptions caused by the pandemic are most prevalent among natives, men, the elderly, individuals with a lower socio-economic status, and individuals living in Noord-Brabant (H3b).*

Whether these social groups also display more anti-immigrant sentiments due to a mediating role of perceived threat depends on the extent to which hypotheses 1 and 2 will be confirmed or rejected.

## Data and methods

### Data

For this study, we used LISS panel data: a probability-based household panel study, representative of the Dutch population (CentERdata, 2020). The initial data collection was part of the fifth wave of the European Values Study (EVS, 2020; Luijkx et al., 2020), and was gathered online between 1 September 2017 and 31 January 2018. With a response rate of approximately 80%, the first sample consisted of 2053 web-respondents. The second moment of data collection took place between 4 and 26 May 2020, when the Netherlands experienced the first wave of corona cases and hence was in national lockdown, but when restrictive measures were announced to be eased somewhat from June onwards (Dutch Government, 2020a). Respondents of the LISS Panel were (re-)

<sup>1</sup> We are aware of studies showing that ethnic minority groups are sometimes less in favor of a common ingroup identity than majority groups, because of their need for distinctiveness (see Dovidio, Gaertner & Saguy, 2008). However, in these cases, minority groups lose their own identity to a common identity of the same category, for example when ethnic minority groups assimilate into the culture of the dominant ethnic group. In case of the COVID-19 pandemic, the common ingroup identity would be that of victims of a shared fate, which could make the distinction between ethnic identities less salient, but not non-existent, as shown by Andrighetto et al. (2016).

<sup>2</sup> Because such poor working and living conditions lead to increased risks of infection and illness, the Dutch Cabinet received a proposal of the Minister of Social Affairs and Employment to improve these conditions, especially for labor immigrants (Dutch Government, 2020b). This group may thus experience more threat than other groups in Dutch society. Yet, based on the Common Ingroup Identity Model and the fact that we investigate anti-immigrant sentiments, we expect that native Dutch citizens will experience more negative affect.



approached with a reduced version of the EVS-questionnaire and additional questions regarding the coronavirus crisis. Of the 1614 respondents (78% response rate), 1288 participated in both the 2017 and 2020 data collection, which allowed for within-individual over-time comparison.<sup>3</sup> Due to item-nonresponse, primarily on the three anti-immigrant sentiment items in both waves (11.9%, 12.7%, and 14.8% respectively for the difference scores), eventually 997 respondents were included in the analyses.<sup>4</sup>

### Variables

The dependent variable *anti-immigrant sentiments* was measured based on three items, asking ‘Please look at the following statements and indicate where you would place your views on this scale?’ ‘Immigrants take away jobs from the Dutch’, ‘Immigrants increase crime problems’, and ‘Immigrants are a strain on welfare system.’ Respectively, response scales ranged from: (1) ‘take away’ to (10) ‘do not take away’, (1) ‘make it worse’ to (10) ‘do not make it worse’, and (1) ‘are a strain’ to (10) ‘are not a strain’.<sup>5</sup> Scales were recoded in such a way that a higher score indicated stronger anti-immigrant sentiment. Because we are interested in within-individual changes in such sentiments, the items were used to create difference scores (Allison, 1990). These were calculated by subtracting respondents’ 2017 score from their 2020 score on all three items separately.

Items indicating the perception of the *COVID-19 pandemic as a threat* were unique to the 2020 wave. We included the following three items as indicators of this latent variable: ‘To what extent are you generally concerned about the COVID-19 pandemic?’ (ranging from (1) ‘not at all’ to (5) ‘very much’), ‘To what extent has the COVID-19 pandemic (temporarily) changed your daily life?’ (with the same answer categories), and ‘How often do you read, listen and/or look at news coverage about the COVID-19 pandemic?’ (ranging from (1) ‘multiple times a day’ to (5) ‘never’). Categories were recoded in such a way that a higher score indicated a stronger threat perception.

Six socio-demographic variables were used as independent variables, including *gender* (0 = ‘male’, 1 = ‘female’), *ethnic background* (in the form of two dummy variables comparing ‘second generation immigrant’ (if the respondent is born in the Netherlands, and at least one of the parents is born in another country) and ‘first generation immigrant’ (if the respondent is born in a country other than the Netherlands) to ‘native Dutch’), and *age* (already included in the dataset as a scale running from 1 = 14 years and younger, to 7 = 65 years and older). *Education* was measured based on the six categories of Statistics Netherlands (2016a), namely: (1) ‘basis’ (primary), (2) ‘vmbo’ (lower secondary), (3) ‘havo/vwo’ (higher secondary), (4) ‘mbo’ (post-secondary, non-tertiary), (5) ‘hbo’ (tertiary, higher vocational), and (6) ‘wo’ (tertiary, university). For *income*, we used the net personal monthly income of the respondent from, indicated on a 13-point scale ranging from (0) ‘no income’ to (12) ‘more than 7500 euros.’ Also included was the *region* respondents live in, indicated by one of the twelve provinces of the Netherlands (with ‘Noord-Brabant’ as the reference category). All socio-demographics were retrieved from the 2020 dataset, in order to investigate the effect of the corona crisis specifically. Only respondents’ ethnic background was retrieved from the 2017 dataset, since this characteristic is invariant and was not asked in 2020. See Table 1 for the descriptive statistics of all included variables.

### Analytical strategy

We make use of the R package *Lavaan* to apply structural equation modelling, whereby change in anti-immigrant sentiments is a latent variable with three indicators, namely the three difference scores (2020–2017) calculated for every respondent. This latent variable is predicted by the six socio-demographics. Threat perception due to the pandemic is also a latent variable with three indicators and modelled as a mediator: one of the benefits of structural equation modeling. See Fig. 1 for a conceptual presentation of the estimated model. Maximum Likelihood estimation and NLMINB-optimization are used, and post-stratification weights are applied to the analyses to correct for the Dutch population’s distribution with regard to sex, age, education, and region. To test the robustness of our findings, we have replicated these models using panel regression (added in Appendix); no differences that change the interpretation of our findings are detected.

Inspection of the data shows that there are no severe violations of non-normality for the included continuous variables.<sup>6</sup> Hence, we look at the standard fit statistics instead of the robust, corrected ones. According to the global and incremental fit indices, the model does not explain the data adequately ( $\chi^2(76) = 308.16, p < 0.001; CFI = 0.75; TLI = 0.61$ ). However, the absolute fit indices indicate an acceptable fit of the model ( $SRMR = 0.03$  and  $RMSEA = 0.06$ ) (Schreiber, Nora, Stage, Barlow & King, 2006). To improve the model

<sup>3</sup> See Reeskens et al. (2021) for a more detailed description of the data, including panel attrition.

<sup>4</sup> Relatively many respondents answered ‘don’t know’ or ‘don’t want to say’ on these three items, and additional analyses showed that this was not completely random. People who follow news about the pandemic less often were more likely to not respond to these items ( $Exp(B) = 0.71, SE = 0.10$ ), together with first generation migrants ( $Exp(B) = 2.50, SE = 0.26$ ), younger people ( $Exp(B) = 0.84, SE = 0.06$ ), the lower educated ( $Exp(B) = 0.83, SE = 0.06$ ), and people living in Gelderland ( $Exp(B) = 1.95, SE = 0.33$ ), Noord-Holland ( $Exp(B) = 1.92, SE = 0.32$ ) and Limburg ( $Exp(B) = 2.86, SE = 0.36$ ).

<sup>5</sup> Several studies use these and similar items to measure anti-immigrant sentiments or xenophobia (see for example, Ceobanu & Escandell, 2008; Hjerm, 1998; 2001; Knudsen, 1997), but the same items are sometimes used as a measure for outgroup threat as well (see for example Scheepers, Gijssberts & Coenders, 2002). In other cases, measures of threat and anti-immigrant sentiments are not clearly distinguished (see for example Andreescu, 2017).

<sup>6</sup> Yet, regarding the categorical variables, we see in Table 1 that the sample consists of relatively many Dutch natives. According to Statistics Netherlands (2020), 24.4% of the Dutch population has an immigration background (first and second generation). In our sample, this is 17.2%. Furthermore, some of the provincial categories contain less than 30 respondents. The applied weights do correct for region.

**Table 1**  
Descriptive statistics (N = 997).

(Latent) Variable	Indicator/Category	Continuous variables			Categorical variables	
		Range	Mean	Std Dev	N	%
A-I sentiments (change)	Immigrant jobs (change)	-9–9	-0.560	2.385		
	Immigrant crime (change)	-9–8	-0.081	2.118		
	Immigrant welfare (change)	-8–9	-0.414	2.088		
Pandemic threat	Concern	1–5	3.322	0.899		
	Changed life	1–5	3.350	0.967		
	Media	1–5	4.161	0.871		
Gender	Male				501	51.1
	Female				496	48.9
Ethnic background	Native Dutch				843	82.8
	Second gen. immigrant				84	10.0
	First gen. immigrant				70	7.2
Age		1–7	4.120	1.819		
Education		1–6	3.705	1.435		
Income		0–12	3.883	2.084		
Region	Groningen				48	3.2
	Friesland				52	3.9
	Drenthe				24	2.9
	Overijssel				60	6.9
	Flevoland				21	2.7
	Gelderland				114	11.1
	Utrecht				74	8.4
	Noord-Holland				133	14.8
	Zuid-Holland				212	22.0
	Zeeland				26	2.0
	Noord-Brabant				168	15.5
	Limburg				65	6.6

Weighted data (except for N).

Source: CentERdata (2020); EVS (2020).

fit, we estimated several adjusted models with only one of the pandemic threat indicators. All models led to the same conclusion, and we eventually decided to continue with the initial model depicted in Fig. 1.<sup>7</sup>

## Results

### Within individual change between 2017 and 2020

Results regarding the latent anti-immigrant sentiments variable show significant factor loadings for both the crime ( $\lambda = 1.43$ ,  $SE = 0.29$ ,  $p < 0.001$ ) and welfare system item ( $\lambda = 1.99$ ,  $SE = 0.43$ ,  $p < 0.001$ ) (the factor loading of the first indicator is automatically fixed to 1, to set the scale of the latent variable). The latent variable explains 13.0% of the variance in the jobs item, 33.5% of the variance in the crime item, and 67.0% of the variance in the welfare system item. The factor loadings of the latent pandemic threat variable are substantially lower, with significant loadings for the changed life ( $\lambda = 0.45$ ,  $SE = 0.10$ ,  $p < 0.001$ ) and media item ( $\lambda = 0.43$ ,  $SE = 0.09$ ,  $p < 0.001$ ). The latent variable explains 77.2% of the variance in the concern item, but only respectively 13.3% and 14.8% of the variance in the changed life and media item.

The descriptive statistics in Table 1 already showed that anti-immigrant sentiments seem to have decreased rather than increased among the same set of respondents between 2017 and 2020, especially when it comes to the labor market and the welfare system. The perception of immigrants taking jobs away from natives has decreased compared to 2017 for 47.1% of the respondents, while 25.6% did not change their perception, and 27.3% of them strengthened their anti-immigrant sentiments. A paired sample *t*-test shows that this overall decrease is significant ( $t(964) = -7.30$ ,  $p < 0.001$ ). For the item asking whether immigrants increase crime problems, these numbers are respectively 36.0%, 32.2%, and 31.8%, leading to no significant overall changes between 2017 and 2020 ( $t(964) = -1.19$ ,  $p = 0.23$ ). Lastly, 44.7% of the respondents weakened their perception of immigrants straining the welfare system; 28.9% did not change their opinion, while 26.4% increased their anti-immigrant sentiments. This decrease is significant ( $t(964) = -$

<sup>7</sup> The fit indices show that the imperfect fit is primarily due to (residual) covariances that have not been modelled between the item regarding pandemic concern, and the two other pandemic threat items. However, the model in which we included these covariances did not converge. Therefore, three additional models were estimated with only one of the pandemic threat indicators in each model. All three models had a much better fit than the initial model and were all acceptable, with the best fit for the model including the corona media item (with an AIC of 15290.34 and a BIC of 15515.96, compared to respectively 20488.89 and 20748.84 for the initial model). Yet, because none of the separate models changed the eventual conclusions (see note 7 and 8) and a construct is preferably measured with at least three items (Hair, Black, Babin & Anderson, 2010), we decided to keep the initial model.

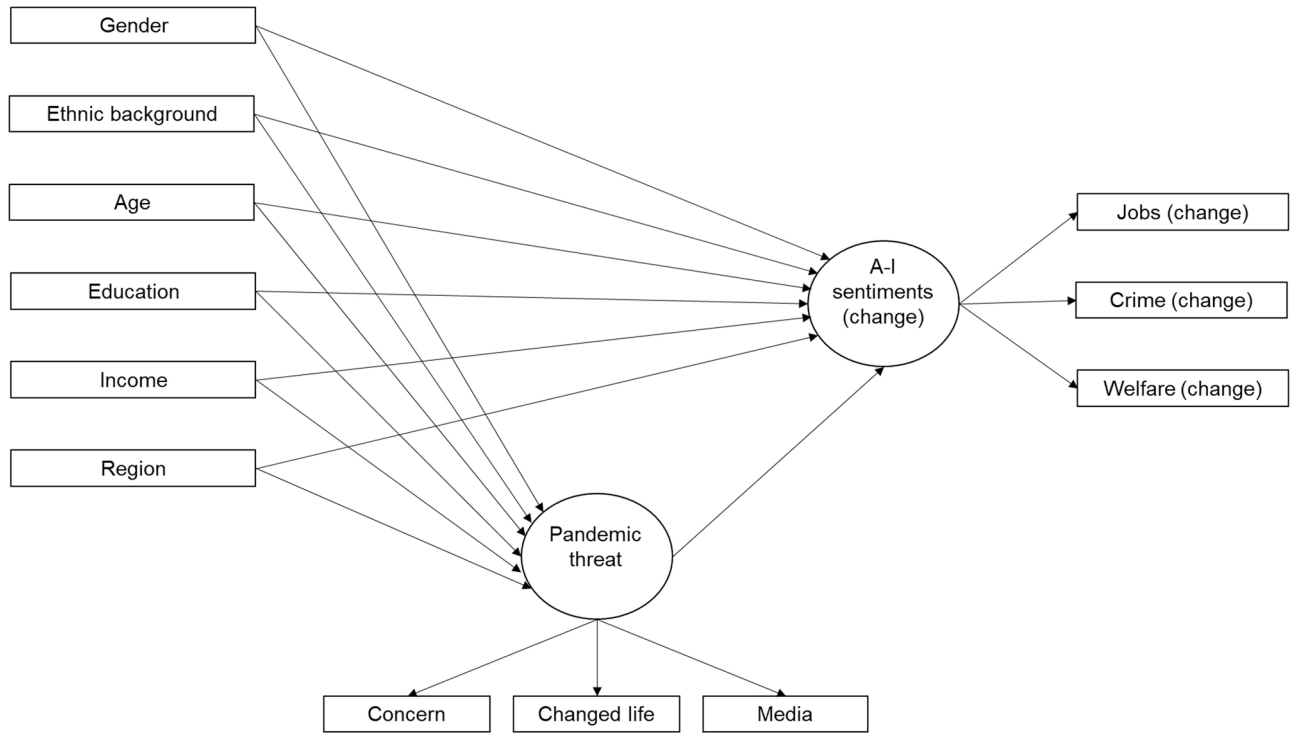


Fig. 1. Conceptual structural equation model.



6.15,  $p < 0.001$ ). Taken all three items together, the overall mean decrease of 0.35 (with a standard deviation of 1.63) is significant ( $t(964) = -6.70$ ,  $p < 0.001$ ). Although these findings confirm Hypothesis 1b (anti-immigrant sentiments have decreased during the COVID-19 pandemic), the small size of the change indicates overall stability rather than change (which was predicted under Hypothesis 1a). In any case, Hypothesis 1c must be rejected: anti-immigrant sentiments have not increased during the COVID-19 pandemic.

The next steps are to see whether this small decrease in anti-immigrant sentiments is due to the influence of perceived threat (or the absence thereof), and whether this can explain potential differences in changes in anti-immigrant sentiments between subgroups. As shown in Table 1, the average threat perception is quite high, but results from structural equation modelling show that perceived threat caused by the pandemic is unrelated to changes in anti-immigrant sentiments ( $B = 0.08$ ,  $SE = 0.06$ ,  $p = 0.20$ ) (see Table 2). This confirms Hypothesis 2a, while Hypotheses 2b and 2c are rejected (perceived threat neither decreases nor increases negative affect).<sup>8</sup>

Although no significant mediation effects are found (See Table 2, Indirect effects) some subgroups perceive significantly more threat than others, such as women, first generation immigrants, and the elderly (see Table 2, Pandemic threat).<sup>9</sup> Of the total variance in pandemic threat perceptions, 14.0% is explained by the model. These findings lead us to reject Hypothesis 3a (threat perceptions caused by the pandemic are not equally prevalent among socio-demographic groups within society), but Hypothesis 3b cannot be fully accepted either. Expectations of stronger threat perceptions were only confirmed for the elderly, while men and natives (at least compared to first generation migrants) actually perceive less threat. No significant differences were found for individuals with a lower socio-economic status or individuals living in Noord-Brabant.

Apart from the absence of a mediating role of perceived threat, no particular subgroup has decreased their anti-immigrant sentiments significantly more than others, except for people living in the provinces of Groningen and Zuid-Holland (see Table 2, A-I sentiments (change) and Total effects); only 4.7% of the variance in the change in negative affect is explained by the model. In several ways, the significant results concerning the provinces stand out. First of all, Zuid-Holland is one of the most culturally diverse provinces of the Netherlands, while Groningen is way less culturally diverse (Statistics Netherlands, 2020a). However, during the 'refugee crisis' in 2016, relatively many refugees from Syria and Eritrea settled in Groningen, while many from Afghanistan, Iraq, Iran, and Somalia sought asylum in Zuid-Holland (Statistics Netherlands, 2016b). Yet, these refugee groups also settled relatively more often than in other provinces in Overijssel, which does not show a significant change in anti-immigrant sentiments. In light of the coronavirus crisis, Groningen stands out because the province has the least infected cases of the country, while Zuid-Holland was catching up with Noord-Brabant at the time of data collection (and even counts the most new infected cases of the Netherlands at the moment of writing this paper) (RIVM, 2020b). However, as elaborated, the perception of the coronavirus as a threat cannot explain these differences.

All in all, the level of anti-immigrant sentiments slightly decreased in the Netherlands between 2017 and 2020. Some regional differences are found, but negative outgroup affect did not increase or decrease among specific subgroups. The perception of the COVID-19 pandemic as a threat is generally strong among the Dutch population, and even stronger for some subgroups, but this perception is unrelated to changes in anti-immigrant sentiments. These findings seem to support the Epidemic Psychology Model (Strong, 1990), which describes the situation of a virus threat as a rather individual matter, in which little distinction is made between social groups, neither in terms of who feels most threatened nor in terms of who is perceived as most threatening.

Yet, the fact that almost no group-related changes in anti-immigrant sentiments were observed does not mean that no differences between socio-demographic groups exist(ed) in the Netherlands. To provide some context and clarity regarding existing differences in anti-immigrant sentiments between socio-demographic groups, we will now shortly discuss the results of cross-sectional linear regression analyses of the 2017 and 2020 waves separately.

### Cross-sectional differences in 2017 and 2020

For these cross-sectional analyses, anti-immigrant sentiments (measured as the mean of the three immigrant items) is regressed on the same socio-demographic indicators included in the main analyses. The Cronbach's alpha of the created scale is 0.86 in 2017 and 0.85 in 2020. Because of the high number of missing values on income in 2017 (21.7%), values were imputed for this variable by means of multiple imputation. In case of item nonresponse, listwise deletion is applied, resulting in a sample size of 1400 respondents in 2017 and 1081 respondents in 2020. Because no item regarding ethnic background was included in the 2020 dataset, a robustness check is conducted without the ethnic background item for 1366 respondents. Post-stratification weights are recalculated for the cross-sectional datasets separately and applied to correct for sex, age, education, and region.

In both years, women displayed less negative attitudes towards immigrants than men, both generations of migrants were less negative than natives, higher education mitigated anti-immigrant sentiments, and people living in Groningen and Noord-Holland

<sup>8</sup> As described in note 6, results remain largely the same when only one indicator of perceived pandemic threat is used. Separately, no effects on changes in anti-immigrant sentiments are found for the concern item ( $B = 0.06$ ,  $SE = 0.05$ ,  $p = 0.26$ ), the changed life item ( $B = 0.05$ ,  $SE = 0.04$ ,  $p = 0.21$ ), or the media item ( $B = 0.06$ ,  $SE = 0.05$ ,  $p = 0.23$ ).

<sup>9</sup> Concerning the relationship between the socio-demographics and the pandemic threat items, no extreme differences were found when the three items were analyzed separately either. Only for the media item, we found no differences between men and women in how often they follow news about corona in the media ( $B = -0.05$ ,  $SE = 0.08$ ,  $p = 0.53$ ), and no differences were found between natives and first-generation migrants ( $B = -0.08$ ,  $SE = 0.17$ ,  $p = 0.62$ ). Age still had a positive, significant effect on following corona news ( $B = 0.15$ ,  $SE = 0.03$ ,  $p < 0.001$ ), which was now the case for income as well ( $B = 0.05$ ,  $SE = 0.02$ ,  $p < 0.05$ ).

**Table 2**

Change in anti-immigrant (A-I) sentiments and the mediating role of perceived pandemic threat – Parameter estimates resulting from structural equation modelling (standard errors between parentheses).

	A-I sentiments (change)	Pandemic threat	Indirect effect on A-I sent. (change)	Total effect on A-I sent. (change)
Gender (Female)	0.028 (0.086)	0.182* (0.079)	0.015 (0.013)	0.043 (0.084)
Ethnic background (ref = Native)				
Second gen. immigrant	-0.105 (0.130)	0.023 (0.125)	0.002 (0.010)	-0.103 (0.133)
First gen. immigrant	0.090 (0.230)	0.356* (0.163)	0.029 (0.025)	0.1119 (0.227)
Age	-0.032 (0.026)	0.144*** (0.020)	0.012 (0.010)	-0.020 (0.026)
Education	0.023 (0.036)	0.018 (0.028)	0.001 (0.003)	0.024 (0.036)
Income	-0.007 (0.020)	0.012 (0.021)	0.001 (0.002)	-0.006 (0.020)
Region (ref = Noord-Brabant)				
Groningen	-0.542** (0.208)	-0.008 (0.196)	-0.001 (0.016)	-0.542** (0.206)
Friesland	0.230 (0.277)	0.011 (0.174)	0.001 (0.014)	0.231 (0.276)
Drenthe	-0.158 (0.257)	0.006 (0.209)	0.001 (0.017)	-0.158 (0.256)
Overijssel	-0.090 (0.156)	-0.038 (0.134)	-0.003 (0.011)	-0.093 (0.154)
Flevoland	0.092 (0.242)	0.263 (0.200)	0.022 (0.024)	0.114 (0.241)
Gelderland	-0.212 (0.165)	-0.008 (0.135)	-0.001 (0.011)	-0.212 (0.167)
Utrecht	-0.259 (0.154)	0.089 (0.126)	0.007 (0.012)	-0.252 (0.155)
Noord-Holland	-0.234 (0.144)	0.082 (0.117)	0.007 (0.011)	-0.227 (0.143)
Zuid-Holland	-0.330* (0.142)	-0.065 (0.100)	-0.005 (0.010)	-0.336* (0.143)
Zeeland	-0.043 (0.209)	0.243 (0.238)	0.020 (0.025)	-0.023 (0.207)
Limburg	-0.171 (0.159)	-0.083 (0.149)	-0.007 (0.013)	-0.178 (0.157)
Pandemic threat	0.082 (0.064)			
R <sup>2</sup>	<b>0.047</b>	<b>0.140</b>		

Weighted data. \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

Source: CentERdata (2020); EVS (2020).

expressed less negative sentiments than those living in Noord-Brabant. In 2017, inhabitants of Overijssel displayed relatively less negative attitudes towards immigrants, but this difference disappeared in 2020 (see Table 3). Age and income, on the other hand, did not influence negative outgroup affect in both years. These results strengthen the conclusion that perceived pandemic threat has little influence on anti-immigrant sentiments, since women, first generation immigrants, and the elderly perceived significantly more threat due to the pandemic (but do not display higher levels of negative affect in both years). Furthermore, the differences between the provinces may indicate that more contact with immigrants (in Groningen and Overijssel because of an increase in refugees in 2016 and in Noord-Holland because of overall diversity (Statistics Netherlands, 2020a)) leads to less negative sentiments towards this outgroup. Yet, more refined measures of contact with immigrants are necessary to formally conclude this. Although we reported a decrease in anti-immigrant sentiments for Zuid-Holland between 2017 and 2020 in our main analyses, this province is not significantly less negative towards immigrants compared to other regions in those years. All socio-demographic indicators together explain somewhat more variation in anti-immigrant sentiments in 2020 than in 2017 (12.6% vs. 10.2%).

Because no item regarding ethnic background was included in the 2020 dataset, the 2017 item was used for those who were involved in both waves, and we conducted an additional robustness check without the ethnic background item for the 2020 wave. Effects and thus conclusions remained largely unchanged for all socio-demographic indicators. The only notable difference concerned age, which now had a small significant, negative effect on anti-immigrant sentiments ( $B = -0.01$ ,  $SE = 0.00$ ,  $p < 0.05$ ). Without including ethnic background, 10.2% (compared to 12.6%) of the variance in anti-immigrant sentiments is explained by the model.

Combined, many differences in anti-immigrant sentiments are found between socio-demographic groups in the Netherlands, both in 2017 and 2020. Despite these differences, no specific subgroups increased their negative outgroup affect at the beginning of the threatening COVID-19 pandemic.

**Table 3**  
Anti-immigrant (A-I) sentiments in 2017 and 2020 – regression coefficients resulting from linear regression analyses (standard errors between parentheses).

	A-I sentiments 2017	A-I sentiments 2020
Intercept	7.801*** (0.308)	8.117*** (0.325)
Gender (Female)	-0.404*** (0.114)	-0.610*** (0.135)
Ethnic background (ref = Native)		
Second gen. immigrant	-0.643*** (0.180)	-0.702** (0.215)
First gen. immigrant	-1.546*** (0.202)	-1.180*** (0.240)
Age	0.000 (0.003)	-0.004 (0.004)
Education	-0.211*** (0.036)	-0.333*** (0.049)
Income	-0.021 (0.022)	-0.033 (0.035)
Region (ref = Noord-Brabant)		
Groningen	-0.719* (0.351)	-1.410*** (0.367)
Friesland	-0.218 (0.323)	-0.267 (0.360)
Drenthe	-0.535 (0.355)	-0.498 (0.409)
Overijssel	-0.531* (0.262)	-0.028 (0.286)
Flevoland	0.012 (0.396)	0.285 (0.409)
Gelderland	-0.204 (0.220)	0.056 (0.250)
Utrecht	-0.443 (0.245)	-0.234 (0.265)
Noord-Holland	-0.618** (0.198)	-0.605* (0.237)
Zuid-Holland	-0.126 (0.188)	-0.037 (0.209)
Zeeland	-0.078 (0.414)	0.651 (0.495)
Limburg	0.496 (0.257)	0.113 (0.293)
R <sup>2</sup>	<b>0.102</b>	<b>0.126</b>

Weighted data.

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

Source: CentERdata (2020); EVS (2020).

## Discussion

The goal of this paper was to investigate whether the COVID-19 pandemic, as a universal threat, increases anti-immigrant sentiments, and whether such threat in response to the coronavirus crisis is expressed more strongly among specific subgroups in society. By means of structural equation modelling of representative Dutch panel data, collected in 2017 and repeated in May 2020 during the first months of the pandemic, we have demonstrated that the global pandemic did not strengthen negative outgroup affect amidst the lockdown; rather the opposite, negative opinions towards immigrants slightly decreased between 2017 and 2020. Further, perceptions of the pandemic as a threat were unrelated to anti-immigrant sentiments in the Netherlands. Although some subgroups do experience more threat than others due to the coronavirus, such as women, first generation migrants, and the elderly, this does not lead to stronger anti-immigrant sentiments.

Although it is difficult to assess what contributes to this slight decrease in anti-immigrant sentiments, one obvious reason could be the influence of media coverage and political attention (see Dennison & Geddes, 2020; Van Klingeren, Boomgaarden, Vliegenthart & De Vreese, 2015). Elevated anti-immigrant sentiment levels in the pre-COVID-19 era might be attributed to the salience of the immigration debate in 2017, due to the 'refugee crisis' that started some years earlier. Because the coronavirus crisis dominated press and politics from March onwards, immigration as a topic is primed less, potentially leading to decreased negative affect amidst the pandemic. Contextual factors such as national economic growth also affect individual changes in anti-immigrant sentiments (e.g. Billiet et al., 2014). The continuous economic growth in the Netherlands between 2017 and the beginning of 2020 may have contributed to the lower levels of negative affect as well (Statistics Netherlands, 2020b). More research on this is necessary in the future.

Besides some regional differences, no specific subgroups decreased or increased their anti-immigrant sentiments more than others

during the pandemic, even though we have reported many group differences in such affect, both in 2017 and 2020 (for example based on gender, ethnic background, and education). This confirms that anti-immigrant sentiments are indeed dependent on people's status in society, but the coronavirus crisis has not led to more differentiation in this regard.

Our findings indicate that the threat of the COVID-19 pandemic cannot be understood in light of traditional literature. The universal scale of the crisis does not seem to elicit group conflict perceptions over scarce resources such as ICU beds or governmental financial aid, as would be expected based on traditional threat theories (Bobo, 1983; 1999; LeVine & Campbell, 1972; Sherif, 1966). The Common Ingroup Identity Model proposes that in case of indiscriminate threats, a sense of common identity can rise, but especially among ethnic minority groups (Andrighetto et al., 2016; Gaertner & Dovidio, 2000). Since we did not find a relationship between perceived threat due to the pandemic and changes in anti-immigrant sentiments, it seems unlikely that this is the case for ethnic majority groups as well. The Epidemic Psychology Model, on the other hand, does not assume a relationship between threat perceptions and group-specific sentiments, as a spreading disease could lead to a situation in which everyone feels threatened by everyone (Strong, 1990).

A limitation of the current study is the mediocre fit of the three indicators used to measure perceived pandemic threat, even though the items independently display similar (absent) effects. Nevertheless, interpretation wise, the extent to which people's life changed due to the pandemic could also indicate less threat, as especially those who do not occupy essential jobs, and thus could work from home, experienced more change in their daily lives, but also run less risk of getting infected. Secondly, although following corona news might indicate salience of the pandemic, tuning out might as well result from anxiety about this threat. The suboptimal measure of perceived threat nuances definite conclusions in terms of the viability of the Epidemic Psychology Model or the Common Ingroup Identity Model.

To decrease anti-immigrant sentiments in uncertain times, we advise policymakers to avoid individual panic and suspicion and encourage an inclusive victim consciousness by emphasizing that, as a collective, we are all fighting the same enemy. Given the influential role of politicians and media in the public debate, these actors should feel responsible for creating or maintaining this feeling of togetherness. This increases resilience and social cohesion, from which society can benefit even after the crisis (Adam-Troian & Bagci, 2021; De Jaegher, 2021; Vollhardt & Bilali, 2015).

Besides better understanding how to measure perceived threat due to the COVID-19 pandemic, continuing research is also desirable to see if the unexpected economic revitalization will decrease anti-immigrant sentiments even further. This could be an opportunity to improve sample selection as well, as some of the missing values were not completely random. Furthermore, the measurement we used for anti-immigrant sentiments is sometimes interpreted as a measure of (outgroup or realistic) threat, so different ways of operationalizing such sentiments could lead to different conclusions. Evidently, pandemic threat perceptions may also differ between countries, for example due to differences in mortality rates. At least for the Netherlands – a country with relatively less deaths due to the COVID-19 pandemic (WHO, 2020a) – we can conclude that this crisis has not (yet) eroded social cohesion.

## Conclusion

To investigate whether and among whom the COVID-19 pandemic has changed anti-immigrant sentiments due to threat perceptions, we have compared and tested three theories that approach a threat like the coronavirus as an individual, collective, and intergroup matter respectively. Our findings show that anti-immigrant sentiments decreased during the beginning of the pandemic, but that threat perceptions were unrelated to this change. This indicates that the coronavirus crisis cannot be understood in light of traditional literature on intergroup conflict, but rather as eliciting more individualistic responses. Therefore, we advise politicians to emphasize the collectivity of the threat more, as this could benefit social cohesion in the long run.

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## Declarations of interest

None.

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**Appendix. – Changes in Anti-Immigrant sentiments between 2017 and 2020. Results of fixed effects panel regression**

	A-I sent. change (1)	A-I sent. change (2)	A-I sent. change (3)	A-I sent. change (4)
Intercept	5.763*** (0.709)	5.782*** (0.711)	5.811*** (0.707)	5.837*** (0.708)
Wave	-0.891** (0.318)	-0.604** (0.218)	-0.735*** (0.201)	-0.558* (0.277)
Age	0.074 (0.133)	0.074 (0.133)	0.064 (0.133)	0.065 (0.133)
Education	0.052 (0.060)	0.050 (0.060)	0.053 (0.060)	0.048 (0.060)
Income	-0.008 (0.024)	-0.010 (0.024)	-0.008 (0.024)	-0.011 (0.024)
Pandemic threat Concern	0.133 (0.086)	0.058 (0.062)		
Changed life			0.098 (0.057)	
Media				0.035 (0.064)
R <sup>2</sup>	<b>0.057</b>	<b>0.055</b>	<b>0.057</b>	<b>0.054</b>

Weighted data. \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

Note: As fixed effects panel regression analysis does not allow the inclusion of time invariant independent variables, gender, ethnic background and region were omitted from the analyses, since the former two are time invariant and the latter was only asked in one of the two waves.

Source: CentERdata (2020); EVS (2020).

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